



LIGHTING SYSTEMS

Flexible solutions for commercial vehicles

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ERMAX® - YOUR PARTNER FOR COMPLETE LIGHTING SYSTEMS

ERMAX A/S

- develops, manufactures and distributes a wide range of products within lighting, junction boxes and cable systems for commercial vehicles and industrial applications.

A unique set-up with a combination of our factory in Denmark and licensed production with our own tools at a number of selected and exclusively certified partners worldwide, offers an extensive, highly competitive and qualitative range of products.

The Brand - ERMAX®

Founded in 1948 the Ermax® lighting technology has been manufactured for the automotive industry for almost 7 decades.

Ermax is the partner, when it comes to understanding and fulfilling the needs of lighting; with tail lights, warning lights, beacons, side markers or work lights – nowadays bulb, LED as well as in hybrid technologies. These lighting components are being offered within a complete solution concept of ADR approved

cables and, where required, junction boxes as well as mounting hardware. All cable sets are configured with multiple connector types to ensure the best lifetime service ability.

Why Ermax® Lighting Systems ?

Partnership through quality, reliability and competence.

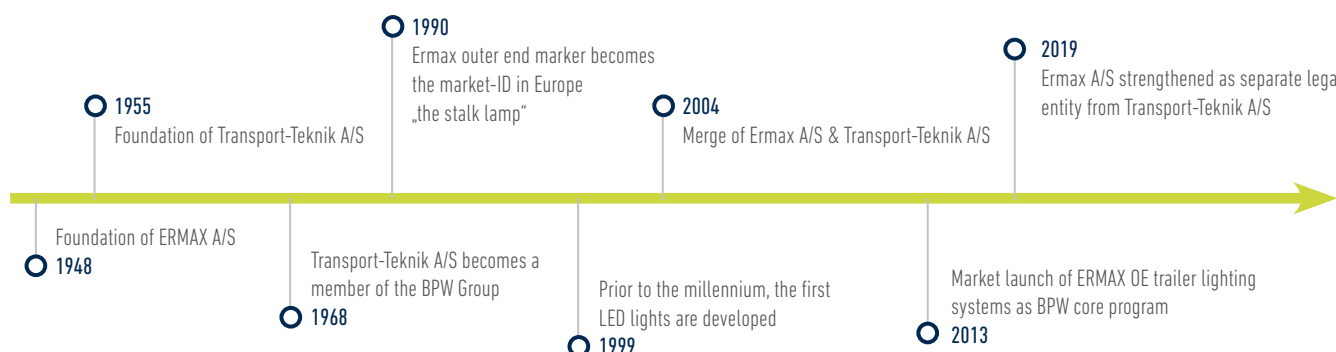
Our competence in partnering with you, is our extensive experience in being an OEM partner with quality and on time delivery as daily focus to ensure expectations and execution match entirely with your requirements.

All our products hold the necessary certifications for E-marking, IP-protection, ADR-approval and design predictions to ensure exclusive design and durability as well as non-violation of patents.

With reliable and planned processes you will reach your goal safely with us as partner.



ERMAX A/S, Kolding, Denmark



DISTRIBUTION NETWORK WORLDWIDE

Always close to you

As a member of the BPW Group, which operates worldwide, we have an unique sales and distribution network with local offices and support for the benefit of all of our business partners.



SOLUTIONS - AS INDIVIDUAL AS YOUR TASKS AND REQUIREMENTS

As ERMAL customer you will achieve the following

- High quality for every area
- Vehicle-customised solutions
- Focus at the newest technology and innovative products with recognisable design
- Production companies with development
- competence under one roof
- Europe-wide after-sales-servicenent

ERMAL lighting systems

- Wide palette including cables, plugs and lights – all built according to customer requirements
- LED and SIMAC control unit built-in tail light
- ADR approved cable kits with 7 pole AMP 1.5 and Super Seal plugs
- Unbeatable, impact resistant and long life solutions

ERMAX CABLE SYSTEMS FOR 24V

Overview and introduction to plug connections

Ermax connections consist of 2 poled, 7 poled and 15 poled connections and plug connections – connections of high quality making it easy and simple to mount and maintain. These connections are used in Ermax cable- and lighting systems for trailer 24V and can be combined according to individual requirements from our customers.

All connections are re-moulded and tested according to IP Rating 69K and ADR approved.

2 poled Super Seal



2 poled Super Seal plug and socket

Make mounting of position lights, side marking lights, marking lights and other 2 poled components easy and simple.

100% waterproof

- Easy and simple mounting
- Easy change when damage on the lamp

2 poled Click-in



2 poled click-in

Makes mounting of position lights, side marking lights, marking lights and other 2 poled components easy and simple.

- Easy and simple mounting
- Fast positioning
- Time-consuming parts replacement

7 poled AMP 1.5



7 poled 1.5

Used for connecting Ermax rear lights to the cable system. The plug can be used when connecting other extra equipment as e.g. working lights

- Rounded off pin-legs
- Extremely durable connection
- Standard plug connection – usual in the market

15 poled Ermax Bayonet



15 poled bayonet /ADR

Used for connecting front box, main cable and rear cable and e.g. mounting of connection box.

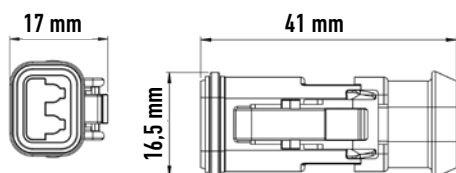
- Rounded off pin-legs
- Extremely durable connection
- Standard plug connection - usual in the market

	Output from the main cable	Side marker	Position light	License plate light	Outline marker	Work light	Reverse light	Interior lighting	Tail light	Reverse light	Junctionbox	Central connection	Rear cable	Interior lighting
2 poled Super Seal	✓	✓	✓	✓	✓	✓	✓	✓			✓			
2 poled Click-in		✓	✓	✓	✓	✓	✓							✓
7 poled AMP 1.5	✓								✓	✓	✓			
15 poled Ermax Bayonet											✓	✓	✓	

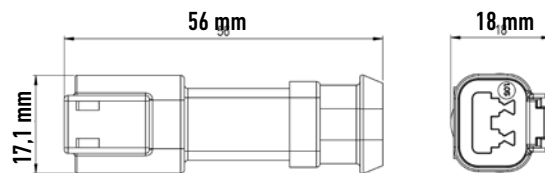
OVERVIEW - PLUG CONNECTIONS FOR ERMAX OE LIGHTING SYSTEMS

Plug type, designation and dimension

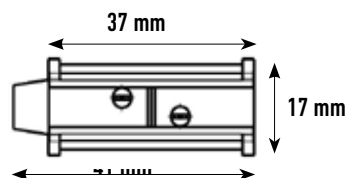
2 poled Deutsch connector



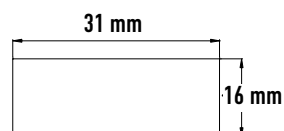
2 poled Deutsch socket



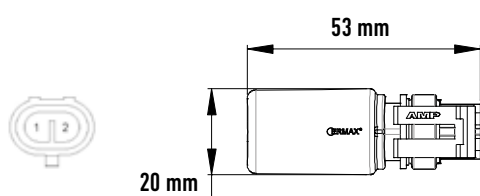
2 poled Super Seal plug



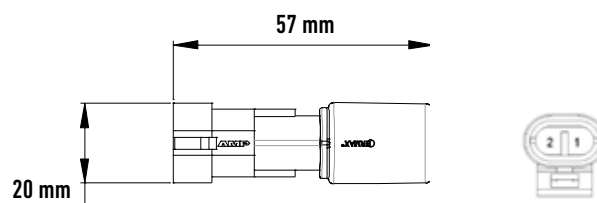
2 poled Super Seal socket



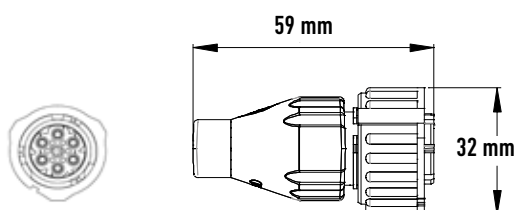
7 poled AMP 1.5 plug



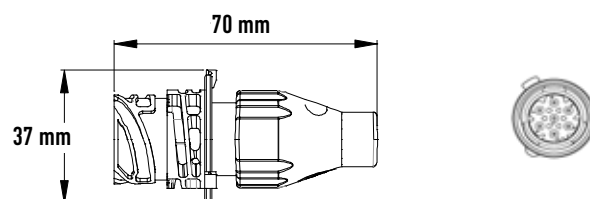
7 poled AMP 1.5 socket



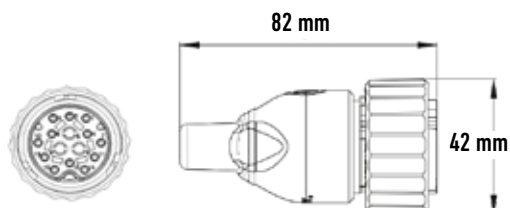
15 poled Bayonet plug



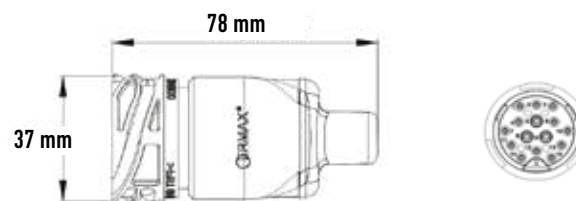
15 poled Bayonet socket



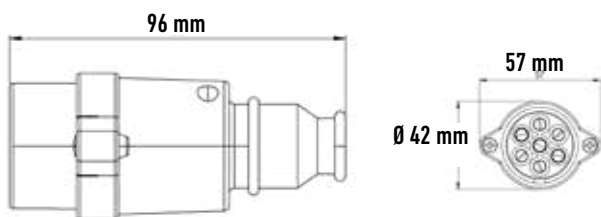
2 poled Click-in connector



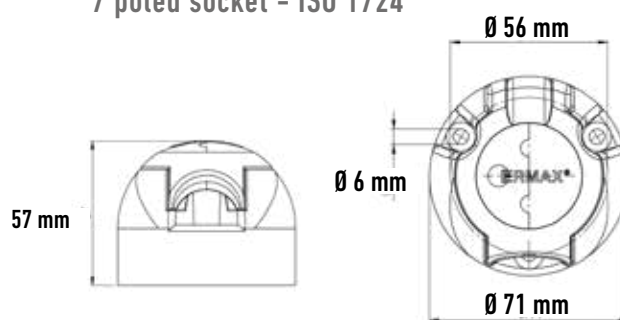
Click-in cap



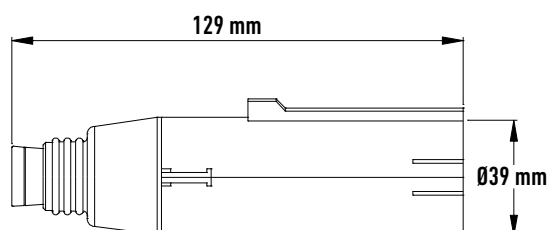
7 poled plug - ISO 1724



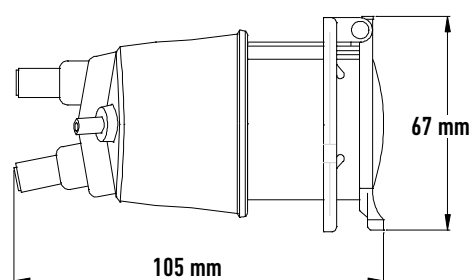
7 poled socket - ISO 1724



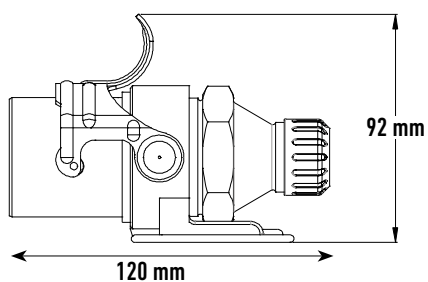
7 poled plug - ISO 3731 / ISO 1185



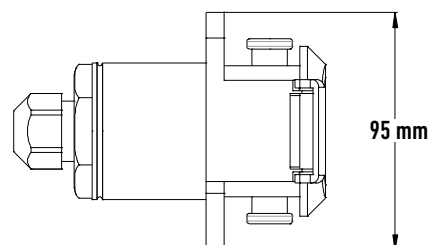
7 poled socket - ISO 3731 / ISO 1185



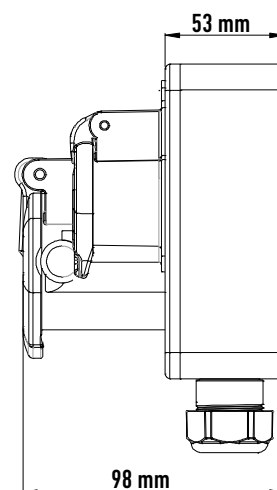
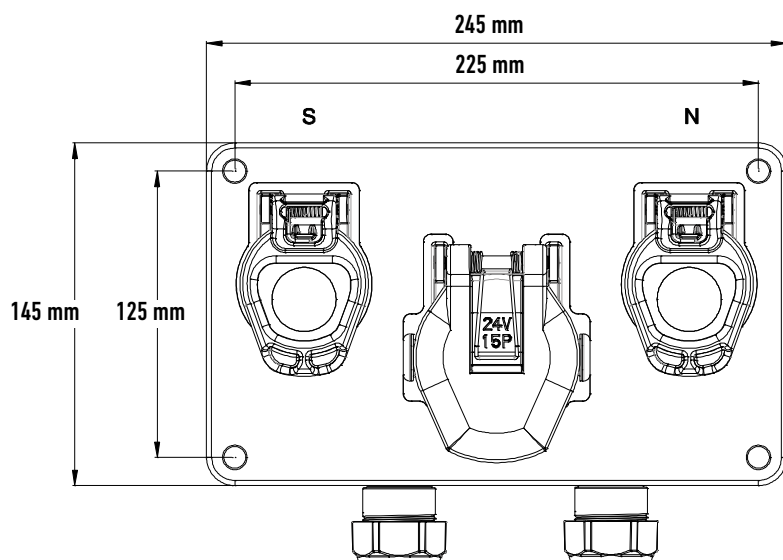
15 poled ADR plug - ISO 12098



15 poled ADR socket - ISO 12098



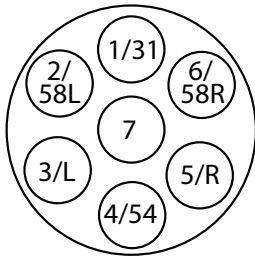
Frontbox



CONTACT ALLOCATION

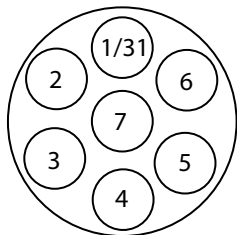


Pin configuration Type N 24V, 7 poled ISO 1185

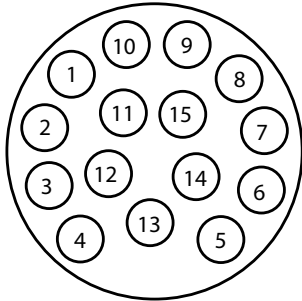
		Colour	Description
	1 / 31	White	Ground
	2 / 58L	Black	Position light left ¹⁾
	3 / L	Yellow	Direction indicator left
	4 / 54	Red	Stop light
	5 / R	Green	Direction indicator right
	6 / 58R	Brown	Position light right ¹⁾
	7	Blue	Aux2 / Stop control for trailer

¹⁾ The license plate must be connected so that no lights of this illumination have common connection with contact 2 and 6

Pin configuration Type S 24V, 7 poled ISO 3731

		Colour	Description
	1 / 31	White	Ground for Pin 9-15 (ISO 12098)
	2	Black	No allocation (CANH, Data communication)
	3	Yellow	Reverse light
	4	Red	Permanent power supply (+)
	5	Green	No allocation (CANL, Data communication)
	6	Brown	Aux3 / lift axle
	7	Blue	Rear fog light

Pin configuration 24V, 15 poled ISO 12098

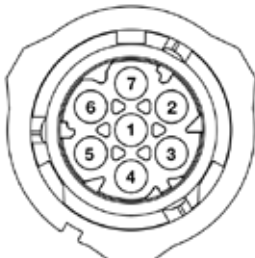
		Colour	Description
	1	Yellow	Direction indicator left
	2	Green	Direction indicator right
	3	Blue	Rear fog light
	4	White	Ground
	5	Black	Position light left ¹⁾
	6	Brown	Position light right ¹⁾
	7	Red	Stop light
	8	Pink	Reverse light
	9	Amber	Permanent power supply (+)
	10	Grey	Aux1 / Brake-wear sensor
	11	White/Black	Aux2 / Stop control for trailers
	12	White/Blue	Aux3 / lift axle
	13	White/Red	Ground for Pin 9-15 (ISO 12098)
	14	White/Green	CANH / Data communication
	15	White/Brown	CANL / Data communication

¹⁾ The license plate illumination must be connected so that no lights of this illumination have a common connection with contract nr. 5 and

Pin configuration Ermax 15 poled bayonet plug

		Colour	Description
	1	Black	Position light left
	2	Yellow	Direction indicator left
	3	Red	Stop light
	4	White/Green	CANH / Data communication
	5	White	Ground
	6	Pink	Reverse light
	7	White/ Black	Aux2 / Stop control for trailers
	8	White/Red	Ground for Pin 9-15 (ISO 12098)
	9	amber	Permanent power supply (+)
	10	Blue	Rear fog light
	11	Grey	Aux1 / Brake-wear sensor
	12	White/Brown	CANL / Data communication
	13	Brown	Position light right
	14	White/Blue	Aux3 / lift axle
	15	Green	Direction indicator right

Pin configuration 7 poled AMP plug

		Colour	Description
	1	White	Ground
	2	Green	Position light
	3	Brown	Reverse light
	4	Yellow	Indicator
	5	Red	Stop light
	6	Blue	Rear fog light
	7	-	-

Pin configuration Deutsch (DT2) plug 2 poled

		Colour	Description
	1	Black	Ground
	2	Red	Permanent power supply (+)

Pin configuration Super Seal plug 2 poled

		Colour	Description
	1	Blue	Permanent power supply (+)
	2	Brown	Ground

Material- and symbol explanation Ermax lighting

Material explanation	
PP	Polypropylene. The maximum working temperature is 80-90°C. Melting point 165°
PC	Impact resistant polycarbonat. The maximum working temperature is 135°C Melting point 300°C
PMMA	Acrylic plastic (polymethylmethacrylate) The maximum working temperature is 70-110 °C. Melting point 160°
ABS	Termoplast - Black plastic The maximum working temperature is 80-105°C

Symbol explanation	
	ECE Approved
	ECE Approved R65
	Electromagnetic test according to R10
	CE Approved
	ADR/GGVS - Approved for use on vehicles carrying dangerous goods
	Meets guidelines for the use of retro reflective safety markings on heavy vehicles
XA1 / XA2	X - Direction flashing unit A - Amber 1 - Class 1 2 - Class 2

TAIL LIGHTS



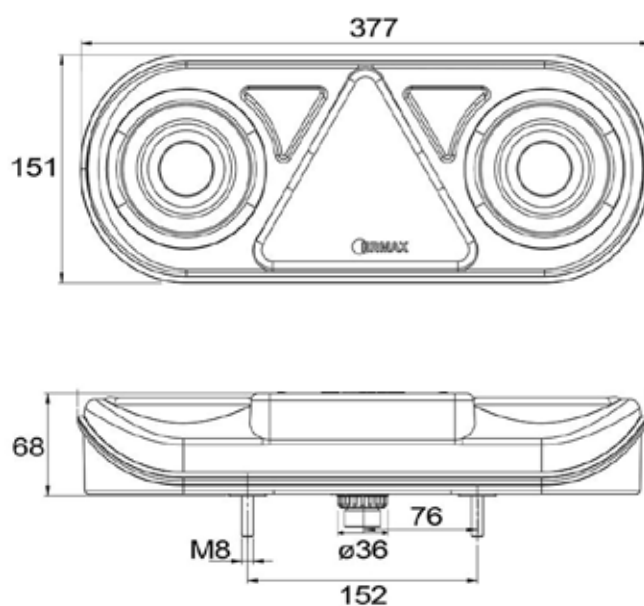
TM1 LED Tail lights 24V



Pos. 1



Pos. 2



Description

Lens:	PMMA
Housing:	ABS
Dimension:	380 x 150 x 70 mm
Bolt hole distance:	152 mm / M8

TM1 LED Tail lights 24V



Operation voltage	IP Rating	Left ← Right →	Position Stop Dir. indicator Reverse Rear fog Reflex reflector	License plate	Side marker	Outer end marker	Connection 7 poled AMP socket	Pos.	Article No.
24V	IP69K	←	✓				✓	1	098 216 701 92.0000.1515
24V	IP69K	→	✓				✓	1	098 216 702 92.0000.1516
24V	IP69K	←	✓	✓	✓		✓	1	098 216 707 95.0000.0001
24V	IP69K	→	✓	✓	✓		✓	1	098 216 708 95.0000.0084
24V	IP69K	←	✓			✓	✓	2	098 216 713 92.0000.1519
24V	IP69K	→	✓			✓	✓	2	098 216 714 92.0000.1520
24V	IP69K	←	✓	✓		✓	✓	2	098 216 718 92.0000.1522
24V	IP69K	→	✓	✓		✓	✓	2	098 216 717 92.0000.1521

Spare parts



Pos. 1



Pos. 2

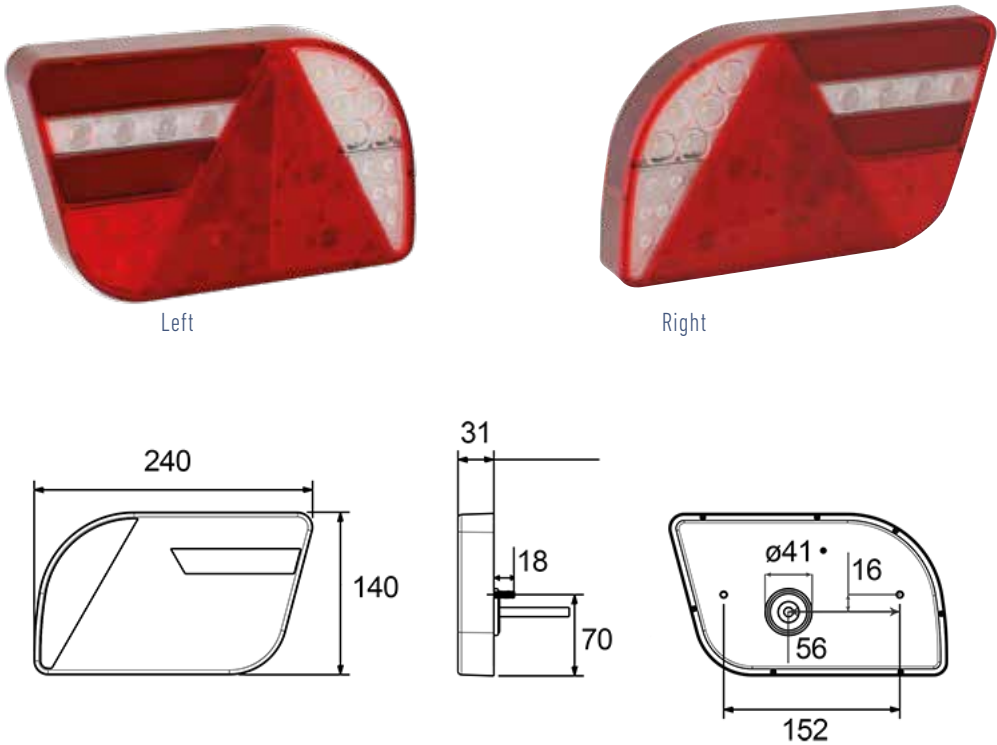


Pos. 3

Protection cover for tail lights		1	098 296 710 92.0000.6877
LED Outer end marker – left		2	098 241 470 92.0000.7347
LED Outer end marker – right		3	098 241 471 92.0000.7348

TM3 LED Tail lights with Eternal Light™ 12/24V

E EMC

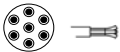


Description

Position light with Eternal Light™

- Lens: Polycarbonate
- Housing: ABS
- Dimension: 240 x 140 x 31 mm
- Bolt distance: 152 mm / M6

*) NB - Tthe covers 098296710 are not to be used in combination with angled 7-pin connectors.
By use of covers, please choose straight 7-pin connectors



Operating voltage	IP Rating	Left ← Right →	Position Stop Dir. indicator	Reverse Rear fog Reflex reflector	Connection	Cable length	Article No.
12/24V	IP69K	→	✓	✓	7 poled AMP socket		098 215 235 * 92.0000.5463
12/24V	IP69K	←	✓	✓	7 poled AMP socket		098 215 237 * 92.0000.5464

TM9 LED Tail lights 12/24V

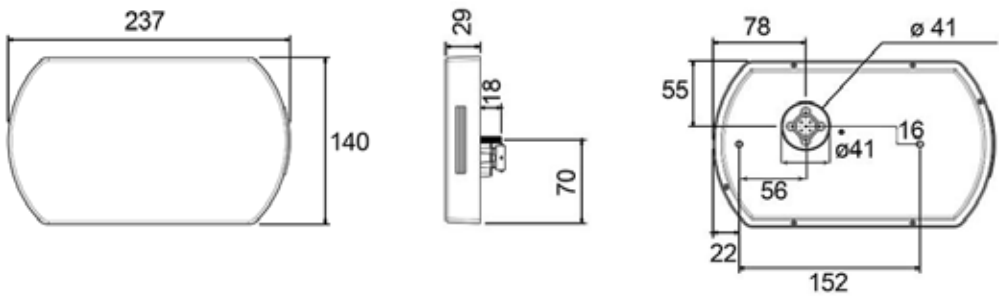
E EMC



Left



Right



Description

Lens:	Polycarbonate
Housing:	ABS
Dimension:	237 x 140 x 29 mm
Bolt distance:	152 mm / M6

*) NB - The covers 098296710 are not to be used in combination with angled 7-pin connectors.
By use of covers, please choose straight 7-pin connectors



Operating voltage	IP Rating	Left ← Right →	Position Stop	Reverse	Rear fog	License plate	Reflex reflector	Connection 7 poled AMP socket	Article No.
12/24V	IP69K	←	✓		✓	✓	✓	✓	098 215 171 * 92.0000.6619
12/24V	IP69K	→	✓	✓		✓	✓	✓	098 215 173 * 92.0000.6620

TM10 Hybrid or Full-LED Tail lights 24V - for trailer



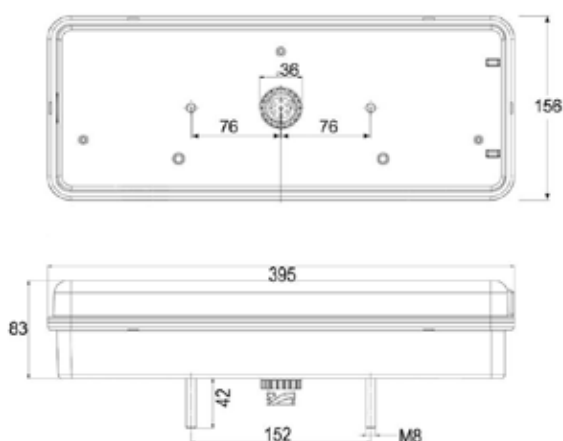
Eternal Light®



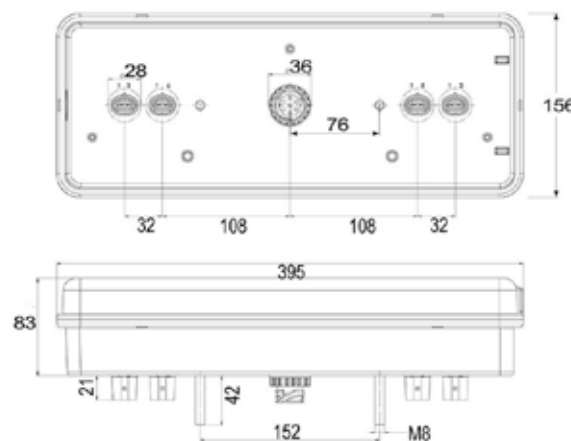
Hybrid



Full-LED

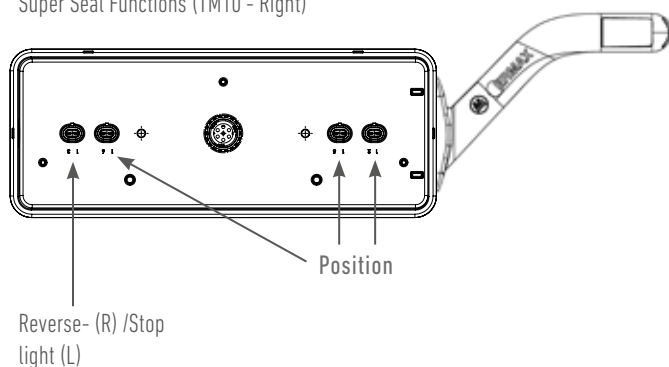


AMP socket placed at the back



AMP socket and 2x2 Super Seal placed at the back

Super Seal Functions (TM10 - Right)



Ex: TM10 with outer end marker light, screw mounted on the side
 098 216 430 / 431
 098 216 530 / 531

Description

Lens:	Impact resistant polycarbonate
Housing:	Polypropylen (PP)
Dimension:	390 x 155 x 80 mm
Bolt distance:	152 mm / M8

*) Super Seal Functions for 3 x Position light, 1 x Stop (L) & Reverse (R)

Outer end marker (098 241 438 / 098 241 439 (R/L)) with 300 mm connection cable and Super Seal plug are mounted at the side of the tail light. This allows the outer end marker to be connected to the tail lights or the rear cable with the Super Seal connection.



TM10 Hybrid or Full-LED Tail lights 24V - for Trailer



Type	Operating voltage	IP Rating	Right → Left ←	Position Stop Dir. indicator Reverse Rear fog Side marker Reflex reflector	License plate	Outer end marker	Connection 7 poled AMP socket Direction:	2x2 Super Seal Placed at the back*	Article No.
Hybrid	24V	IP54	→	✓			Rear		098 216 400 92.0000.6367
Hybrid	24V	IP54	←	✓			Rear		098 216 401 92.0000.6368
Hybrid	24V	IP54	→	✓	✓		Rear		098 216 402 92.0000.6369
Hybrid	24V	IP54	←	✓	✓		Rear		098 216 403 92.0000.6370
Hybrid	24V	IP54	→	✓			Rear	✓	098 216 404 92.0000.6371
Hybrid	24V	IP54	←	✓			Rear	✓	098 216 405 92.0000.6372
Hybrid	24V	IP54	→	✓	✓		Rear	✓	098 216 406 92.0000.6373
Hybrid	24V	IP54	←	✓	✓		Rear	✓	098 216 407 92.0000.6374
Full-LED	24V	IP54	→	✓			Rear		098 216 500 92.0000.6383
Full-LED	24V	IP54	←	✓			Rear		098 216 501 92.0000.6384
Full-LED	24V	IP54	→	✓	✓		Rear		098 216 502 92.0000.6385
Full-LED	24V	IP54	←	✓	✓		Rear		098 216 503 92.0000.6386
Full-LED	24V	IP54	→	✓			Rear	✓	098 216 504 92.0000.6387
Full-LED	24V	IP54	←	✓			Rear	✓	098 216 505 92.0000.6388
Full-LED	24V	IP54	→	✓	✓		Rear	✓	098 216 506 92.0000.6389
Full-LED	24V	IP54	←	✓	✓		Rear	✓	098 216 507 92.0000.6390
Full-LED	24V	IP54	→	✓		45° (Long)	Rear	✓	098 216 530 92.0000.7790
Full-LED	24V	IP54	←	✓		45° (Long)	Rear	✓	098 216 531 92.0000.7791

TM10 Hybrid or Full-LED Tail lights 24V - for truck



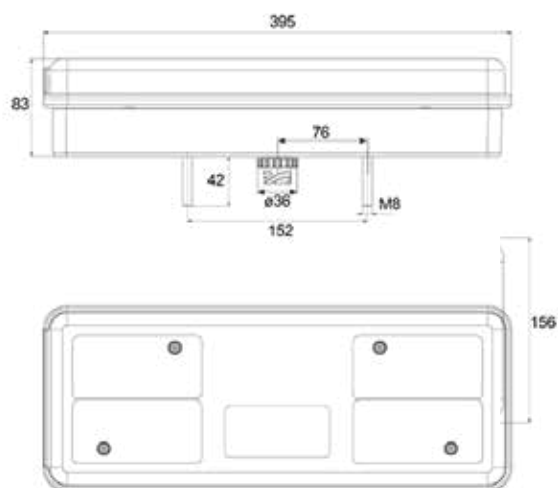
Eternal Light®



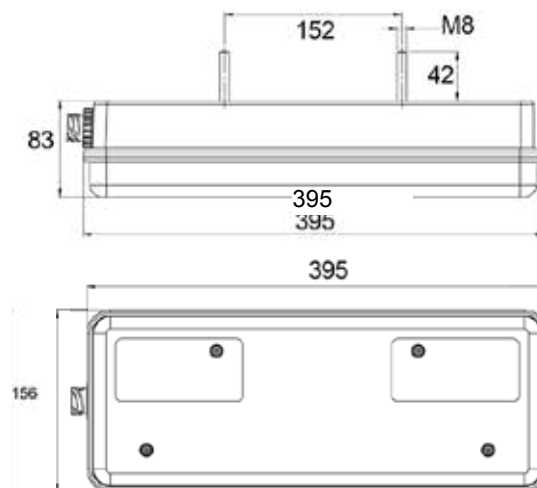
Hybrid



Full-LED



AMP socket placed at the back



AMP socket placed at the side

Description

Lens:	Impact resistant polycarbonate
Housing:	Polypropylen (PP)
Dimension:	390 x 155 x 80 mm
Bolt distance:	152 mm / M8

TM 10 Hybrid or Full-LED Tail lights 24V - for truck



Type	Operation voltage	IP Rating	Right → Left ←	Position Stop Dir. indicator Reverse Rear fog Seiten- markierung	License plate	Outer end marker	Connection 7 poled AMP 1.5 socket Direction:	Article No.
Hybrid	24V	IP54	→	✓	✓		Rear	098 216 410 92.0000.6377
Hybrid	24V	IP54	←	✓	✓		Rear	098 216 411 92.0000.6378
Hybrid	24V	IP54	→	✓			Side	098 216 412 92.0000.6379
Hybrid	24V	IP54	←	✓			Side	098 216 413 92.0000.6380
Hybrid	24V	IP54	→	✓	✓		Side	098 216 414 92.0000.6381
Hybrid	24V	IP54	←	✓	✓		Side	098 216 415 92.0000.6382
Full-LED	24V	IP54	←	✓			Rear	098 216 509 92.0000.6392
Full-LED	24V	IP54	→	✓	✓		Rear	098 216 510 92.0000.6393
Full-LED	24V	IP54	→	✓			Side	098 216 512 92.0000.6395
Full-LED	24V	IP54	←	✓			Side	098 216 513 92.0000.6396

Spare parts TM10 Hybrid or Full-LED Tail lights 24V - truck & trailer



Pos. 1



Pos. 2



Pos. 3

Spare parts / Accessories

Lens, Right	1	098 296 354 92.0000.6640
Lens, Left	1	098 296 355 92.0000.6641
Protection cover for tail light	2	098 296 710 92.0000.6877
LED Outer end marker 12/24V, Right - 300 mm connection cable with Super Seal plug	3	098 241 438 92.0000.6355
LED Outer end marker 12/24V, Left - 300 mm connection cable with Super Seal plug	3	098 241 439 92.0000.6356

TM11 LED Tail lights 12/24V

Tail light for Standard vehicles

Modern light- and LED-Technology

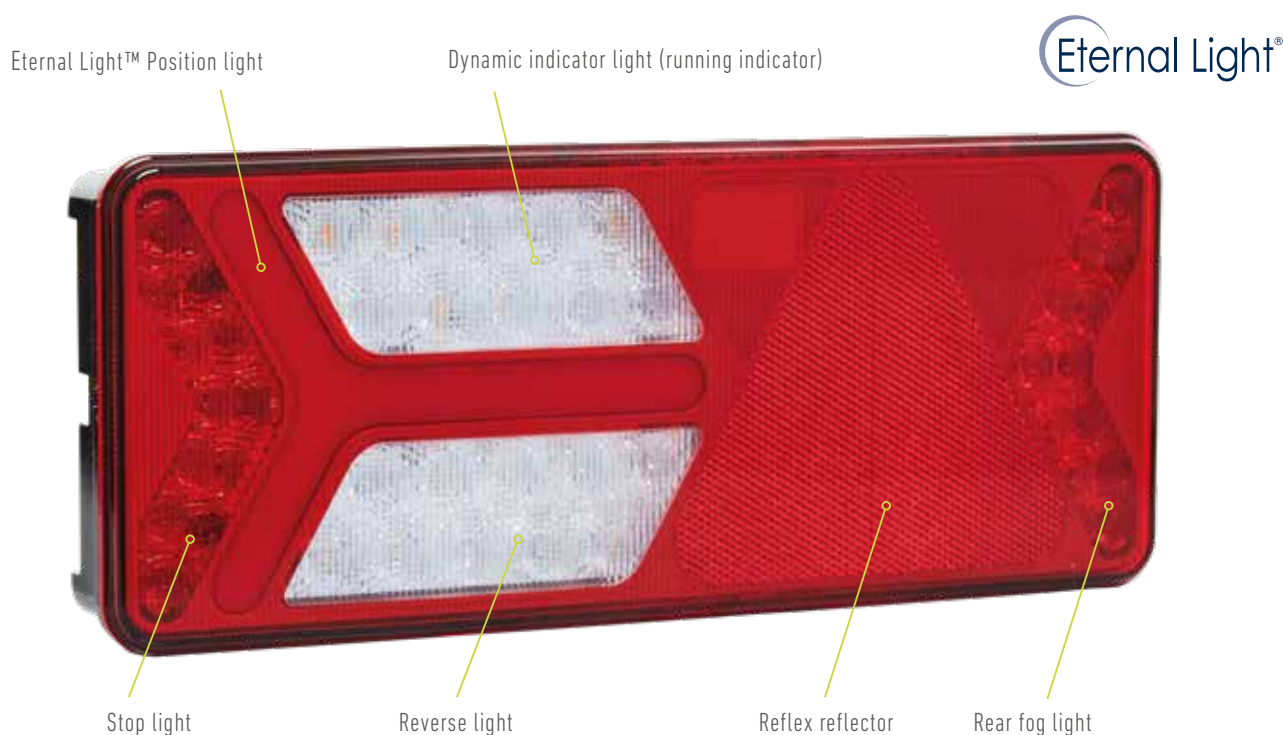
The compact and modern 7-function tail light from ERMAX

As highlights the full-LED tail light from Ermax offers a thin design, modern dynamic indicator light, impact-resistant lens and integration of all legal control units.

The intelligent and up to date control unit of the Ermax TM11 makes the universal connection of the tail light to any truck wanted possible – without failure warnings. This is also valid for the indicator failure control – and the brake light control.

The indicator light function in the side markers, lights simultaneously with the tail light according to ECE 48. This function is fully integrated in the TM11 tail light.

Superior durability, modern functionality and a modern design, come together in the Ermax TM11 tail light and making it a real highlight.



Highlights

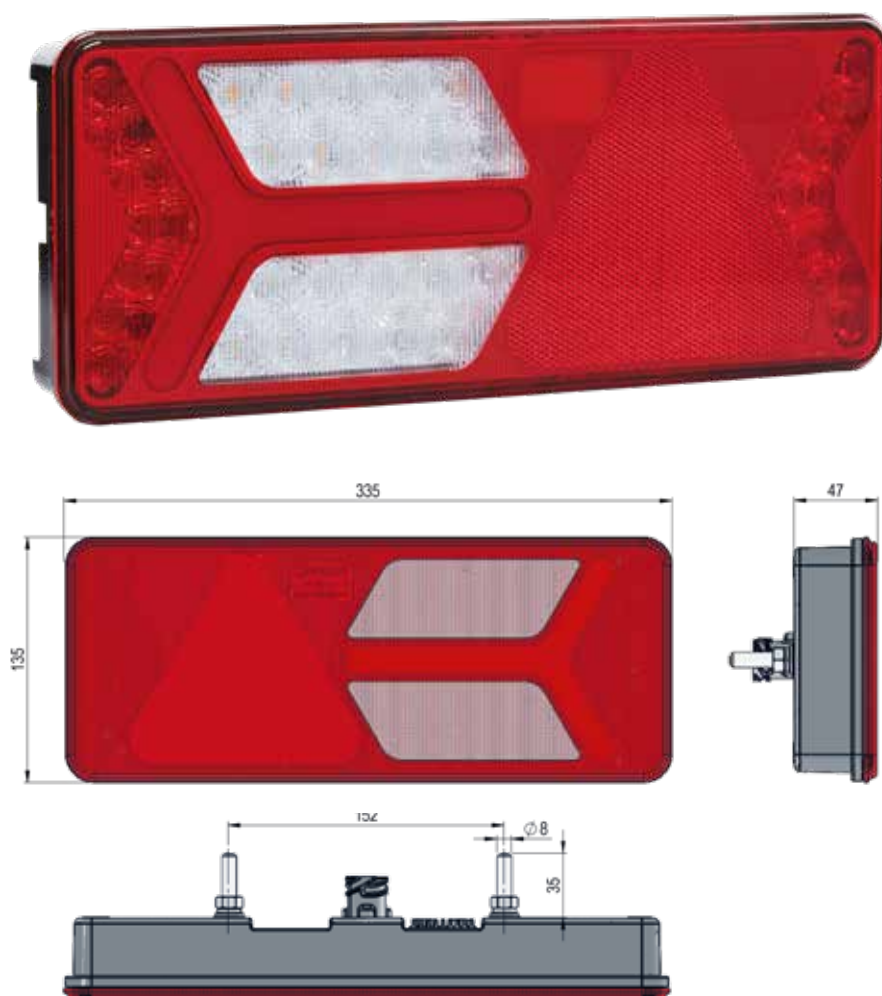
- Unbreakable – Impact resistant lens of polycarbonat
- Multi voltage 12/24V
- Modern dynamic indicator light (running indicator)
- Built-in indicator failure control according to ECE 48 – compatibel with all brands and year of EU Trucks*
- Built-in stop light failure control according to ECE 48 – compatibel with all brands and year of EU Trucks*
- Built-in control of flashing side marker lights (SIMAC®) according to ECE 48 supp. 06 (Since nov. 2017)
- Certified in accordance with all relevant standards and regulations in Europe

* Stand 2018

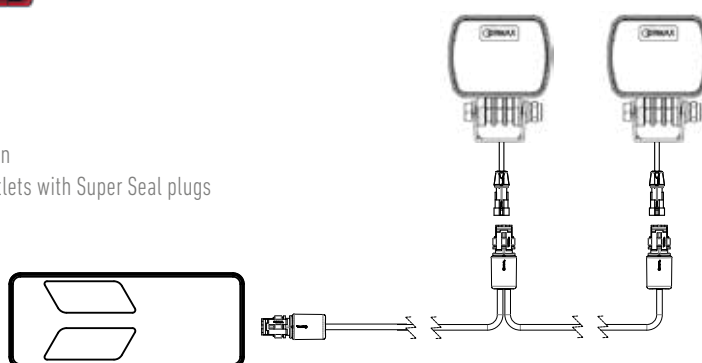
TM11 Tail lights 12/24V - Full-LED for trailer



Eternal Light®



Reverse light connected as a chain
- side cable with 1 inlet and 2 outlets with Super Seal plugs



2 pieces of Ermax reverse lights or work lights are allowed to be connected to an Ermax tail light (Max 52W)

Description

Lens:	Impact resistant polycarbonate
Direction indicator:	Progressive direction indicator light (running indicator)
Housing:	Impact resistant polycarbonate
Dimension:	335 x 135 X 47 mm
Bolt distance:	152 mm / M8
IP Rating:	IP69K

*) Super Seal Functions for 3 x position light incl. SIMAC, 1 x Stop (L) & Reverse (R)

TM11 Tail lights 12/24V - Full-LED for trailer



Type	Right → Left ←	Position Stop Dir. indicator Reverse Rear fog Reflex reflector	Outer end- marker	Connection 7 poled AMP socket Direction:	2x2 Super Seal Placed at the back*	SIMAC control integrated	LED control integrated	Article No.
Full-LED	→	✓	Optional	Rear	✓	✓	--	098 216 550 92.0000.7653
Full-LED	←	✓	Optional	Rear	✓	✓	--	098 216 551 92.0000.7655
Full-LED	→	✓	Optional	Rear	✓	✓	Dir. indicator light	098 216 552 92.0000.7657
Full-LED	←	✓	Optional	Rear	✓	✓	Dir. indicator light	098 216 553 92.0000.7659
Full-LED	←	✓	Optional	Rear	✓	✓	Dir. indicator- & Stop light	098 216 555 92.0000.7661
Full-LED	→	✓	300 mm		✓	✓		098 216 558 92.0000.8122
Full-LED	←	✓	300 mm		✓	✓		098 216 559 92.0000.8123

PREMIUM: 098 216 552 (R) & 098 216 555 (L) SIMAC, LED

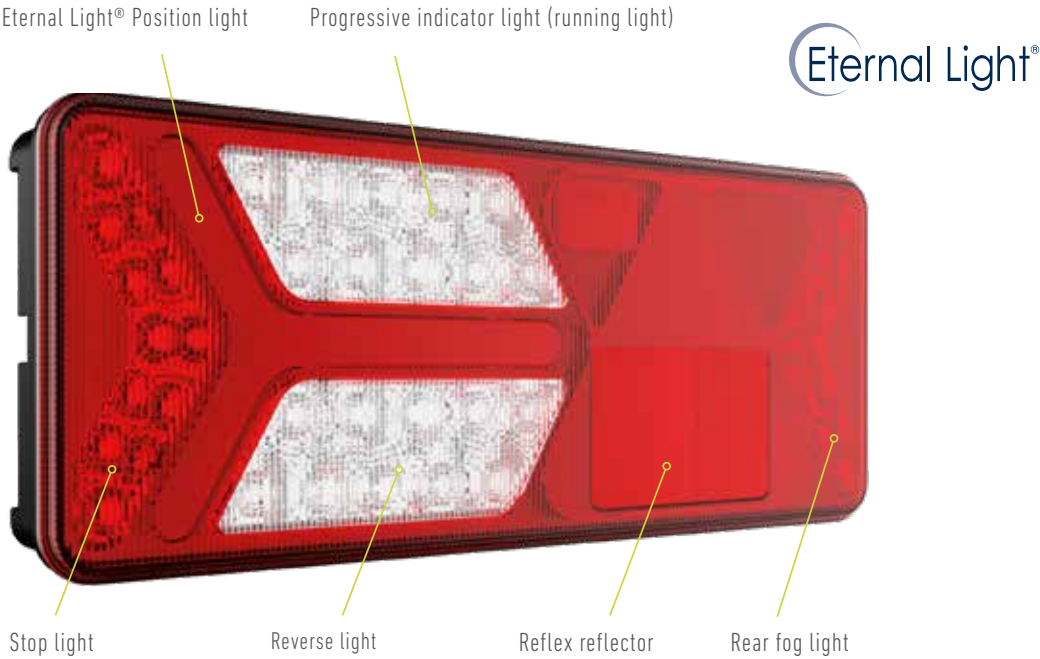
Outer end marker are optional

and can be mounted at any version afterwards

Article no. suitable for outer end marker is 098 241 448 / 098 241 449 (R/L). The outer end marker is mounted at a holder and the Super Seal plug at the outer end marker is mounted at the back of the tail light in the Super Seal socket



TM11 Tail light 12/24V - LED for Truck



Type	Right → Left ←	Position Stop Dir. indicator Reverse Rear fog Reflex reflector	Outer end marker	Connection 7 poled AMP socket Direction:	2x2 Super Seal placed at the back*	SIMAC control integrated	LED control integrated	Article no.
LED	→	✓	Optional	Rear	✓	✓	Optional	098 216 570 92.0000.8181
LED	←	✓	Optional	Rear	✓	✓	Optional	098 216 571 92.0000.8182

LED failure control for monitoring of direction indicator and/or stop light is optional

Some vehicles can be reprogrammed to use LED tail light, whereas other vehicles do not offer this facility. In these cases, using ERMAS LED failure control, it is possible to achieve the correct settings, and still meet all regulations.

The truck version of ERMAS TM11 tail lights is already prepared for integrating the LED failure control of the direction indicator and stop light functions. One LED failure control unit (098298149) pr. lighting function should be mounted in each of the ERMAS TM11 tail lights. One unit for direction indicator light, if the direction indicator light is not recognized by the truck. Two units, if both lighting functions are not recognized by the truck.



+



LED control for direction indicator and stop light

LED control unit for direction indicator and stop light (098298149)
- mounted in the back of the TM11 light

Spare parts & Accessories TM11 Tail lights 12/24V



Pos. 1



Pos. 2



Pos. 3



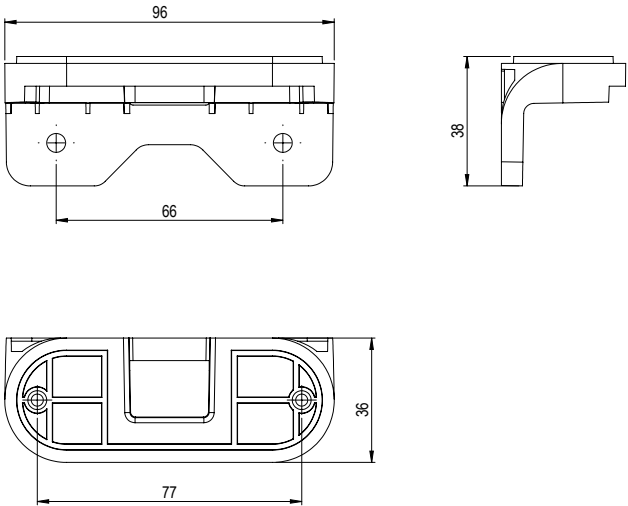
Pos. 4



Pos. 5

Holder of plastic, angled, for outer end marker Delivered with 4 pcs. stainless torx screws. Mounting hole distance: 77 mm	1	098 292 610 92.0000.7668
LED outer end marker 12/24V, Right - 300 mm connection cable with Super Seal plug	2	098 241 448 92.0000.6355
LED outer end marker 12/24V, Left - 300 mm connection cable with Super Seal plug	2	098 241 449 92.0000.6356
Protection cover for tail light	3	098 296 710 92.0000.6877
Cover of LED control - For covering of SLD connection at TM11 Tightens and protects contacts for SLD-unit	4	098 296 700 92.0000.7670
LED-Control unit 12/24V for TM11 Tail light built-in For monitoring direction indicator or stop light. One unit per function is needed For mounting at the back of the housing light. Connection with 3 x spring-loaded contacts	5	098 298 149 92.0000.7671

Pos. 1



Unique design – and rather cool

Modern technology and design combined

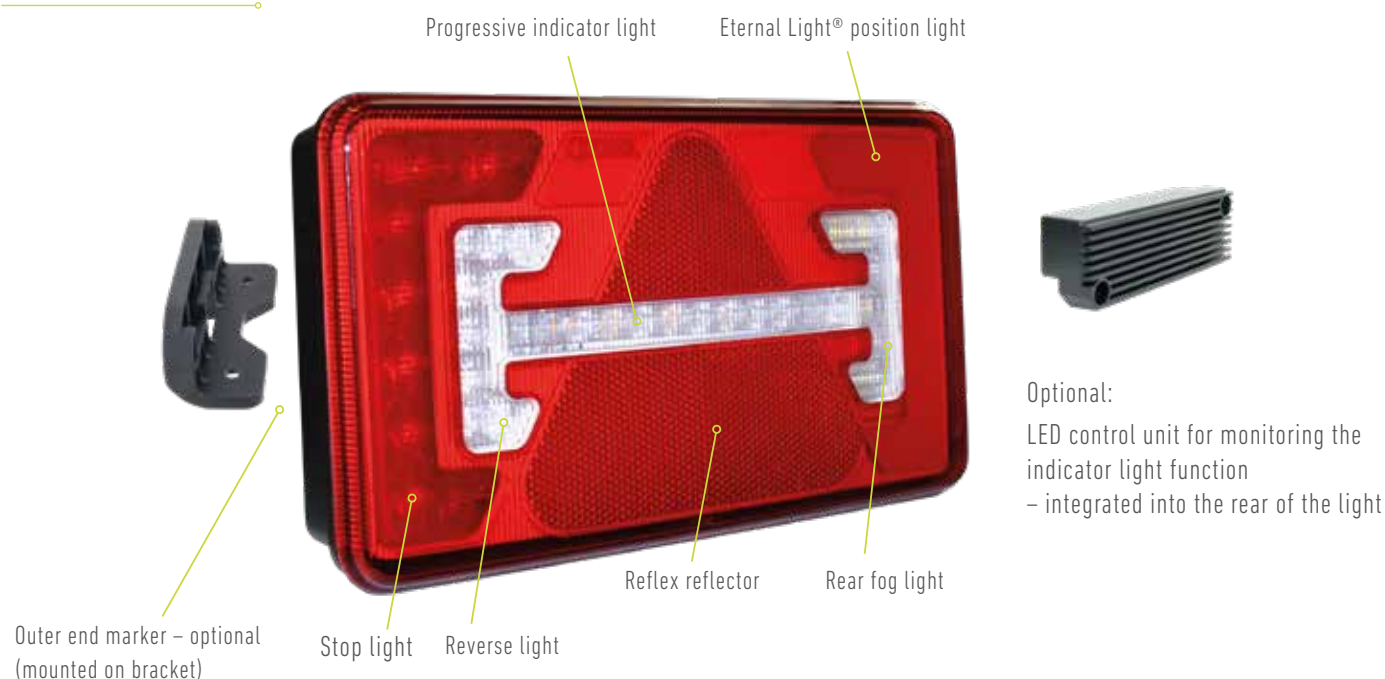
ERMAX TM12 LED tail light is the market's most compact tail light with a built-in LED control unit. The design is based on the newest light and LED technology, and meets the toughest standards in terms of technique, quality and functionality.

The TM12 tail light is developed with 100% LED technology and with a unique, harmonious design – with white optics on the rear fog light function as well as a long modern, dynamic indicator light. Likewise, the Eternal Light® technology is used in the TM12 tail light, whereby a soft, homogeneous and traffic-safe light-picture is obtained.

Due to the compact size, the TM12 tail light is particularly suitable for vehicles with limited mounting or installation space.

Eternal Light®

TM12 – left tail light

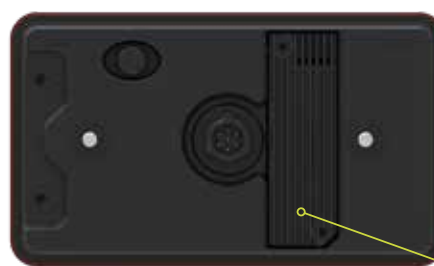


Rear variants



Without LED control unit for indicator light.
7-pole AMP socket.

Cover



With LED control unit for indicator light. 7-pole AMP socket.

LED control unit

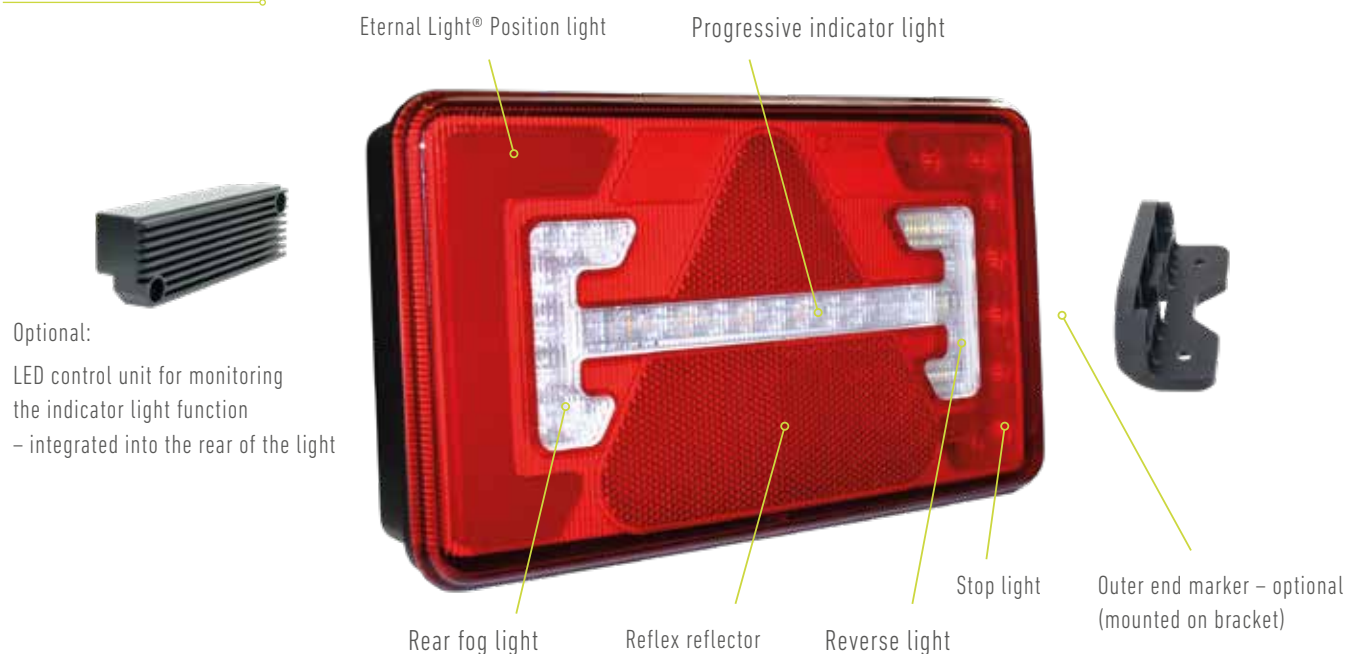
Compact rear light with integrated control unit

Solves many challenges

Highlights

- Housing and lens made of highly resistant polycarbonate
- ERMAX patented position light – Eternal Light® – for optimum traffic safety
- Dynamic indicator light
- Integrated multi-volt 12/24V LED control for monitoring of indicator light function, both ISO 13207 and older vehicles according to ECE R48 (optional)
- Compact – especially suitable for vehicles with limited installation space
- Can be used for both trailer and truck – uniform look
- The market's only tail light with adjustable IP69K license plate light
- ECE-, EMC- and ADR-certified
- IP69K rating

TM12 – right tail light



TM12 tail light – TRUCK variant



Impressive technology

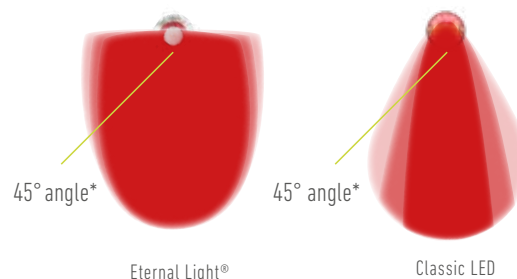
The best choice

Eternal Light® lighting technology – increases traffic safety

ERMAX Eternal Light® technology is designed for the best possible SAFETY when driving. It offers the best possible homogeneous light function and has various advantages based on test results.

- Eternal light® is perceived by other road users earlier than classic LED lights or bulb lights.
- Contributes to reducing the number of accidents in connection with changing lanes and right turns.
- Gives a soft visuality when platooning. Prevents fatigue in case of long-lasting impact and thus also accidents.

Eternal Light®

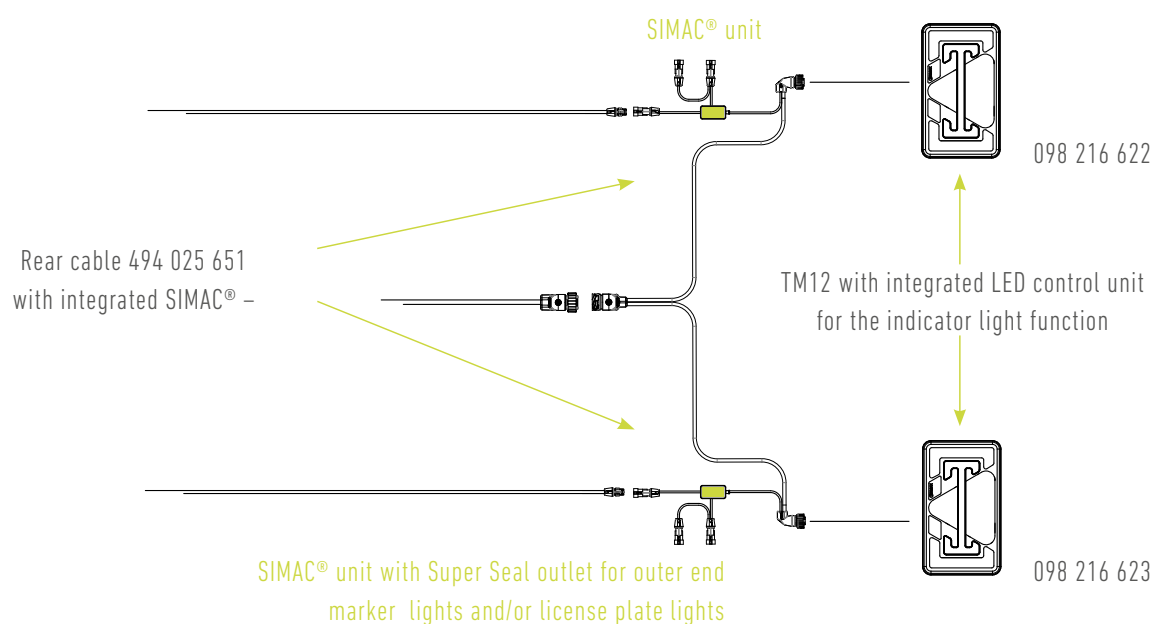


Newest technology for monitoring and controlling lighting functions

The use of the newest technology provides the possibility of an integrated LED control for monitoring the direction indicator light function in the ERMAX TM12 tail light. If monitoring of the stop light function or control of flashing side marker lights is required, ERMAX offers various innovative solutions, which can be intelligently connected as part of the cable system or as Plug-In solution.

- Integrated LED control in the tail lights for monitoring the indicator light function, which uses a technology that is not only limited to ISO 13207, but can be used for all types of vehicles* according to ECE R48.
- Intelligent SIMAC® control of flashing side marker lights according to ECE R48 integrated into the rear cable.

ERMAX cable system with SIMAC®



* Applies to all known brands in EU countries from 11/2019

Variants and functions

For every purpose

TM12 tail light	RH → LH ←	5-pole socket / M6 bolts	7-pole AMP socket / M8 bolts	Position Stop Dynamic indicator	Reverse	Rear fog	Reflex reflector	License plate	LED indicator failure control	Artikel no.
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15-pole front connection (ISO12098)

	→		✓	✓	✓	✓	△			098 216 620 92.0000.8087
	←		✓	✓	✓	✓	△			098 216 621 92.0000.8088
	→		✓	✓	✓	✓	△		✓	098 216 622 92.0000.8089
	←		✓	✓	✓	✓	△		✓	098 216 623 92.0000.8090

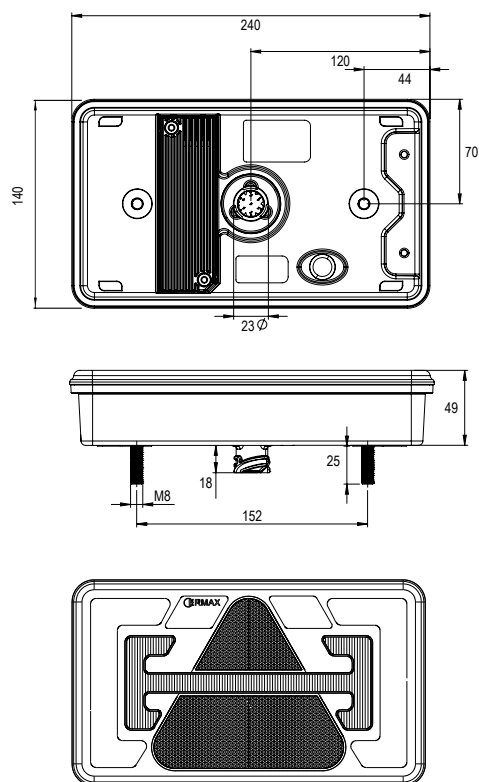
Truck variant

	→		✓	✓	✓	✓	□			098 216 630 92.0000.8090
	←		✓	✓	✓	✓	□			098 216 631 92.0000.8091

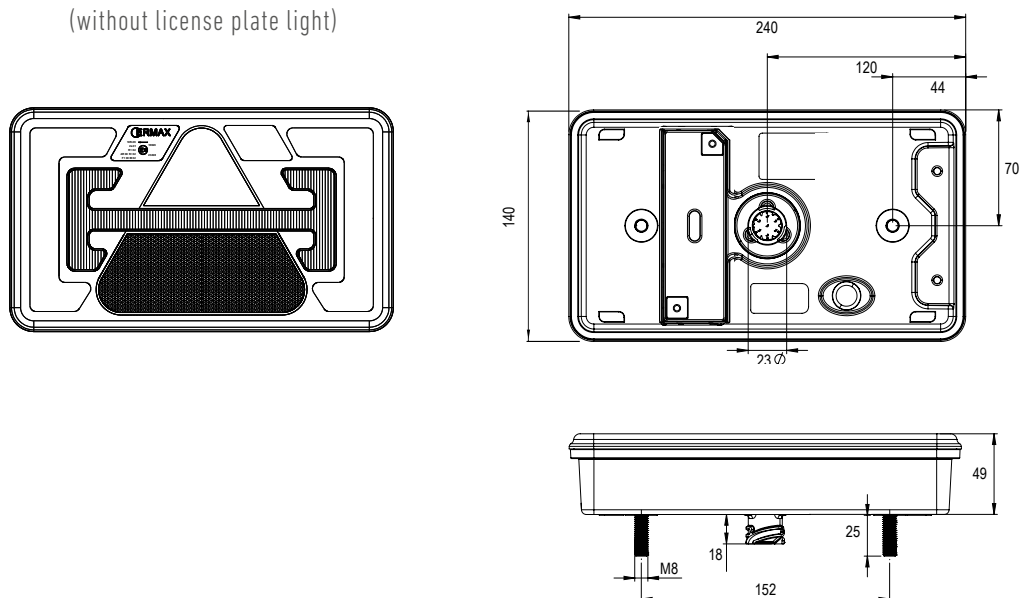
NOTE: Variants with 5-pin connector - see our agricultural catalogue.

Drawings and dimensions

TM12 trailer variant with 7-pole socket
without license plate light



TM12 TRUCK variant with 7-pole socket
(without license plate light)



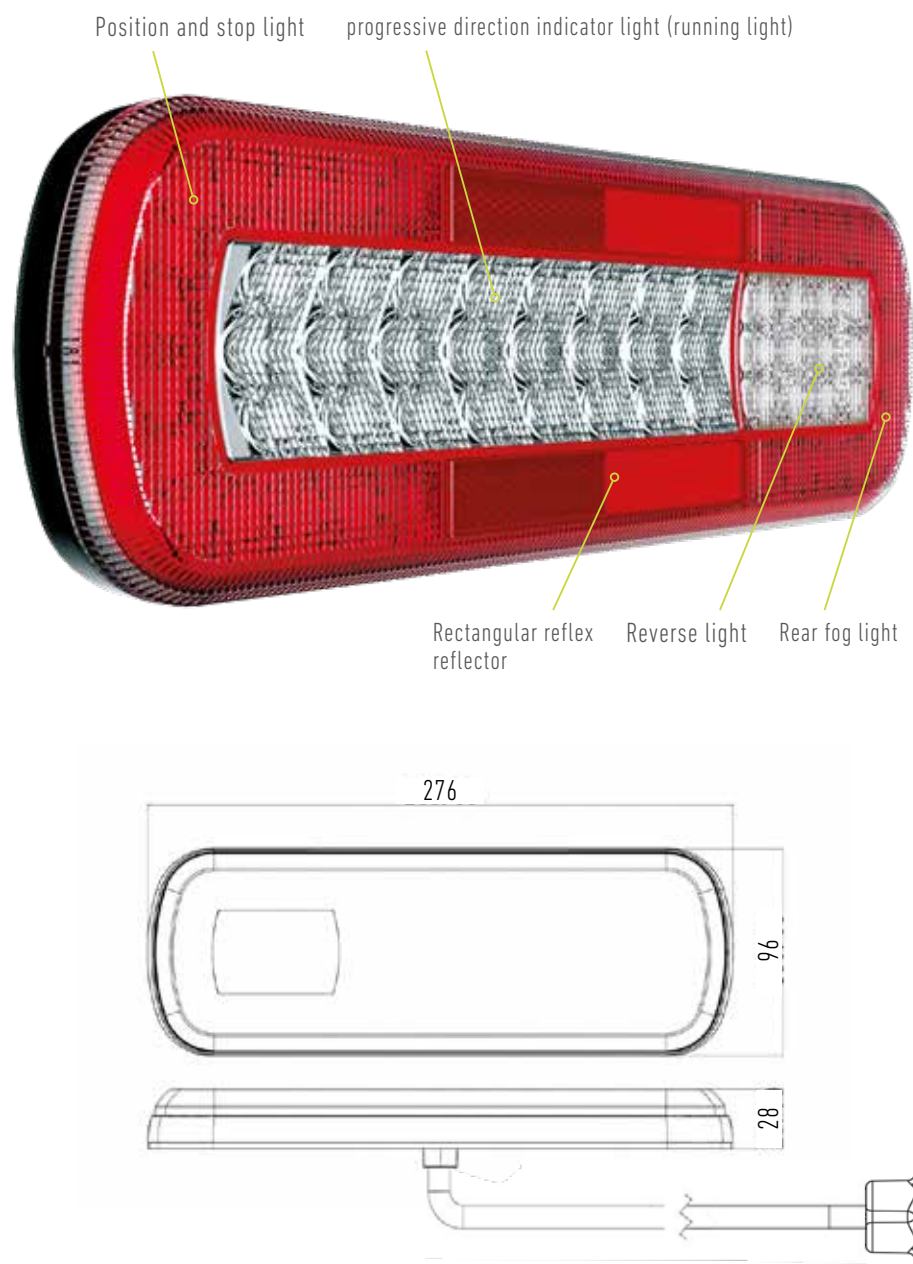
Spare parts and accessories



Spare parts and accessories

Bracket, angled, made of plastic – for mounting of outer end marker light Supplied with 2 pcs. stainless Torx screws – bolt hole distance of 77 mm	1	098 292 610
LED outer end marker light 12/24V, right / left – 300 mm connection cable with Super Seal plug	2	098 241 218
LED outer end marker light 12/24V, right – 300 mm connection cable with Super Seal plug	3	098 241 448
LED outer end marker light 12/24V, left – 300 mm connection cable with Super Seal plug	3	098 241 449
Protection cover, plastic, for tail light – bolt hole distance of 152 mm	4	098 296 705
Protection cover – to be used on the TM12 tail light if the LED control unit is removed Tightens and protects the contacts of the LED control unit	5	098 296 700
LED control unit 12/24V for mounting on TM12 tail light for controlling of the indicator light Connection with 3 spring loaded contacts	6	098 298 149

TM15 LED Tail light 12/24V



Description

Lens:	Impact resistant polycarbonate
Direction indicator:	Dynamic direction indicator light(running light)
Housing:	Impact resistant polycarbonate
Dimension:	283 x 100 x 29 mm
Bolt distance:	152 mm / M8
Working temperature:	-40°C - +65°C
IP Rating:	IP69K

Consumption per lighting function

Position light:	0,6W
Stop light:	3,1W
Direction indicator light:	3,1W
Reverse light:	2,8W
Rear fog light:	3,6W

TM15 LED Tail light 12/24V



Type	Right → Left ←	Position Stop Progressive dir. indicator Reverse Rear fog Rectangular reflex reflector	Connection	Cable length	Article no.
LED	→ ←	✓	7 poled AMP socket	300 mm	098 216 590 92.0000.8048

TM15 Tail light LED

Smart, modern 6 function tail light for trucks with dynamic direction indicator light
Long slim design with many LEDs which gives a beautifull and modern light pattern



A classic new developed

The newest technology – integrated LED failure control

The classic ERMAX TM4 LED tail light is well-known and has been used on vehicles all over Europe for many years. Due to new vehicle technology challenges with the light function recognition, ERMAX has new developed the classic TM4 LED tail light. The new TM4 tail light now meets the highest demands in the areas of technique, quality and functionality.

The design and build-in measures of the TM4 tail light have not been changed. Quite NEW is, however, the possibility of getting the tail light with integrated LED failure control for monitoring the direction indicator light and the stop light. This means that the vehicle is able to control the light functions according to ECE regulations.

The integrated LED failure control offers many advantages, as it supports both the ISO 13207 cold test and the state-of-the-art LED monitoring.

TM4 LED Tail light



The integrated LED failure control will solve many challenges

Highlights

- LED tail light with integrated LED control for monitoring the indicator and stop light in accordance with ECE 58.
- Use of a technology that is not only limited to ISO 13207 but also takes over the monitoring of older and new vehicles*.
- Control of flashing side marker lights (SIMAC®) by using rear cable with incorporated SIMAC®.
- Space-saving and fewer interfaces in the wiring harness, as no external control units / control boxes are required.
- Easy and quick mounting. Cost-saving due to reduction of mounting time and no maintenance.
- Classic design which can easily be combined with other existing lights.
- Possibility of a unique red-white-red design.
- D-approval and thus suitable for double mounting.
- IP69K rating of the LED unit (the tail light IP54K).
- ECE-, EMC- and ADR certified.

* Applies to all well-known brands in EU countries from 11/2009

Convincing technology

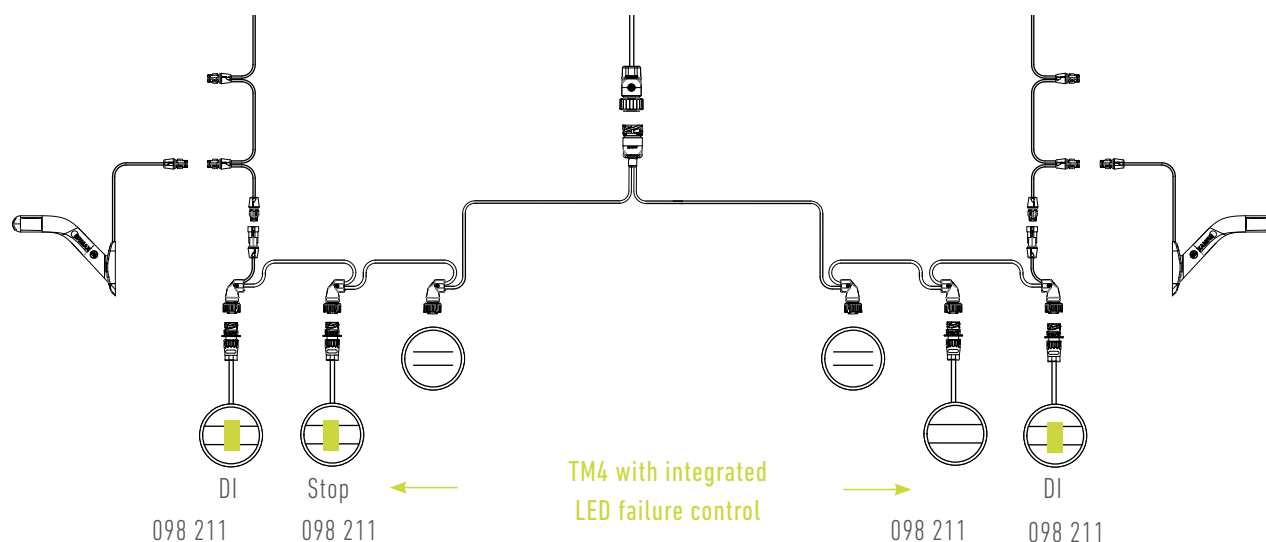
The best choice

The newest technology for monitoring and control of LED light functions

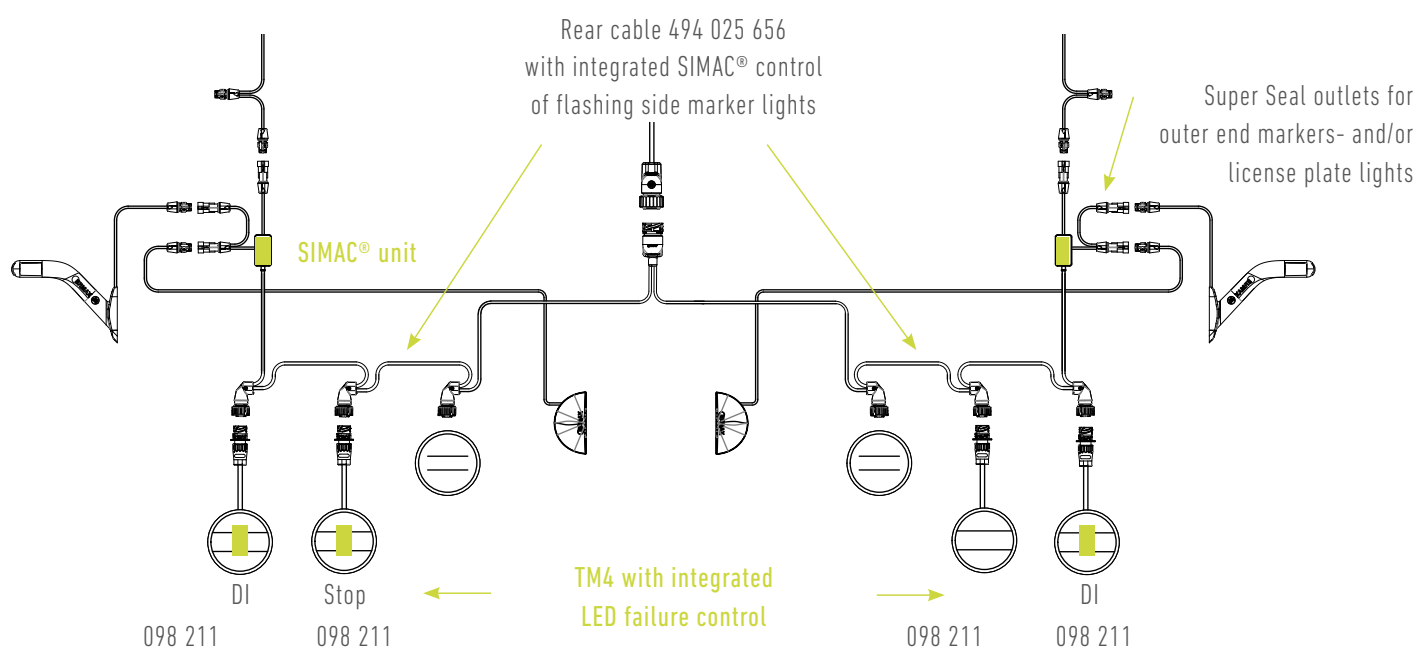
Using the newest technology in the ERMAX TM4 tail light enables integrated LED control to monitor the indicator and stop light function. If control of flashing side marker lamps SIMAC are needed ERMAX offers several innovative solutions, which can be connected easily and intelligently as a part of the cable system or as a plug-in solution.

- The integrated LED control in the tail light for monitoring the indicator and stop light functions, using a technology which is not limited to ISO 13207 and thus can be used for all vehicle* according to ECE R48.
- Intelligent control of the flashing side marker lights SIMAC® according to ECE R48 integrated in the rear cable.

Cable system with LED failure control for direct indicator and stop light function - integrated in the TM4 tail lights



Cable system with LED failure control for direct indicator and stop light function integrated in the TM4 tail lights - and SIMAC® in the rear cable



Variants & functions

for every use

TM4 LED tail light Surface mounting	Voltage	Position Stop Indicator	Reverse	Rear fog	Connection	D-approval	LED control integrated	Article No.
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Classic design - with D approval

	24V	✓			Cable lead through rubber grommet	✓		098 211 340 92.0000.8382
	24V	✓			300 mm cable with 7 pole AMP socket	✓		098 211 342 92.0000.8384
	24V	✓			Cable lead through rubber grommet	✓	Direct indicator light	098 211 341 92.0000.8383
	24V	✓			300 mm cable with 7 pole AMP socket	✓	Direct indicator light	098 211 343 92.0000.8385
	24V	✓			300 mm cable with 7 pole AMP socket	✓	Stop light	098 211 344 92.0000.8386

Classic design - without D approval

	12/24V	✓			Cable lead through rubber grommet			098 212 442 92.0000.6937
	12/24V	✓			300 mm cable with 7 pole AMP socket			098 212 436 92.0000.8255

Unique red-white-red design - with D approval

	12/24V	✓			Cable lead through rubber grommet	✓		098 212 345 92.0000.7553
	12/24V	✓			300 mm cable with 7 pole AMP socket	✓		098 212 339 92.0000.7553
	24V	✓			Cable lead through rubber grommet	✓	Direct indicator light	098 211 361 92.0000.8388
	24V	✓			300 mm cable with 7 pole AMP socket	✓	Direct indicator light	098 211 363 92.0000.8390
	24V	✓			300 mm cable with 7 pole AMP socket	✓	Stop light	098 211 364 92.0000.8391

Variants & functions

for every use

TM4 LED tail light Surface mounting	Voltage	Position Stop Indicator	Reverse	Rear fog	Connection	D-approval	LED control integrated	Article No.
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Combination rear light - reversing and rear fog - without D approval

	12/24V		✓	✓	Cable lead through rubber grommet			098 255 340 92.0000.8308
	12/24V		✓	✓	300 mm cable with 7 pole AMP socket			098 255 342 92.0000.8309

Single-function rear light - reversing and rear fog - without D approval

	24V		✓		Cable lead through rubber grommet			098 256 343 92.0000.7204
	12/24V		✓		300 mm cable with 7 pole AMP socket			098 256 336 92.0000.8257
	12/24V			✓	Cable lead through rubber grommet			098 257 349 92.0000.1608
	12/24V			✓	300 mm cable with 7 pole AMP socket			098 257 336 92.0000.8258

Material description

Lens:	PMMA
Housing:	PP
Measure:	Ø140 x 80 mm
Bolt distance:	45 mm / M6
Working temperature:	-40°C - +65°C
IP-Rating:	IP54 (LED-Einheit: IP69K)

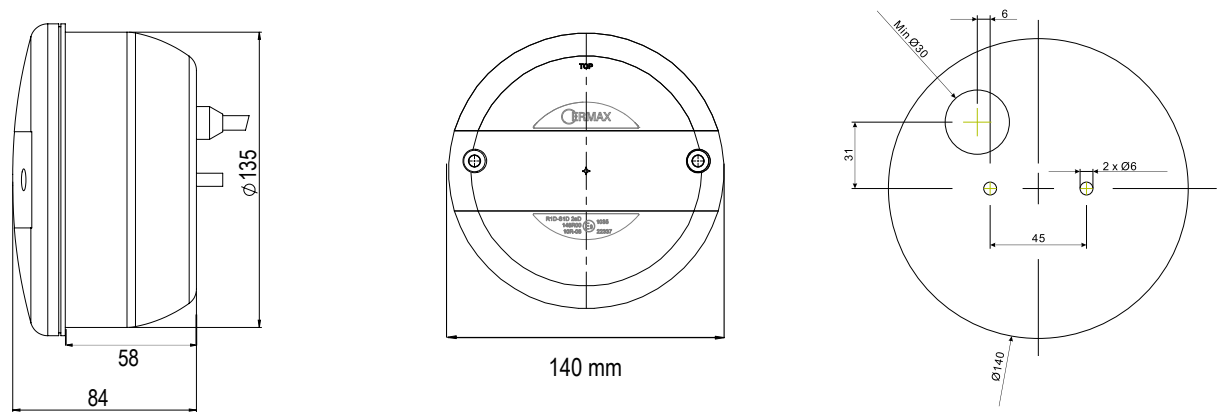
LED failure control on functions that are not preconfigured

The ERMAX TM4 tail light is pre-configured to monitor a specific light function as described above.

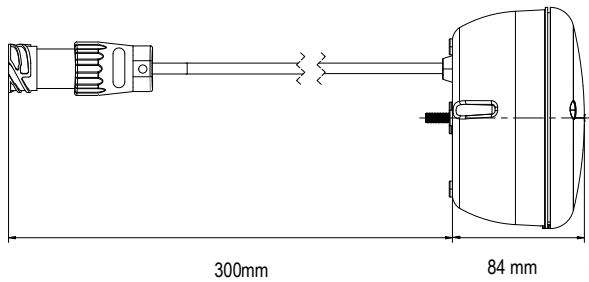
If monitoring of a different light function is required, this can be changed by changing a pair of plug connections. Information can be found on page 7.

Drawings, measure and spare parts

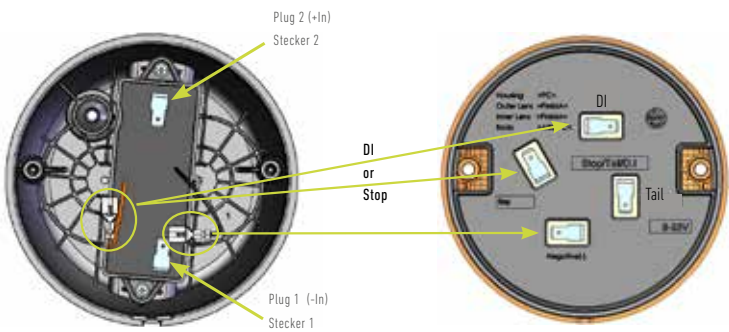
TM4 LED tail light with rubber grommet



TM4 LED tail light with 300 mm connection cable with 7 pole AMP socket



LED failure control on functions that are not preconfigured



Spare parts and accessories



Chrome ring and built-in kit	1	098 292 360 92.0000.1668
Protection cover for tail light	2	098 296 270 92.0000.1681
TM4 housing with LED failure control unit 24V, cable lead through rubber grommet, for monitoring the direct indicator or stop light function	3	098 298 114 92.0000.8426

TM5 LED Tail lights with Eternal Light® and chrome ring 12/24V (Built-in)

The highlights of the ERMAX TM5 tail light in full LED are a modern and recognizable design with Eternal Light® light function for almost every application - both on the trailer and on the truck.

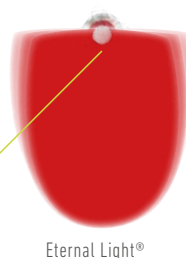
Due to its slim design and ultra-thin installation depth, the TM5 LED tail light is ideal for integration in an underrun protection bar.

Eternal Light®

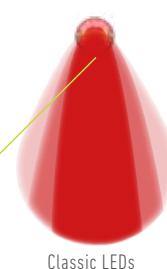
Position light Eternal Light®



45° - Angle*



45° - Angle*



Highlights

- Impact-resistant lens made of polycarbonate
- Can be used for trailer and truck
- Ultra Slimline-Design - Maximum installation flexibility
- Chrome ring is screwed mounted - easy to replace
- ERMAX patented position light – Eternal Light®
- Compatible with the intelligent ERMAX LED failure control and the SIMAC control unit according to ECE 48 regulations
- Certified according to all relevant standards and regulations in Europe

Light technology Eternal Light® – increases road safety

ERMAX Eternal Light® light technology is designed for the best possible SAFETY when driving. It offers the best possible homogeneous light function and has various advantages based on test results.

- Eternal Light® lighting technology – is perceived by other road users earlier than classic LEDs lights or bulb lights.
- Contributes to reducing the number of accidents in connection with changing lanes and right turns.
- Soft visuality when platooning.
- Prevents fatigue in case of long-lasting impact and thus also accidents.

TM5 LED Tail lights with Eternal Light™ and Chrome ring 12/24V (Built-in)



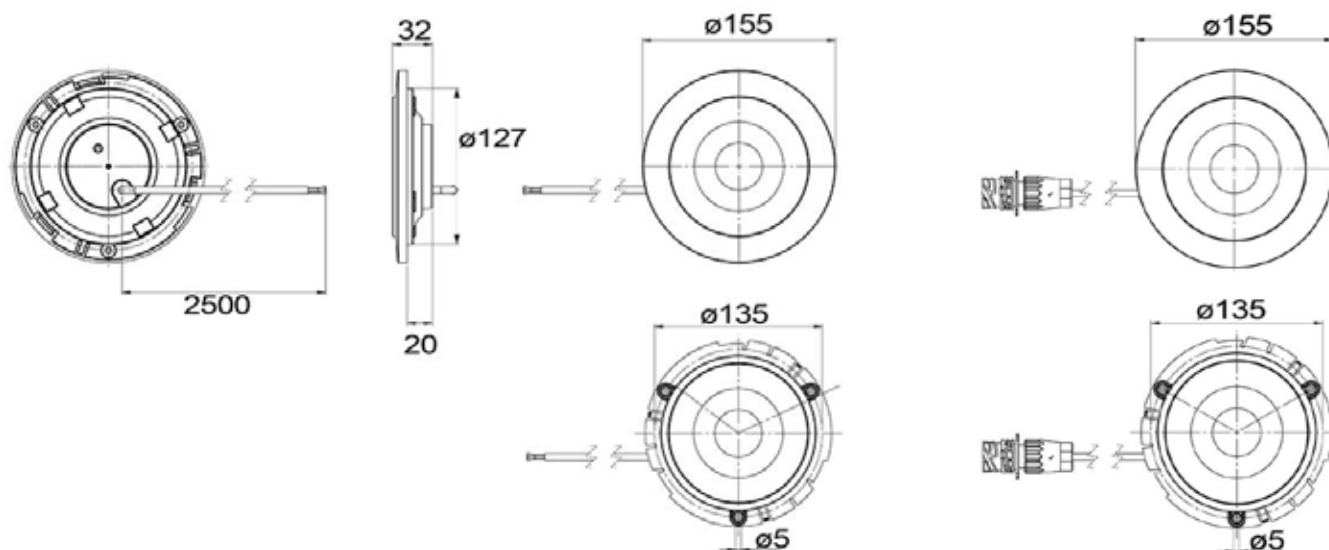
Eternal Light®



Pos. 1



Pos. 2

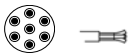


Description

Tail light with Eternal Light™ technology - for Built-in
Ultra thin installation depth

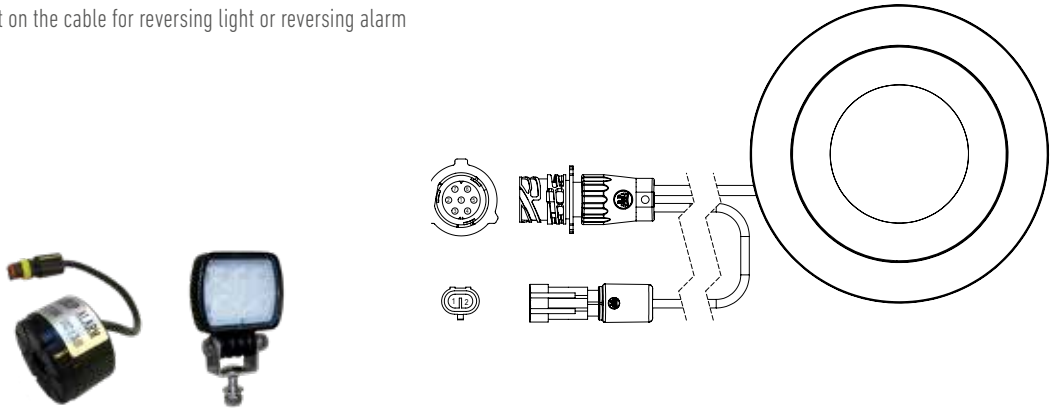
Lens:	Impact resistant polycarbonate
Housing:	Impact resistant polycarbonate
Dimension:	$\varnothing 155 \times 32$ mm
Built-in:	$\varnothing 127$ mm
Bolt distance:	3 pcs $\varnothing 4,5$ mm in 120° spread in $\varnothing 135$ mm
Working temperature:	$-40^\circ\text{C} - +65^\circ\text{C}$
Chrome ring:	Max Temperatur 80°C

TM5 LED Tail lights with Eternal Light™ and Chrome ring 12/24V (Built-in)



Operation voltage	IP Rating	Position Stop Dir. indicator	Reverse Rear fog	Connection	Cable length	Outlet Super Seal	Pos.	Article No.
12/24V	IP69K	✓		Open end	2500 mm		1	098 212 101 92.0000.5868
12/24V	IP69K	✓		7 poled AMP socket	300 mm		1	098 212 102 92.0000.5869
12/24V	IP69K		✓	Open end	2500 mm		2	098 255 101 92.0000.5875
12/24V	IP69K		✓	7 poled AMP socket	300 mm		2	098 255 102 92.0000.5876
12/24V	IP69K		✓	7 poled AMP 1.5 socket	1.200 mm	200 mm cable with Super Seal socket for Reverse alarm / Reverse light	2	098 255 104 92.0000.7479

098 255 104
- with outlet Super Seal socket on the cable for reversing light or reversing alarm



Spare parts



Chrome ring	098 292 215 92.0000.6639
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TM6 LED Tail lights 12/24V (Surface mounting)



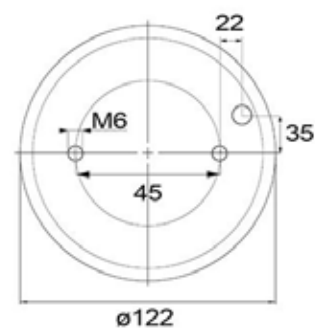
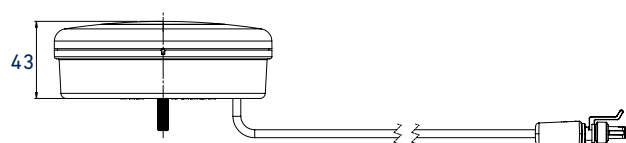
Pos. 1



Pos. 2



Pos. 3



Description

Lens:	PMMA
Housing:	ABS
Dimension:	Ø122 x 43.2 mm
Bolt distance:	45 mm / M6

TM6 LED Tail lights 12/24V (Surface mounting)



Operation voltage	IP Rating	Position Stop	Dir. indicator	Reverse	Rear fog	Cable length	Connection	Pos.	Article No.
12/24V	IP69K	✓	✓			2.500 mm	Open end	1	098 212 022 92.0000.5732
12/24V	IP69K	✓	✓			2.000 mm	7 poled AMP 1.5 plug	1	098 212 027 92.0000.1491
12/24V	IP69K	✓	✓			200 mm	7 poled AMP 1.5 socket	1	098 212 028 92.0000.1492
12/24V	IP69K	✓				2.500 mm	Open end	3	098 212 122 92.0000.5733
12/24V	IP69K			✓	✓	2.500 mm	Open end	2	098 255 022 92.0000.5734
12/24V	IP69K			✓	✓	2.000 mm	7 poled AMP 1.5 plug	2	098 255 027 92.0000.1584
12/24V	IP69K			✓	✓	200 mm	7 poled AMP 1.5 socket	2	098 255 028 92.0000.1585
12/24V	IP69K				✓	1.000 mm	7 poled AMP 1.5 plug	3	098 257 027 92.0000.1606

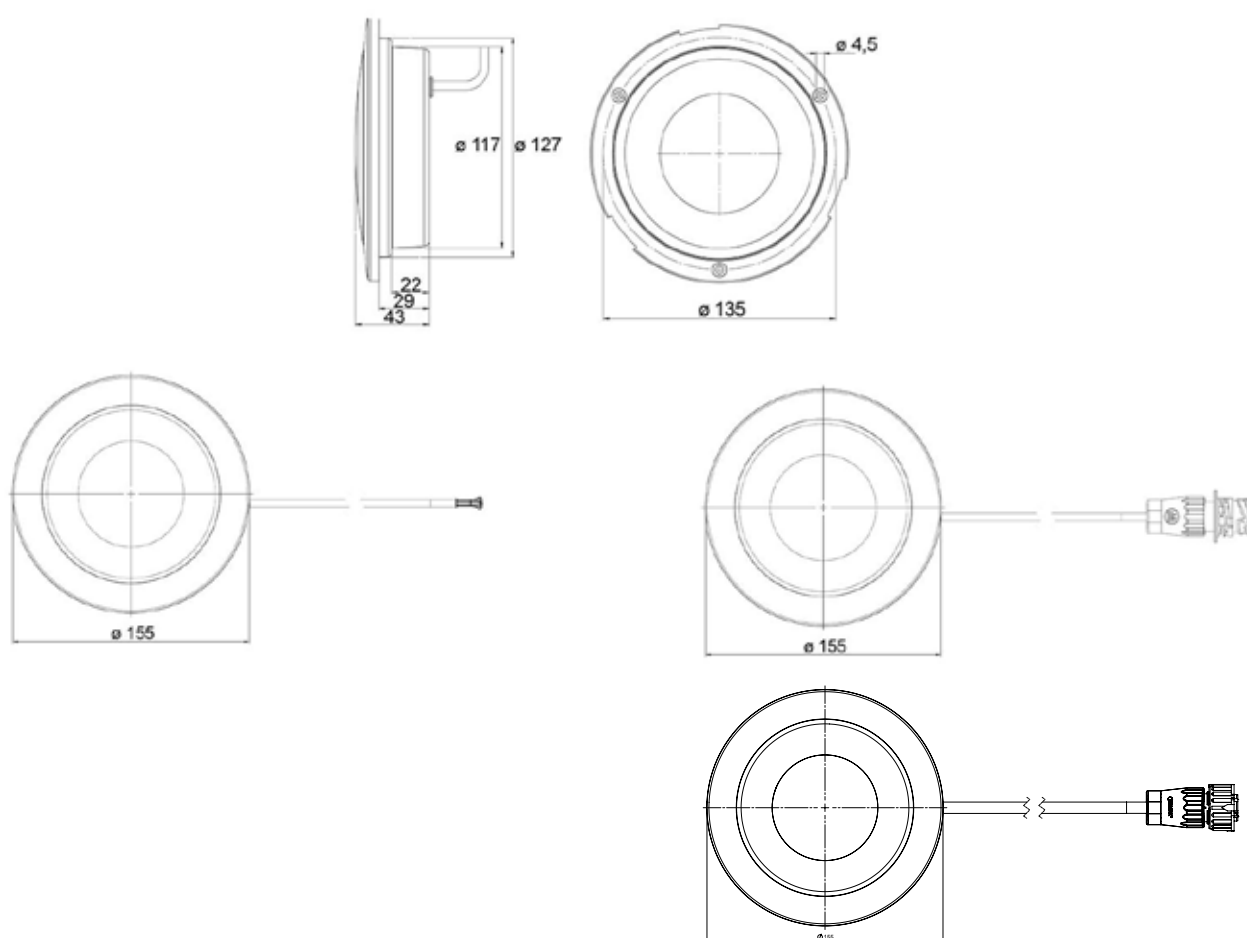
TM7 LED Tail lights 12/24V (Built-in)



Pos. 1



Pos. 2



Description

Lens:	PMMA
Housing:	ABS
Dimension:	Ø155 x 43.2 mm
Bolt distance:	45 mm / M6
Built-in:	Ø127 mm
Mounting holes:	3 pcs Ø4,5 mm in 120° spread in Ø135 mm
Working temperature:	-40°C - +65°C
Chrome ring:	Max Temperatur 80°C

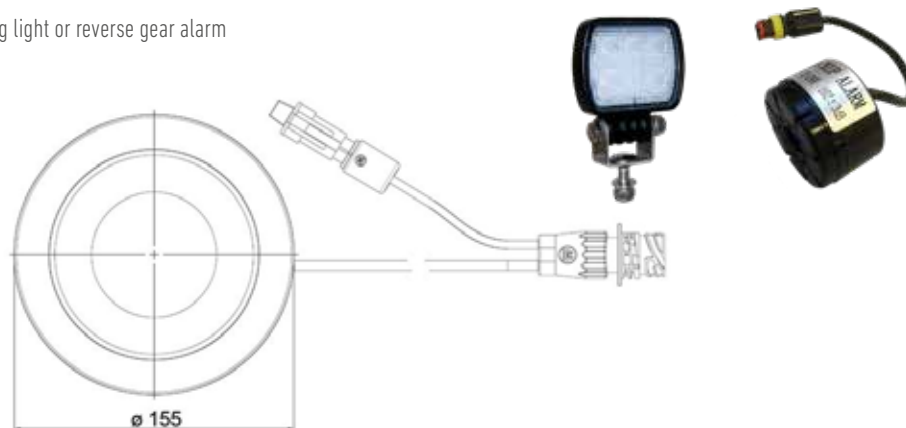
TM7 LED Tail lights 12/24V (Built-in)



Operation voltage	IP Rating	Position Stop Dir. indicator	Reverse Rear fog	Cable length	Connection	Outlet Super Seal	Pos.	Article No.
12/24V	IP69K	✓		2.500mm	Open end		1	098 212 002 92.0000.7475
12/24V	IP69K	✓		300 mm	7 poled AMP 1.5 socket		1	098 212 008 92.0000.7476
12/24V	IP69K	✓		2.000 mm	7 poled AMP 1.5 plug		1	098 212 017 92.0000.0012
12/24V	IP69K		✓	2.000 mm	7 poled AMP 1.5 plug		2	098 255 017 95.0000.0013
12/24V	IP69K		✓	200 mm	7 poled AMP 1.5 socket		2	098 255 018 95.0000.0014
12/24V	IP69K		✓	2.500 mm	Open end		2	098 255 002 95.0000.0014
12/24V	IP69K		✓	1.000 mm	7 poled AMP 1.5 socket	200 mm cable with Super Seal socket for Reverse alarm / - Reverse light	2	098 255 014 95.0000.0014

098 255 104

- with outlet Super Seal socket on the cable for reversing light or reverse gear alarm



Spare parts



Chrome ring Ø155 mm	098 292 216 92.0000.5702
Black ring Ø155 mm	098 292 217 92.0000.9278

TM8 LED Tail lights 12/24V



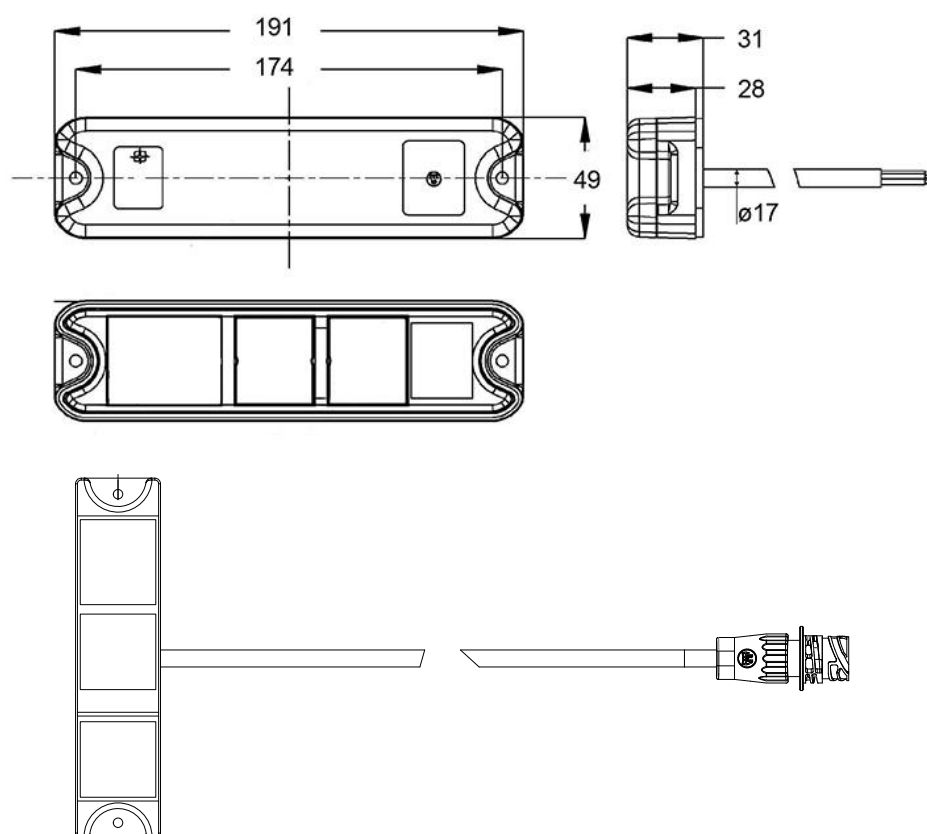
Pos. 1



Pos. 2

With 8 red and 6 yellow SMD LED's

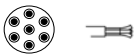
With 8 red and 9 white SMD LED's



Description

Lens:	PMMA
Housing:	ABS
Dimension:	191 x 49,4 x 30 mm
Bolt distance:	174 mm / M5

TM8 LED Tail lights 12/24V



Operating voltage	IP Rating	Position Stop Dir. indicator	Reverse Rear fog	Reflex reflector	Cable length	Connection	Pos.	Article No.
12/24V	IP69K	✓		✓	200 mm	7 poled AMP 1.5 socket	1	098 212 274 92.0000.1500
12/24V	IP69K		✓	✓	200 mm	7 poled AMP 1.5 socket	2	098 255 274 92.0000.1587

TM13 LED Tail light 12/24V

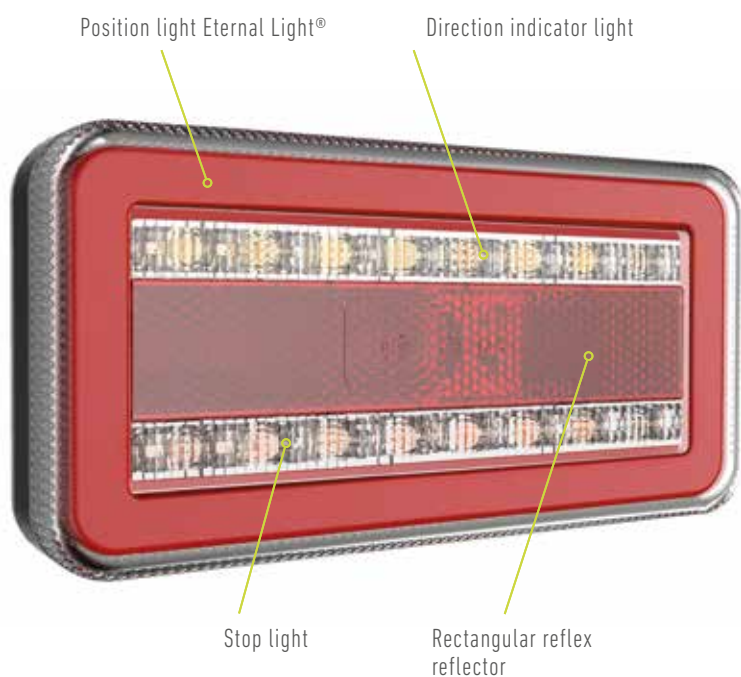
Small and slim design

The perfect solution if the installation place is limited

The new ERMAX TM13 4-functions tail light in full-LED offers highlights as small, slimline and modern design for almost any application – for trailer as well as truck.

The TM13 LED tail light is due to its compact size and its slim design all-round useable and especially suitable for narrow build-in measures.

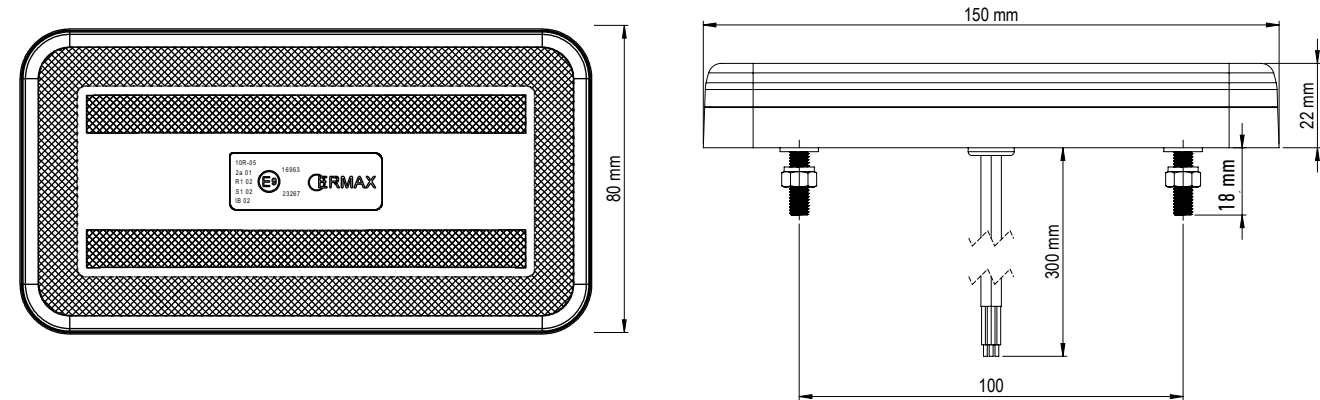
Recognizable design with Eternal Light®, newest light and LED technology and high quality are united in the ERMAX TM13 tail light – and makes the new TM13 tail light to another ERMAX innovation within lighting for heavy vehicles.



Highlights

- Applicable for trailer and truck
- Slimline-design - the perfect solution for limited build-in dimensions
- Suitable for high mounting
- ERMAX patented position light – Eternal Light®
- Compatible with the intelligent ERMAX LED failure control and the SIMAC®-control unit according to ECE 48 regulation
- Certified according to all relevant standards and regulations in Europe

TM13 LED Tail light 12/24V



OBS: IF ONLY VERTICAL MOUNTING, A SEPARATE
LEGAL REFLECTOR MUST BE MOUNTED



Description

- Lens: Polycarbonate
- Housing: Polycarbonate and ABS
- Dimension: 150 x 80 x 22 mm
- Bolt distance: 100 mm / M5
- Working temperature: -40°C - +65°C
- IP Rating: IP69K

Type	Right → Left ♦	Position Stop Dir. indicator Rectangular reflex reflector	Connection	Cable length	Article no.
LED	→ ←	✓	Open end	300 mm cable, 4 core	098 212 170 92.0000.8007
LED	→ ←	✓	Open end	2.500 mm cable, 4 core	098 212 171 92.0000.8008
LED	→ ←	✓	7 poled AMP Steckdose	300 mm cable	098 212 172 92.0000.8009
LED	→ ←	✓	4 poled Deutsch socket (DT4)	300 mm cable	098 212 173 92.0000.8010

TM14 LED Slim-Line Tail light 12/24V

Individual styling with TM14 Slim-line

The perfect solution for limited space

The ERMAX TM14 Slim-Line lighting series is ideal for individual modern styling of a vehicle and can be used for both surface mounting and built-in. The TM14 Slim-Line series is in full LED and offers highlights as a narrow, slim-line and modern design suitable for almost all applications – on the trailer as well as on the truck.

Due to the size and the slim design, there are many applications possibilities – especially where there are limited and narrow mounting surfaces.

The TM14 Slim-Line light can be mounted vertically, horizontally, and as high-mounted light – and fits with the various connection possibilities optimally with ERMAX' present cable system.

The stop light can also with advantage be use as high-mounted 3. stop light.



Position and / or stop light



Direct indicator light as standard or with dynamic direct indicator light

Truck styled with TM14 position lights



Highlights

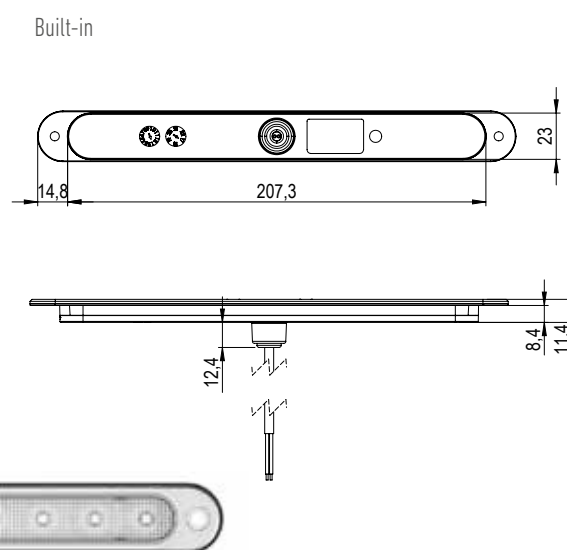
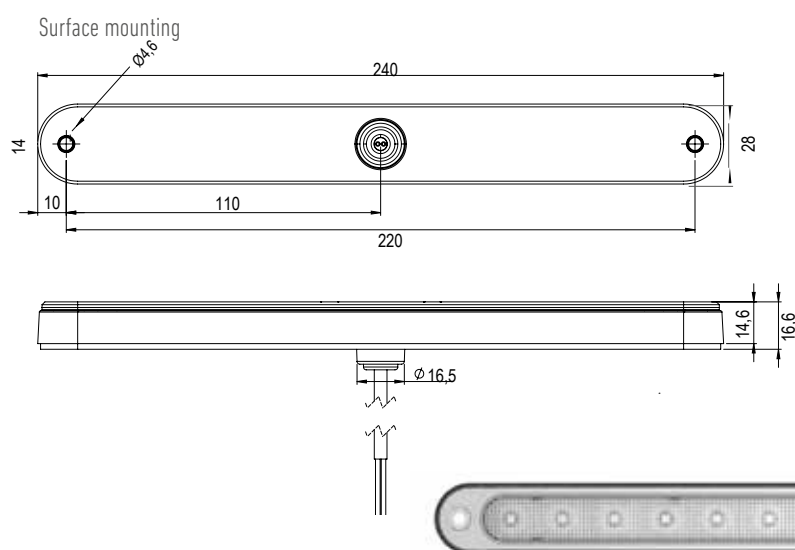
- Slim and modern design for practically any application
- Applicable for trailer and truck
- Time saving mounting with 2 poled or 3 poled Super Seal connection
- 5 m Open end versions for long wiring
- Especially suitable for vehicles with limited mounting space
- Various applications – surface mounting, built-in, horizontal and vertical mounting and as high-mounted light
- Ideal as high-mounted 3. stop light.
- Certified according to all relevant standards and regulations in Europe

TM14 LED Slim-line - Flexible and individual styling possibilities

Design the "rear end" according to needs and demands



Position of more lights underneath each other means more effect of the nice, modern and dynamic direction indicator light



OBS - See all variants, connection possibilities and description on next page

TM14 LED Tail light 12/24V - Slim-line



Description

Lens: Impact resistant polycarbonate
 Housing: Impact resistant polycarbonate
 Dimension
 Surface mounting: 240 x 28 x 16,6 mm
 Built-in: 208 x 23 x 8,4 mm
 Bolt distance: 220 mm / Ø4,6
 Working temperature: -40°C til +65°C
 IP Rating: IP69K

Consumption per lighting function

Positions light: 0,6W
 Stop light: 2,0W
 Direction indicator light: 0,9W
 Dynamic direction indicator light : 4,0W

* Bi-polar connection

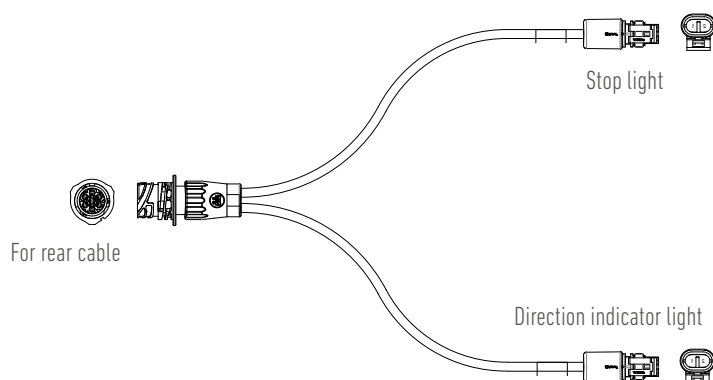
Operat- ingvolt- age	Right → Left ←	Position	Stop	Dir. indica- tor	Dynamic dir. indicator "NEW"	Connection	Cable length	Pin-configuration / wire color pr. function	Article no.
12/24V	→ ←	✓	✓			3 poled Super Seal socket	300 mm	1 = Ground 2 = Position light 3 = Stop light	098 212 250 92.0000.8077
12/24V	→ ←	✓	✓			Open end	5.000 mm - 3 core	Brown = Ground Blue = Position Yellow/green= Stop	098 212 252 92.0000.8078
12/24V	→ ←	✓				2 poled Super Seal socket	300 mm		098 200 250 92.0000.8069
12/24V	→ ←	✓				Open end	5.000 mm - 2 core	Brown = Ground Blue= Position light	098 200 252 92.0000.8070
12/24V	→ ←		✓			2 poled Super Seal socket	300 mm		098 203 250 92.0000.8071
12/24V	→ ←		✓			Open end	5.000 mm - 2 core	Brown = Ground Blue = Stop	098 203 252 92.0000.8072
12/24V	→ ←			✓		2 poled Super Seal socket	300 mm		098 222 250 92.0000.8093
12/24V	→ ←			✓		Open end	5.000 mm - 2 core	Brown = Ground Blue = Dir. indicatir	* 098 222 252 92.0000.8094
12/24V	→ ←				✓	2 poled Super Seal socket	300 mm		* 098 222 260 92.0000.8095
12/24V	→ ←				✓	Open end	5.000 mm - 2 core	Brown = Ground Blue = Dir. indicator	* 098 222 262 92.0000.8096

TM14 LED Tail light 12/24V - Slim-line

Accessories - Adapter cable for installation of TM14 Slim-Line to rear cable (see detailed description in the section "cables universal")

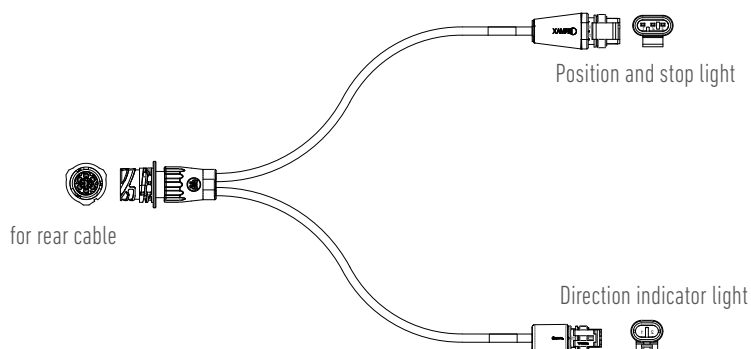
994 003 282 - Adapter cable 300 mm,

7 poled AMP socket > 2 x Super Seal plug
with outlet for stop- and direction indicator light



994 003 285 - Adapter cable 300 mm,

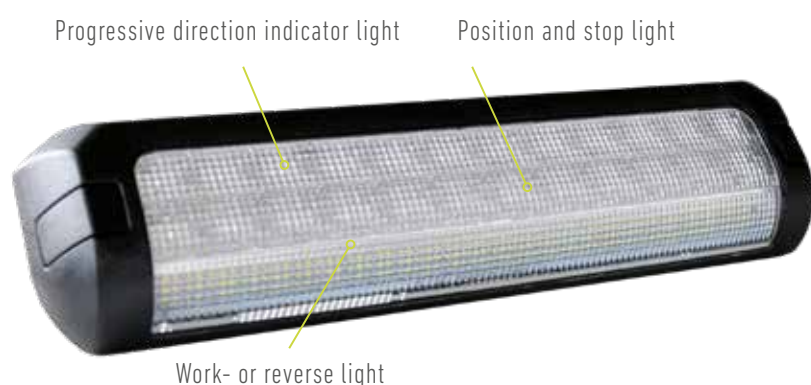
7 poled AMP socket > 1 x 3 poled Super Seal plug with outlet
for position and stop light + 1 x 2 poled super seal plug with outlet for direction indicator light



Compact and Slim Design - Integrated work- or reverse light

The Ermax Top light 4 functions tail light in LED and with integrated work- or reverse light, offers as high light a small, slim and modern design for almost all application - on the trailer as well as on the truck.

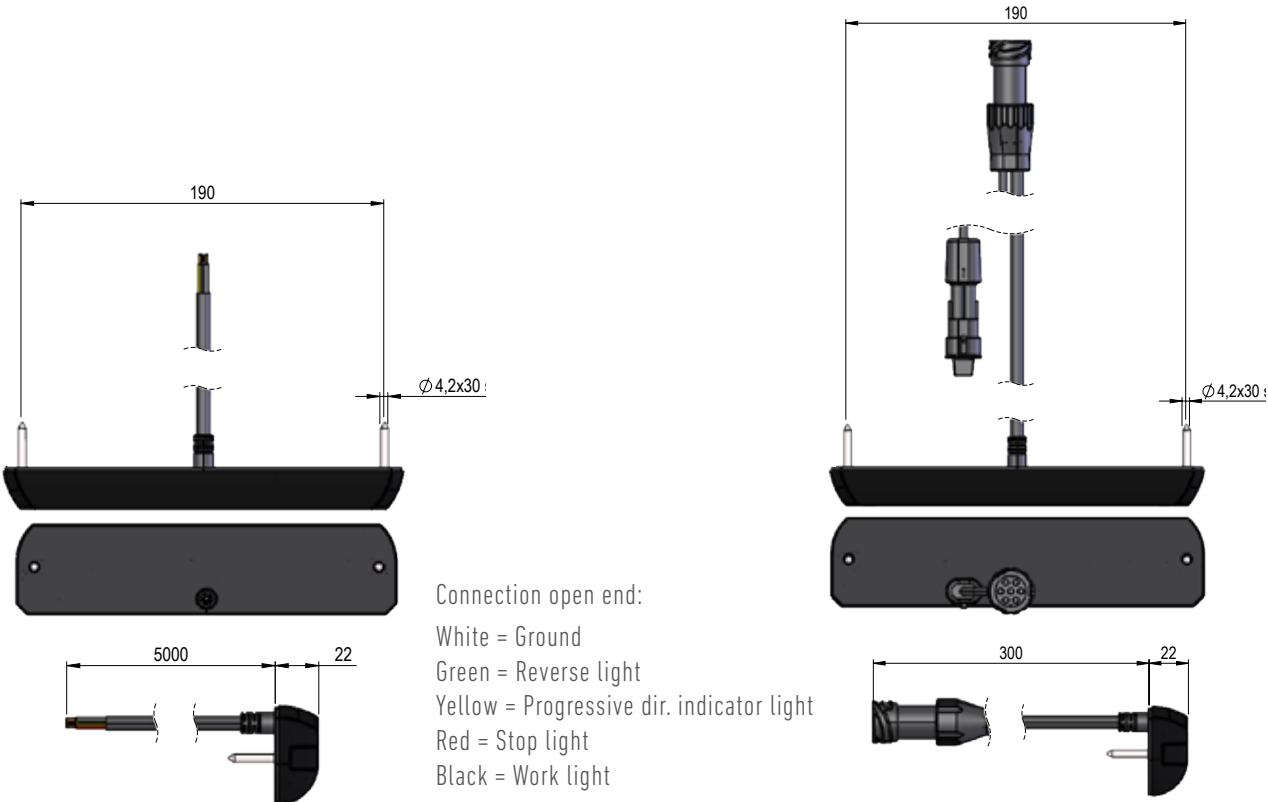
The Ermax Top light LED tail light is due to its size and slim design applicable for many purposes, especially for where there are limited and narrow mounting surfaces. High-mounted in order to use the work light function - or mounted in a height of max. 1.200 mm to use the reverse light function.



High lights

- Slim and compact design - Optimal as high-mounted tail lights
- Integrated work- or reverse light
- Progressive direction indicator light
- Impact-resistant lens made of Polycarbonate
- Ideal as high-mounted light for use as work light in order to lighten up the work area in the rear end of the trailer or truck
- Especially suitable for vehicles with limited mounting surfaces
- Certified according to all relevant standards and regulations in Europe

LED Tail light 12/24 with intergrated reverse- or work light



Description

Lens: Impact resistant polycarbonate
Housing: Impact resistant polycarbonate with backplate of aluminium
Dimension: 210 x 50 x 20 mm
Bolt distance: 190 mm / M4
Working temperature: -40°C - +65°C
IP-Rating: IP69K

Consumption per function

Position light: 0,6W
Stop light: 2,7W
Progressive dir. indicator: 2,5W
Work- / Reverse light: 10W

Obs - approved as reverse light with installation height of max. 1.200 mm

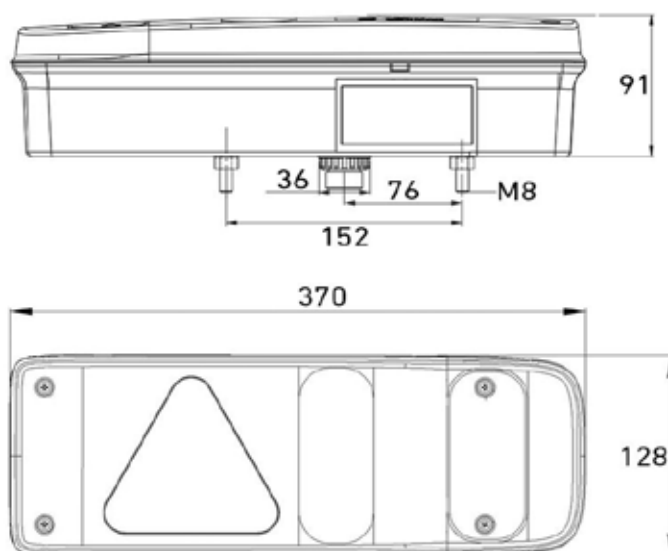


Type	Right → left ←	Position Stop Progressive dir. indicator	Work light / Reverse light * Lumen theoretical/ effektive	Connection and cable length	Article no.
LED	→	✓	950 / 730 Lumen	5.000 mm cable open end	098 212 240 92.0000.8073
LED	←	✓	950 / 730 Lumen	5.000 mm cable open end	098 212 241 92.0000.8074
LED	→	✓	950 / 730 Lumen	300 mm cable with 7 poled AMP socket 300 mm cable with 2 poled Super Seal socket	098 212 242 92.0000.8075
LED	←	✓	950 / 730 Lumen	300 mm cable with 7 poled AMP socket 300 mm cable with 2 poled Super Seal socket	098 212 243 92.0000.8076

TM2 **HYBRID** Tail lights 24V

Pos. 1

Pos. 2

**Description**

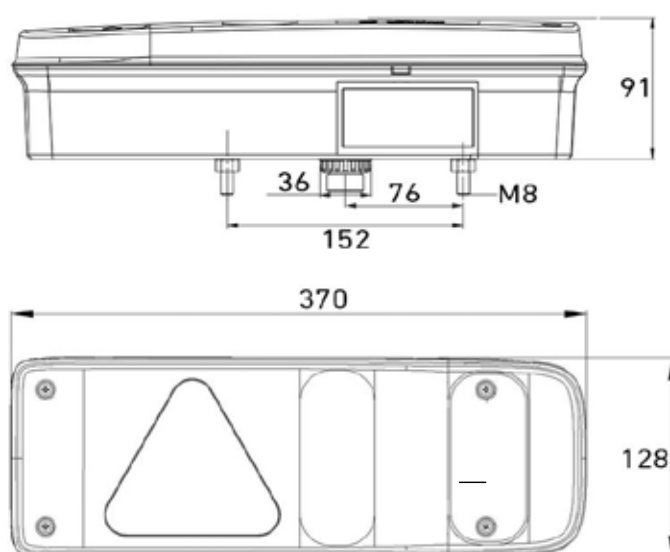
Lens:	PMMA
Housing:	PP
Dimension:	370 x 128 x 91 mm
Bolt distance:	152 mm / M8

TM2 Tail lights 24V - HYBRID

Type	IP Rating	Left ← Right →	Position Stop Dir. indicator	Reverse Rear fog Reflex reflector	License plate	Side marker	Outer end marker	Connection 7 poled AMP 1.5 socket	Pos.	Article No.
------	-----------	-------------------------	------------------------------------	---	---------------	-------------	---------------------	---	------	-------------

Hybrid	IP54	←	✓	✓				✓	1	098 216 251 92.0000.9306
Hybrid	IP54	→	✓	✓				✓	1	098 216 252 92.0000.9307
Hybrid	IP54	←	✓	✓			45° Long (LED)	✓	2	098 216 265 92.0000.9308
Hybrid	IP54	→	✓	✓			45° Long (LED)	✓	2	098 216 266 92.0000.9309

TM2 GL bulb or Hybrid Tail lights 24V



Description

Lens:	PMMA
Housing:	PP
Dimension:	370 x 128 x 91 mm
Bolt distance:	152 mm / M8

TM2 GL Tail lights 24V - bulb or Hybrid



Type	IP Rating	Left ← Right →	Position Stop Dir. indicator	Reverse Rear fog Reflex reflector	License plate	Side marker	Outer end marker	Connection 7 poled AMP 1.5 socket	Pos.	Article No.
Bulb	IP54	←	✓	✓				✓	1	098 216 351 92.0000.1506
Bulb	IP54	→	✓	✓				✓	1	098 216 352 92.0000.1507
Bulb	IP54	←	✓	✓		✓		✓	1	098 216 353 92.0000.1508
Bulb	IP54	→	✓	✓		✓		✓	1	098 216 354 92.0000.1509
Bulb	IP54	←	✓	✓	✓			✓	1	098 216 355 92.0000.1510
Bulb	IP54	→	✓	✓	✓			✓	1	098 216 356 92.0000.1511
Bulb	IP54	←	✓	✓	✓	✓		✓	1	098 216 357 92.0000.1512
Bulb	IP54	→	✓	✓	✓	✓		✓	1	098 216 358 92.0000.1513
Bulb	IP54	←	✓	✓			45° Long (LED)	✓	2	098 216 365 92.0000.1452
Bulb	IP54	→	✓	✓			45° Long (LED)	✓	2	098 216 366 92.0000.1003
Bulb	IP54	←	✓	✓	✓		45° Long (LED)	✓	2	098 216 367 92.0000.1004
Bulb	IP54	→	✓	✓	✓		45° Long (LED)	✓	2	098 216 368 92.0000.1514

Spare parts & Accessories TM2 **HYBRID** Tail lights bulb, 24V



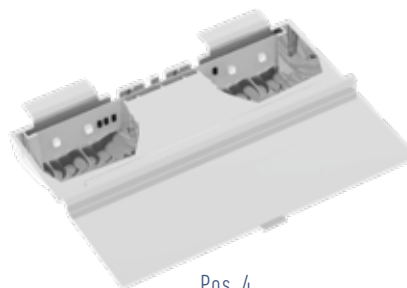
Pos. 1



Pos. 2



Pos. 3



Pos. 4



Pos. 5



Pos. 6

Lens, left, with 4 screws	1	098 296 351 92.0000.1679
Lens, right, with 4 screws	1	098 296 352 92.0000.1680
Protection cover for tail light	2	098 296 710 92.0000.6877
LED Outer end marker, left - 500 mm connection cable open end	3	098 241 442 92.0000.7039
LED Outer end marker, right - 500 mm connection cable open end	3	098 241 443 92.0000.7040
LED Module TM2 Hybrid, 24V	4	098 296 250 92.0000.5884
Bulb 24V 21W amber HD, BAU15s - with amber lens for clear direction indicator light	5	091 624 078 92.0000.5885
Bulb 24V 21W HD, BA15s - for stop- and rear fog light	6	091 624 071 92.0000.5882

Spare parts & Accessories TM2 GL Tail lights bulb, 24V



Pos. 1



Pos. 2



Pos. 3

Pos. 4



Pos. 5



Pos. 6

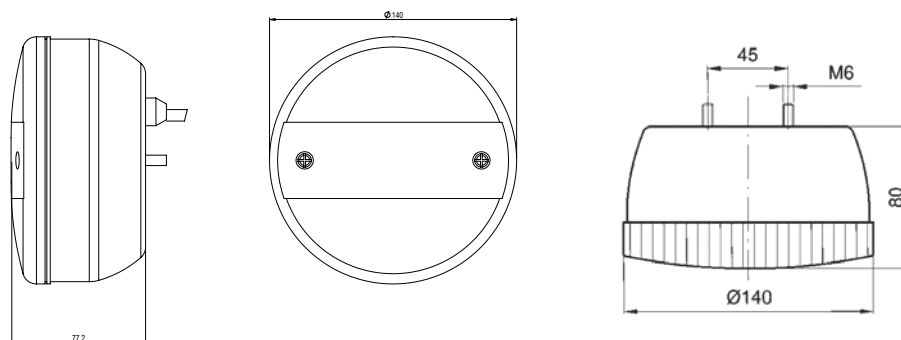


Lens, left, with 4 screws	1	098 296 351 92.0000.1679
Lens, right, with 4 screws	1	098 296 352 92.0000.1680
Protection cover for tail light	2	098 296 710 92.0000.6877
LED Outer end marker, left - 500 mm connection cable open end	3	098 241 442 92.0000.7039
LED Outer end marker, right - 500 mm connection cable open end	3	098 241 443 92.0000.7040
Bulb 24V 5W HD, BA15s - for position light	4	091 624 075 92.0000.5884
Bulb 24V 21W amber HD, BAU15s - with amber lens for clear direction indicator light	5	091 624 078 92.0000.5885
Bulb 24V 21W HD, BA15s - for stop- and rear fog light	6	091 624 071 92.0000.5882

TM1 GL - Tail lights bulb



**) 098212354 with HD bulb *) Version with H3 bulb - have no E-Approval



Description

Tail lights bulb - Pos. 1, 3 and 4 is delivered without bulb

Lens: PMMA
Housing: ABS
Dimension: Ø140 mm x 80 mm
Bolt distance: 45 mm / M6



Operating voltage	IP Rating	Position	Stop	Dir. indicator	Reverse	Reverse - H3 bulb	Rear fog	License plate	Connection	Pos.	Article No.
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12/24V	IP54	✓	✓	✓					Cable lead through rubber grommet	1	098 212 352 92.0000.1504
12/24V	IP54	✓	✓	✓				✓	Cable lead through rubber grommet	1	098 212 356 92.0000.1505
12/24V	IP54	✓	✓	✓					7 poled AMP 1.5 socket	2	098 212 354** 92.0000.8307
12/24V	IP54	✓	✓	✓					7 poled AMP 1.5 socket	2	098 212 351 92.0000.1503
12/24V	IP54				✓	✓			Cable lead through rubber grommet	3	098 256 040* 92.0000.1591
12/24V	IP54						✓		Cable lead through rubber grommet	4	098 256 050 92.0000.1593

Spare parts TM1 GL - Tail lights bulb



Pos. 1



Pos. 2



Pos. 3



Pos. 4



Pos. 5



Pos. 6



Pos. 7

Lens for position light with 2 screws and 1 sealing Suitable for 098 212 352 / 356 / 351	1	098 292 354 92.0000.5735
Lens, transparent for reverse light Suitable for 098 256 040	2	098 292 242 92.0000.5891
Chrome ring and built-in kit	4	098 292 360 92.0000.1668
Protection cover for reverse light	5	098 296 720 92.0000.1681
Bulb 24V 5W HD BA15s - for position light	6	091 624 075 92.0000.5884
Bulb 24V 21W HD BA15s - for stop- and rear fog	7	091 624 071 92.0000.5882
Halogen headlight H3, bulb 24V 70W H3, PK22s	8	091 324 003 92.0000.5881

LICENSE PLATE LIGHT



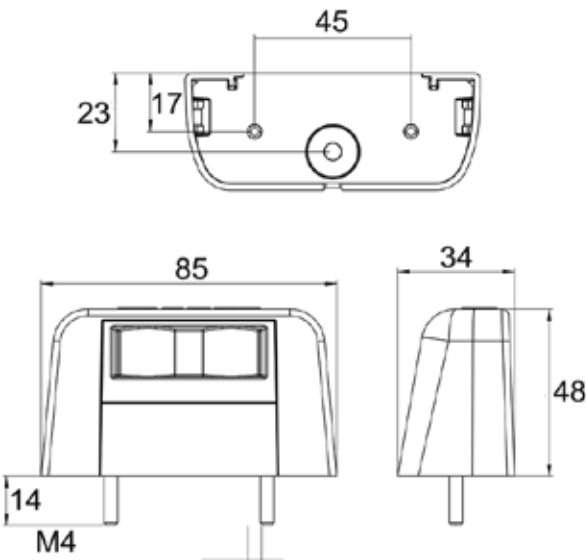
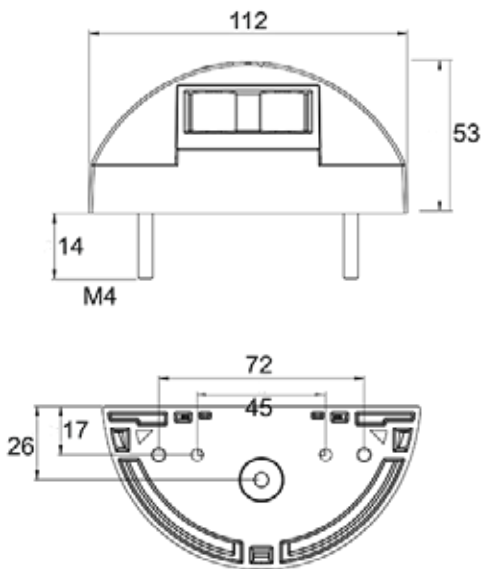
LED License plate light 12/24V



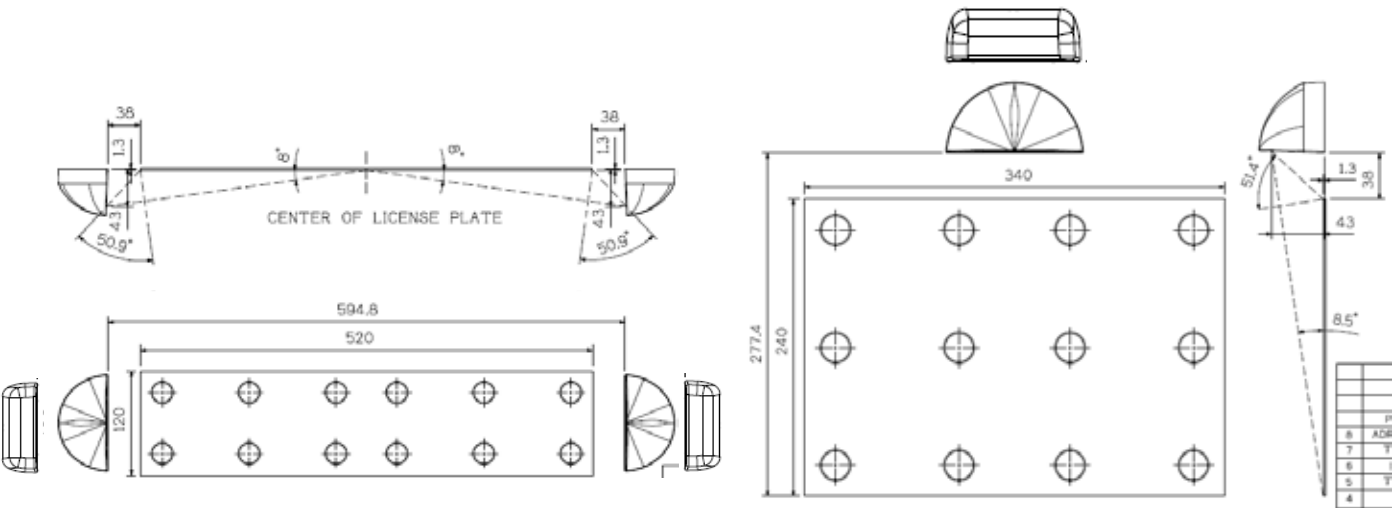
Pos. 1



Pos. 2



Both types are Certified for the application as shown:



LED License plate light 12/24V

Description

Lens: PMMA
Housing: ABS

Half-round design

Dimension: 112 x 57 x 53 mm
Bolt distance: 45 mm or 72 mm / M4

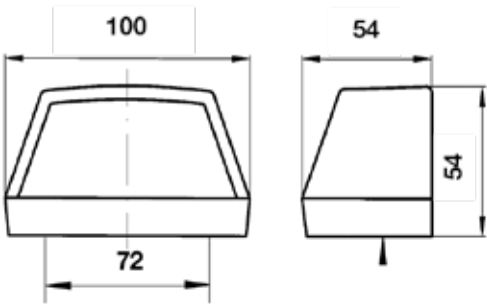
Square design

Dimension: 85 x 34 x 48 mm
Bolt distance: 45 mm / M4

Operating voltage	IP Rating	Connection	Cable length	Bolt hole distance	LED	Pos.	Article No.
12/24V	IP54	Click-in 1,5 mm ²	500 mm	45 / 72 mm	2	1	098 254 330 92.0000.6550
12/24V	IP54	Click-in 1,5 mm ²	500 mm	45 mm	2	2	098 254 340 92.0000.6554
12/24V	IP54	Click-in 1,5 mm ²	1.500 mm	45 / 72 mm	2	1	098 254 332 92.0000.6551
12/24V	IP54	Click-in 1,5 mm ²	1.500 mm	45 mm	2	2	098 254 342 92.0000.6555
12/24V	IP54	Super Seal Steckdose	500 mm	45 / 72 mm	2	1	098 254 334 92.0000.6552
12/24V	IP54	Super Seal Steckdose	500 mm	45 mm	2	2	098 254 344 92.0000.6556
12/24V	IP54	Super Seal plug	1.200 mm	45 / 72 mm	2	1	098 254 335 92.0000.7168
12/24V	IP54	Super Seal plug	1.200 mm	45 mm	2	2	098 254 345 92.0000.7169
12/24V	IP54	Super Seal plug	2.000 mm	45 / 72 mm	2	1	098 254 350 92.0000.7913
12/24V	IP54	Open end	2.500 mm	45 / 72 mm	2	1	098 254 336 92.0000.6553
12/24V	IP54	Open end	2.500 mm	45 mm	2	2	098 254 346 92.0000.6557
12/24V	IP54	Cable lead through rubber grommet	--	45 / 72 mm	2	1	098 254 338 92.0000.7557
12/24V	IP54	Cable lead through rubber grommet	--	45 mm	2	2	098 254 348 92.0000.7007

LED diode unit: IP69K capability

LED License plate light 12/24V

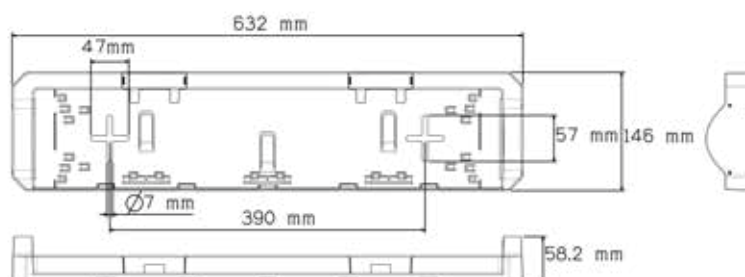


Description

Lens: PMMA
Housing: ABS
Dimension: 100 x 54 x 54 mm
Bolt distance: 72 mm / M4

Operationg voltage	IP Rating	Light source	Connection	Cable length	Bolt distance	Article no.
24V	IP67	LED	Cable lead through rubber grommet	---	72 mm	098 254 167 92.0000.6054
24V	IP67	LED	Click-In	500 mm	72 mm	098 254 251 92.0000.6508

LED license plate carrier 24V



Description

Dimensions: L x B x H: 625 x 145 x 55 mm

Bolt distance: 445-535 mm / Ø7 mm

Material: Black ABS

Consumption: 0,8W

Operationg voltage	Light source	Connection	Cable length	Bolt distance	Artikel-Nr.
24V	LED	Click-In	500 mm	445-535 mm / Ø7	098 254 324 92.0000.1583
24V	LED	Super-Seal-Stecker	1800 mm	445-535 mm / Ø7	098 254 326 92.0000.9182

Clips for license plate carrier



Clips for license plate carrier. 2 clips are needed for each license plate carrier.

098 292 300
92.0000.9259

OUTER END MARKER LIGHT



LED Outer end marker light (45°) 12/24V

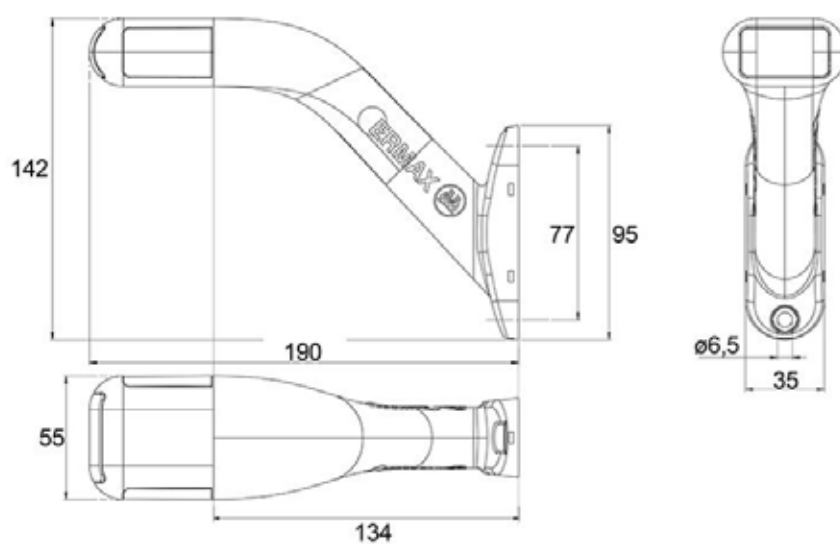


Pos. 1



Pos. 2

Possibility of having the cable at the side of the mounting foot



Description

With clear lens - lighting red, amber and white

Lens:	Impact resistant polycarbonate
Housing:	Rubber
Bolt distance:	77 mm / Ø 6,5

LED Outer end marker light (45°) 12/24V

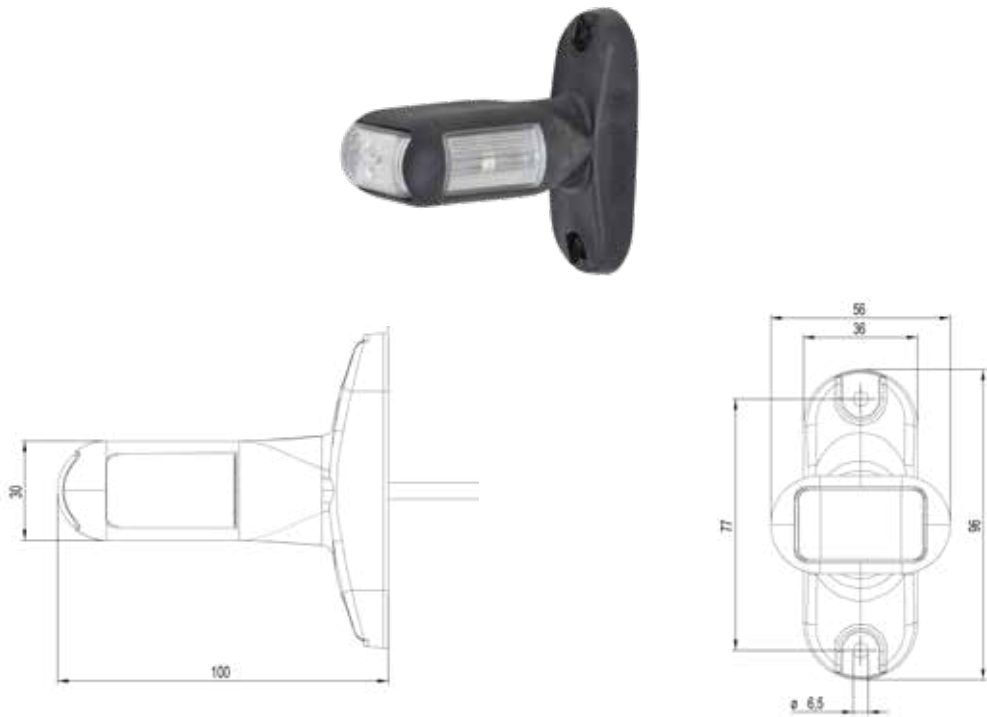
Left ← Right →	Operating voltage	IP Rating	Connection	Cable length	Light colour	Pos.	Article No.
←	12/24V	IP69K	Click-in 1,5 mm ²	1.500 mm	red / white / amber	1	098 241 422 95.0000.0005
→	12/24V	IP69K	Click-in 1,5 mm ²	1.500 mm	red / white / amber	1	098 241 423 95.0000.0006
←	12/24V	IP69K	Super Seal socket	1.500 mm	red / white / amber	1	098 241 425 95.0000.0086
→	12/24V	IP69K	Super Seal socket	1.500 mm	red / white / amber	1	098 241 426 95.0000.0087
←	12/24V	IP69K	Open end	1.500 mm	red / white / amber	1	098 241 427 92.0000.1560
→	12/24V	IP69K	Open end	1.500 mm	red / white / amber	1	098 241 428 92.0000.1561
←	12/24V	IP69K	Open end	5.000 mm	red / white / amber	1	098 241 429 92.0000.1562
→	12/24V	IP69K	Open end	5.000 mm	red / white / amber	1	098 241 430 92.0000.1563
→	12/24V	IP69K	Super Seal plug	300 mm	red / white / amber	1	098 241 448 92.0000.7050
←	12/24V	IP69K	Super Seal plug	300 mm	red / white / amber	1	098 241 449 92.0000.7051



Suitable for mounting on flat surfaces, with the possibility of having the cable at the side of the mounting foot. Also there is the possibility to connect the outer end marker to the tail lights or the rear cable with Super Seal connection

→	12/24V	IP69K	Super Seal plug	300 mm	red / white / amber	2	098 241 438 92.0000.6355
←	12/24V	IP69K	Super Seal plug	300 mm	red / white / amber	2	098 241 439 92.0000.6356

LED Outer end marker light 12/24V



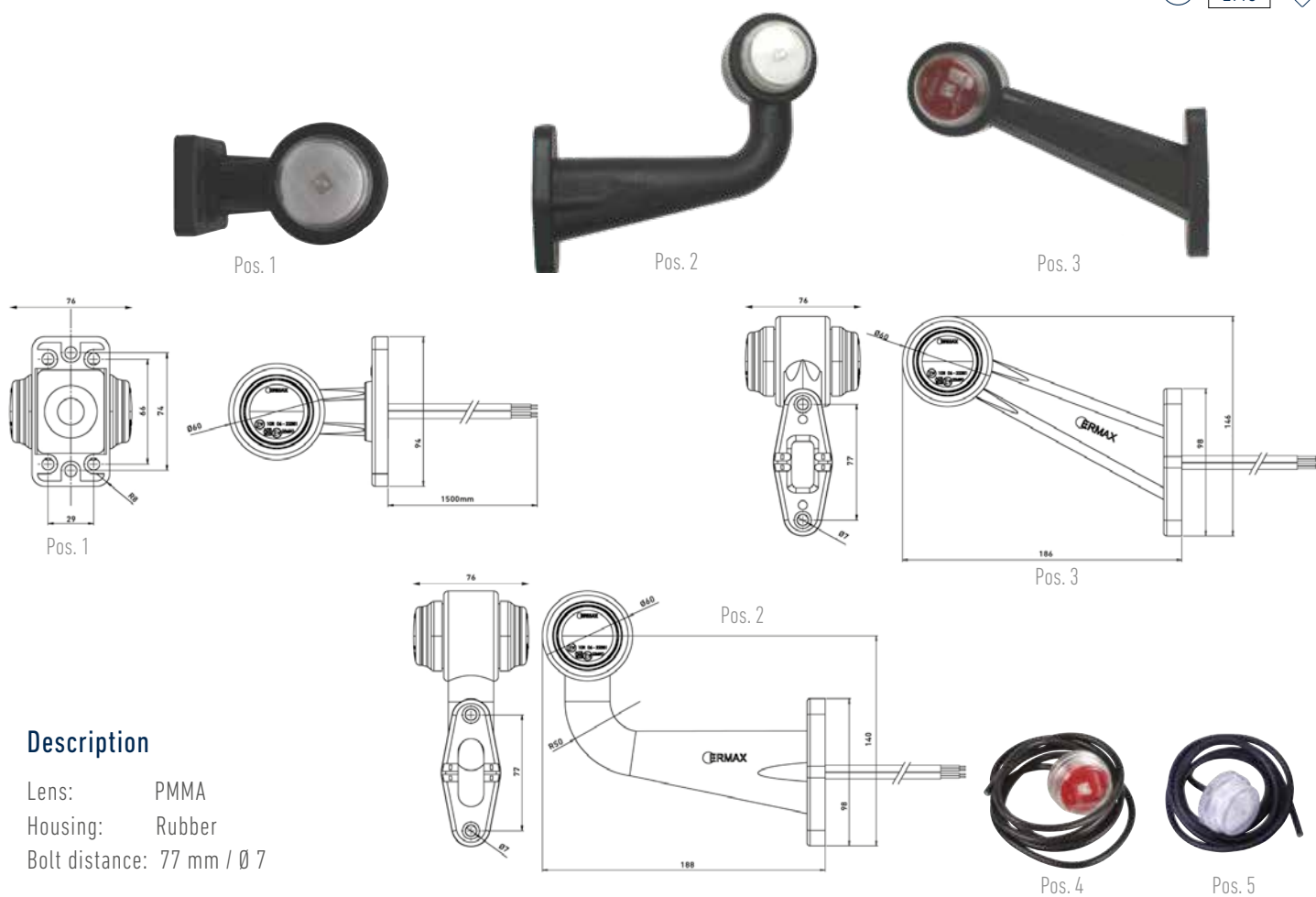
Description

With clear lens - lighting red, amber and white

Lens:	Impact resistant polycarbonat
Housing:	Rubber
Bolt distance:	77 mm / Ø 6,5

Left ← Right →	Operating voltage	IP Rating	Connection	Cable length	Light colour	Article No.
← →	12/24V	IP69K	Super Seal socket	500 mm	red / white / amber	098 241 205 92.0000.5870
← →	12/24V	IP69K	Super Seal socket	1.500 mm	red / white / amber	098 241 215 92.0000.5872
← →	12/24V	IP69K	Click-in 1,5 mm ²	1.500 mm	red / white / amber	098 241 211 92.0000.5871
← →	12/24V	IP69K	Open end	1.500 mm	red / white / amber	098 241 216 92.0000.5873
← →	12/24V	IP69K	Open end	5.000 mm	red / white / amber	098 241 217 92.0000.5874
← →	12/24V	IP69K	Super Seal plug	300 mm	red / white / amber	098 241 218 92.0000.7490

LED Outer end marker light 12/24V - Classic 1



Description

Lens: PMMA
Housing: Rubber
Bolt distance: 77 mm / Ø 7

1 impact resistant LED units per light

Left ← Right →	Operating voltage	IP Rating	Connection	Cable length	Light source	Light color	Pos.	Article no.
← →	12/24V	IP67	Super Seal socket	500 mm	1 LED	red / white	1	098 241 005 92.0000.9066
← →	12/24V	IP67	Open end	1.500 mm	1 LED	red / white	1	098 241 000 92.0000.9065
← →	12/24V	IP67	Open end	1.500 mm	1 LED	red / white	2	098 241 050 92.0000.9067
← →	12/24V	IP67	Super Seal socket	500 mm	1 LED	red / white	2	098 241 055 92.0000.9068
← →	12/24V	IP67	Super Seal plug	300 mm	1 LED	red / white	2	098 241 056 90.0000.9069
← →	12/24V	IP67	Open end	1.500 mm	1 LED	red / white	3	098 241 090 92.0000.9070

Spare parts

LED - red unit with 1.250 mm connection cable	4	098 291 012 92.0000.1659
LED - clear unit with 1.250 mm connection cable	5	098 291 016 92.0000.1660

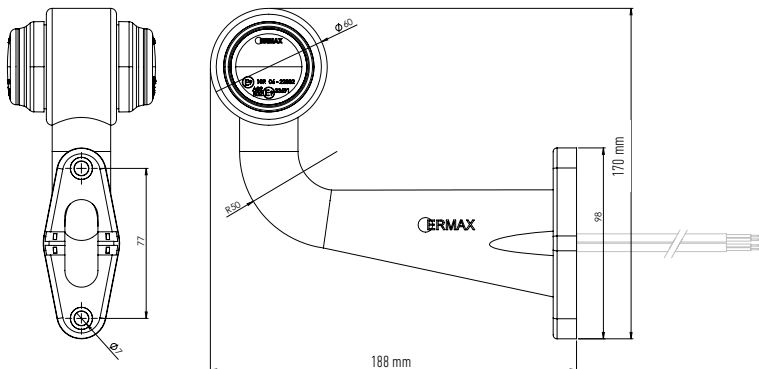
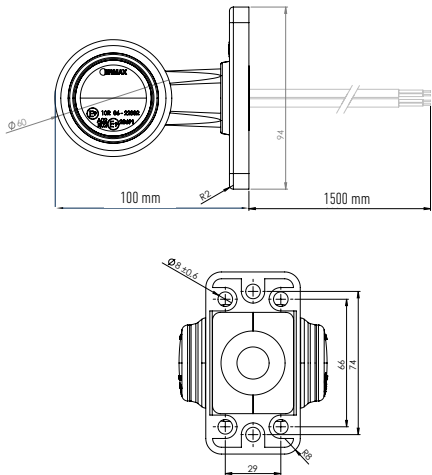
Outer end marker light LED 12/24V - Classic 2



Pos. 1



Pos. 2



Description

Lens: PMMA
Housing: Rubber
Bolt distance Pos 1: 74 mm / 2 x Ø7 + 66 mm / 4 x Ø7
Bolt distance Pos 2: 77 mm / 2 x Ø7
2 impact resistance LED units per light



Pos. 4

Pos. 5

Pos. 6



Left ← Right →	Light source	IP Rating	Operating voltage	Connection	Cable length	Light color	Pos.	Article no.
← →	LED	IP67	12/24V	Open end	1500 mm	red / white	1	098 241 600 92.0000.9071
← →	LED	IP67	12/24V	Open end	1500 mm	red / white	2	098 241 650 92.0000.9072

Spare parts

Rubber grommet for 098 241 014	4	098 291 119
LED unit, red	5	098 291 015
LED unit, white	6	098 291 031 92.0000.9078

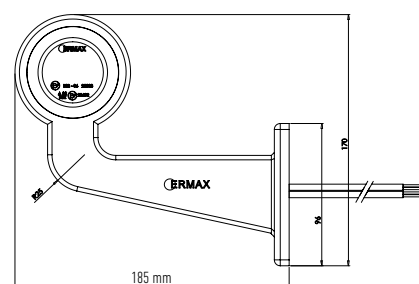
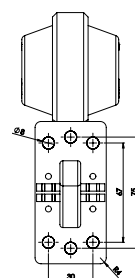
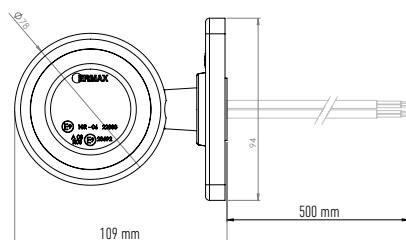
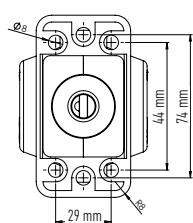
Outer end marker light / Direction indicator light LED 12/24V - Classic XL



Pos 1



Pos 2



Description

Lens: PMMA

Housing: Rubber

Bolt distance Pos 1: 74 mm / 2 x Ø8 + 64 mm / 4 x Ø8

Bolt distance Pos 2: 75 mm / 2 x Ø8 + 67 mm / 4 x Ø

2 variants - short straight variant (possible to turn 360°) - angled variant 45°

2 impact resistant LED units in each outer end marker light - 6 LEDs per LED unit



Pos. 5



Pos. 6



Pos. 7



Left ← Right →	Light source	IP Rating	Operating voltage	Connection	Cable length	Light color	Pos	Article no.
-------------------	--------------	-----------	-------------------	------------	--------------	-------------	-----	-------------

← →	LED	IP67	12/24V	Open end	500 mm	red / white	1	098 241 800 92.0000.9073
← →	LED	IP67	12/24V	Open end	2500 mm	red / white	1	098 241 802 92.0000.9243
← →	LED	IP67	12/24V	Open end	500 mm	red / white	2	098 241 850 92.0000.9074
← →	LED	IP67	12/24V	Open end	2500 mm	red / white	2	098 241 852 92.0000.9220

Spare parts

LED unit, red (outer end marker light)	5	098 291 041 92.0000.9080
LED unit, white (outer end marker light)	6	098 291 040 92.0000.9081
Rubber grommet for 098 221 076	7	098 291 119

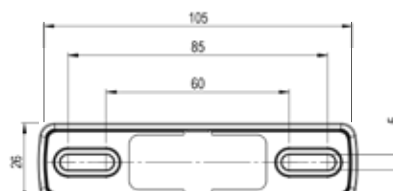
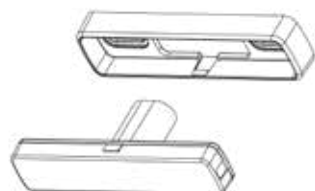
MARKER LIGHTS POSITION SIDE & MARKERS



LED Side marker 12/24V



Standard frame - with Super Seal socket



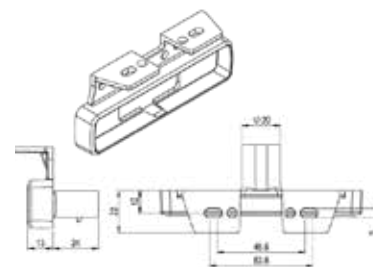
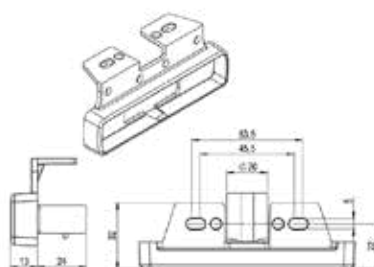
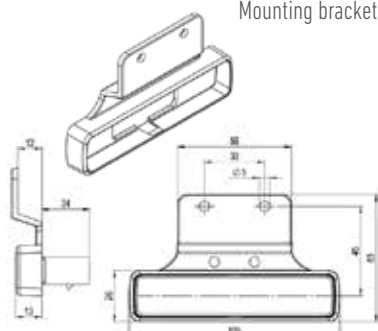
Mounting bracket straight



Backwards 90°



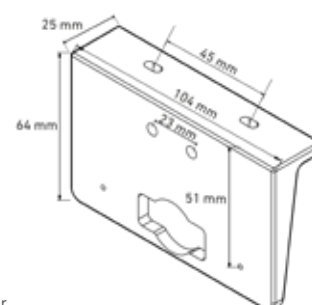
Forwards 90°



- Mounting without visible screws
- 2 LED
- 4 Mounting variants
- 3 cable versions
- IP69K Rating



Universal Rubber holder



Description

LED Side marker- and position light
2 LED and with reflex reflector
IP69K rating

Lens:	PMMA
Housing:	ABS
Frame:	PP
Dimension:	B105 x H26 x T13 mm (standard frame)
Variable hole distance:	60-85 mm

LED Side marker 12/24V

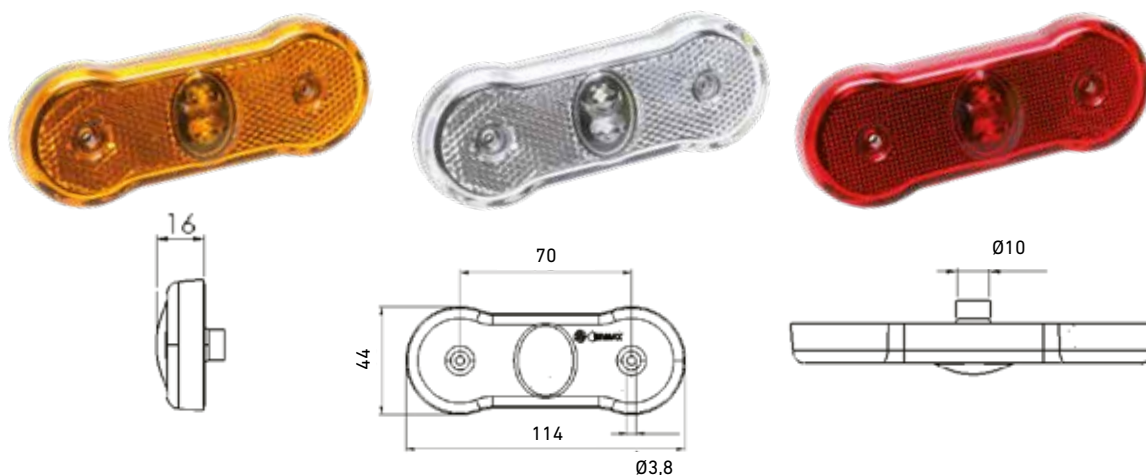
Mounting bracket	Connection	Cable length	Operating voltage	Side marker amber	Position lights White	Position lights Red
Standard frame	Super Seal socket	---	12/24V	098 221 726 92.0000.6011	098 230 726 92.0000.6028	098 204 726 92.0000.6005
Straight	Super Seal socket	----	12/24V	098 221 742 92.0000.6018		
90° bracket backwards	Super Seal socket	----	12/24V	098 221 748 92.0000.6021		
90° bracket forwards	Super Seal socket	----	12/24V	098 221 756 92.0000.6024		
Standard frame	Super Seal socket	500 mm	12/24V	098 221 727 92.0000.7969		
90° bracket backwards	Super Seal socket	1.500 mm	12/24V	098 221 745 92.0000.7958		
Standard frame	Super Seal plug	5.000 mm	12/24V		098 230 736 92.0000.8139	
Standard frame	Click-in	500 mm	12/24V	098 221 720 92.0000.6008	098 230 720 92.0000.6024	098 204 720 92.0000.6002
Standard frame	Click-in	1.500 mm	12/24V	098 221 722 92.0000.6009	098 230 722 92.0000.6025	098 204 722 92.0000.6003
Standard frame	Click-in	5.000 mm	12/24V	098 221 724 92.0000.6010	098 230 724 * 92.0000.6026	098 204 724 * 92.0000.6004
Straight mounting bracket	Click-in	1.500 mm	12/24V	098 221 740 92.0000.6017		
90° bracket backwards	Click-in	500 mm	12/24V	098 221 744 92.0000.6019		
90° bracket backwards	Click-in	1.500 mm	12/24V	098 221 746 92.0000.6020		
90° bracket forwards	Click-in	500 mm	12/24V	098 221 752 92.0000.6022		
90° bracket forwards	Click-in	1.500 mm	12/24V	098 221 754 92.0000.6023		
Standard frame	Open end	500 mm	12/24V	098 221 730 92.0000.6012	098 230 730 * 92.0000.6029	
Standard frame	Open end	2.500 mm	12/24V	098 221 732 92.0000.6013	098 230 732 92.0000.6030	098 204 732 * 92.0000.6006
Standard frame	Open end	5.000 mm	12/24V	098 221 734 92.0000.6014	098 230 734 92.0000.6031	098 204 734 92.0000.6007
Standard Rahmen	Super Seal Stecker	5.000	12/24V		098 230 736 92.0000.7523	

Spare parts

Standard frame	098 292 700 92.0000.6032
Mounting bracket, straight, hole distance 30 mm	098 292 701 92.0000.6033
Mounting bracket - 90° bracket backwards, hole distance 30-55 mm	098 292 702 92.0000.6034
Mounting bracket - 90° bracket forwards, hole distance 30-55 mm	098 292 703 92.0000.6035
Universal rubber holder- 90° bracket backwards, hole distance 45-55 mm	098 292 629 92.0000.7559

*1) This article no. is not in stock - are only produced at customer specification in larger quantities

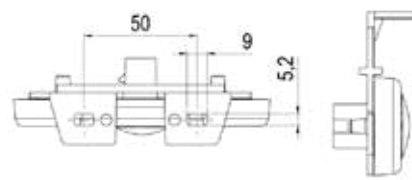
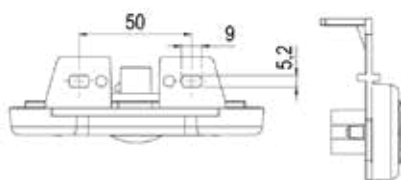
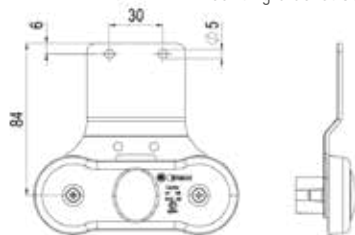
LED Side marker - 12/24V



Mounting bracket Straight

Rear 90°

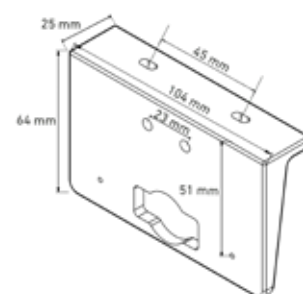
Forwards 90°



- Standardized mounting
- 2 LEDs
- 4 Mounting-variants
- 4 cable-versions
- IP69K Rating



Universal rubber bracket



Description

LED Side marker- and position light

2 LEDs and with reflex reflector

Mounting screw with Ø4 must be used

Lens: PMMA

Housing: ABS

Frame: PP

Dimension: B114 x H44 x T16 mm

Hole distance: 70 mm

IP69K rating

LED Side marker - 12/24V

Mounting bracket	Connection	Cable length	Operating voltage	Side marker amber	Position lights White	Position lights Red
Without mounting bracket	Super Seal socket	---	12/24V	098 221 620 95.0000.0091	098 230 401 95.0000.0089	098 204 501 95.0000.0090
Straight mounting bracket	Super Seal socket	---	12/24V	098 221 630 92.0000.1533		
90° bracket backwards	Super Seal socket	---	12/24V	098 221 640 95.0000.0093	098 230 430 92.0000.1549	
90° bracket forwards	Super Seal socket	---	12/24V	098 221 650 92.0000.1536		
Without mounting bracket	Super Seal socket	500 mm	12/24V	098 221 635 92.0000.6867		
Without mounting bracket	Super Seal socket	1.500 mm	12/24V	098 221 628 92.0000.5374	098 230 428 92.0000.5375	
90° bracket forwards	Super Seal socket	1.500 mm	12/24V	098 221 664 92.0000.5354		
Without mounting bracket	Super Seal plug	2.500 mm	12/24V		098 230 418 92.0000.9228	
Without mounting bracket	Super Seal plug	5.000 mm	12/24V	098 221 627 92.0000.5781		
Without mounting bracket	Super Seal plug	10.000 mm	12/24V	098 221 629 92.0000.5782	098 230 431 92.0000.5783	
90° bracket backwards	Super Seal socket	1.500 mm	12/24V	098 221 662 92.0000.5353		
Without mounting bracket	Click-in	500 mm	12/24V	098 221 621 92.0000.1528	098 230 405 92.0000.1545	098 204 502 92.0000.1486
Without mounting bracket	Click-in	1.500 mm	12/24V	098 221 622 92.0000.1001	098 230 415 95.0000.0004	098 204 503 92.0000.1487
Without mounting bracket	Click-in	5.000 mm	12/24V	098 221 623 92.0000.1529	098 230 450 92.0000.1550	098 204 504 92.0000.1458
Straight mounting bracket	Click-in	500 mm	12/24V	098 221 631 92.0000.1534		
90° bracket backwards	Click-in	500 mm	12/24V	098 221 641 92.0000.1007		
90° bracket backwards	Click-in	1.500 mm	12/24V	098 221 642 92.0000.1535		
90° bracket forwards	Click-in	500 mm	12/24V	098 221 651 92.0000.1537		
90° bracket forwards	Click-in	1.500 mm	12/24V	098 221 652 95.0000.0017		
Without mounting bracket	Open end	500 mm	12/24V	098 221 624 92.0000.1530	098 230 420 92.0000.1546	098 204 505 92.0000.1489
Without mounting bracket	Open end	1.500 mm	12/24V	098 221 625 92.0000.1531	098 230 425 92.0000.1547	
Without mounting bracket	Open end	2.500 mm	12/24V			098 204 506 92.0000.5531
Without mounting bracket	Open end	5.000 mm	12/24V	098 221 626 92.0000.1532	098 230 427 92.0000.1548	098 204 507 92.0000.1490

Spare parts LED Side marker - 12/24V



Pos. 1 - Straight



Pos. 2 - Rear 90°



Pos. 3 - Forwards 90°



Pos. 4



Pos. 5



Pos. 6



Pos. 7



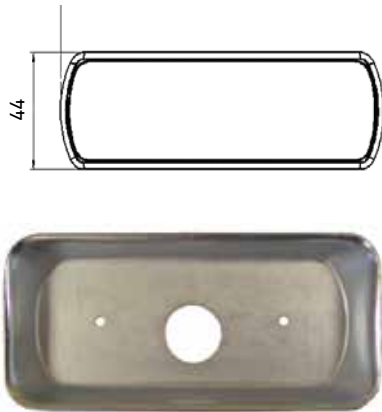
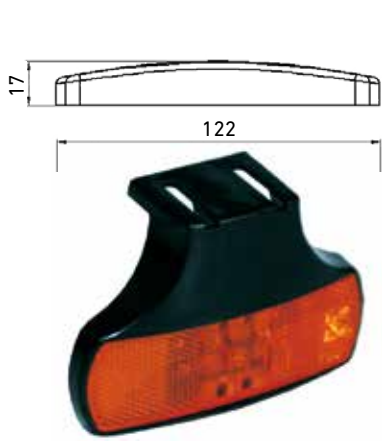
Ex.: Pos. 7

Mounting bracket, straight, hole distance 30 mm	1	098 292 622 92.0000.1671
Mounting bracket - 90° bracket backwards, hole distance 30-55 mm	2	098 292 620 92.0000.1669
Mounting bracket - 90° bracket forwards, hole distance 30-55 mm	3	098 292 621 92.0000.1670
Seal - 10 pcs packing unit, black rubber	4	098 292 626 92.0000.1672
Rivet - 20 pcs packing unit, black plastic, Ø4 mm	5	098 291 602 92.0000.1663
Rivet - 100 pcs packing unit, black plastic, Ø4 mm	5	098 291 610 92.0000.1665
Universal rubber bracket - 90° bracket backwards, hole distance 45-55 mm	6	098 292 629 92.0000.7559
Mounting bracket, rubber, for mudwingholders. Usuable with Ermax front position marker	7	098 292 628 92.0000.7446

LED Side marker 12/24V



Flat mounting - Without mounting bracket



Pos. 1

Description

LED Side marker- and position light - Bi-polarity
4 light diodes and with reflex reflector

- Lens: PMMA
- Housing: PP
- Dimension: B122 x H44 x T17 mm (without mounting bracket)
- Variable hole distance: 65 - 90 mm

Mounting bracket	Connection	Cable length	Operating voltage	IP Rating	Position White	Side marker amber	Position Red
Flat mounting	Open end	500 mm	12/24V	IP67	098 230 601 92.0000.1551	098 221 601 92.0000.1523	098 203 601 92.0000.1481
Flat mounting	Open end	5.000 mm	12/24V	IP67	098 230 605 92.0000.1552	098 221 605 92.0000.1524	098 203 605 92.0000.1482
Flat mounting	Open end	10.000 mm	12/24V	IP67		098 221 610 92.0000.1525	
90° bracket backwards	Open end	500 mm	12/24V	IP67		098 221 611 92.0000.1526	

Spare parts

Seal			098 291 606 92.0000.1664
Protective body, steel plate, untreated	Suitable for flat mounting lights	Pos. 1	098 291 912 92.0000.7667

REAR UNDERRUN PROTECTION BAR



The strong solution at the market

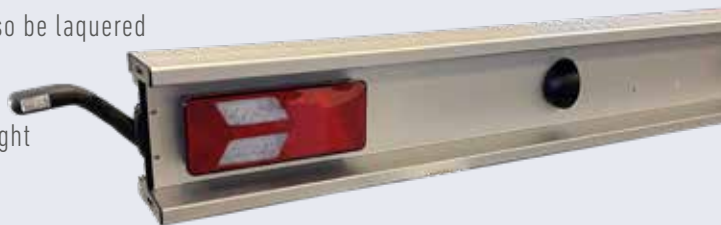
Individually adapted for optimal use

Certified production

In Denmark, ERMAX assembles the complete rear underrun protection bar solutions at own production facilities in Denmark according to the "Kraftfahr Bundesamt" certified "Conformity of Production". Each variant of the rear underrun protection bar is individually adapted. This ensures optimal positioning of the lights and perfect cable structure. This saves weight and increases the life time of the components, makes installation easier and at the same time guarantees a short and reliable delivery time.

Highlights

- Connection via one interface and 8 T-bolts
- Fully anodized rear underrun protection bar - can also be laquered
- Integration of
 - LED failure control on direct indicator and stop light
 - SIMAC® control
 - Junction box
- Certified according to all relevant standards (ECE R58 Rev. 02 or ECE 58 Rev. 03) and regulations in Europe
- Weight optimized
- TM5, TM10 and TM11 with impact resistant lens made of polycarbonate



High-quality Design - various applications

ERMAX produces two different rear underrun protection bar profiles - one with the approval according to ECE R58-02 and one according to the new regulation ECE R58-03. The versions of the ERMAX rear underrun protection bar consist of five design variants.

The different versions are available with the following options: LED failure control, SIMAC control (flashing side marker lights), with plugs or with junction box. You will find information about the various types on the following pages.

All variants are supplied with a protection cover over the junction box or over the connectors of the tail lights.



TM4



TM5 - Polycarbonate



TM7



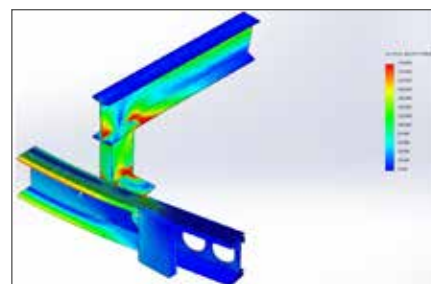
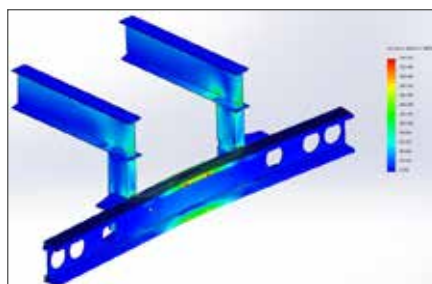
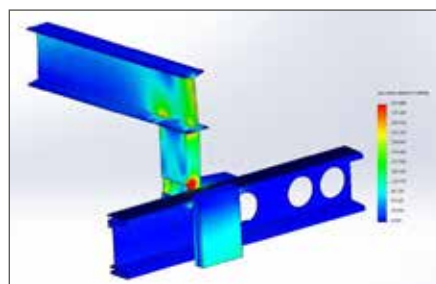
TM10 - Polycarbonate



TM11 - Polycarbonate

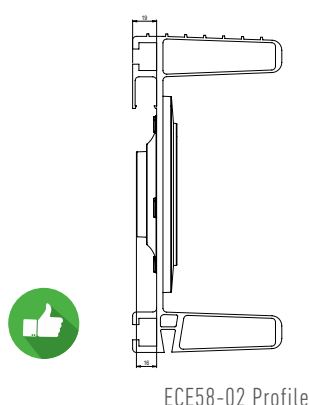
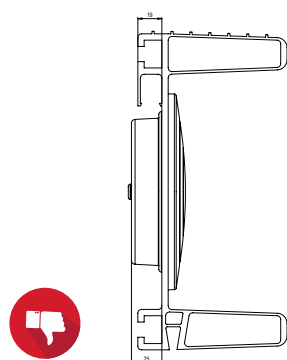
These reasons speak for ERMAX

The development and design of the solutions is supported by CFD & CAE Engineering to ensure optimum impact strength of the ECE-tested rear underrun protection bar. The new weight-optimized ERMAX rear underrun protection bar with a total weight of only 28 kg and mounting brackets of total 8 kg meets the new requirements and is one of the lightest solutions on the market. With only two reinforcement brackets the assembly is very efficient.



Intelligent Design

The intelligent design of the rear underrun protection bar ensures that even built-in lights don't protrude beyond the rear underrun protection bar. This gives you the full width of the chassis frame and ensures maximum flexibility in the construction and the design of the vehicle.



ECE58-02 Profile



ECE58-03 Profile

Safe delivery

Before shipment the assembled rear underrun protection bar is tested meticulously and packed in an individual and maximally padded cardboard box. This in order to minimize transport damage and to ensure a safe and optimal transportation.



Production of the rear underrun protection bar



Increased security

Rear underrun protection bar according to ECE R58 revision 3

New regulations

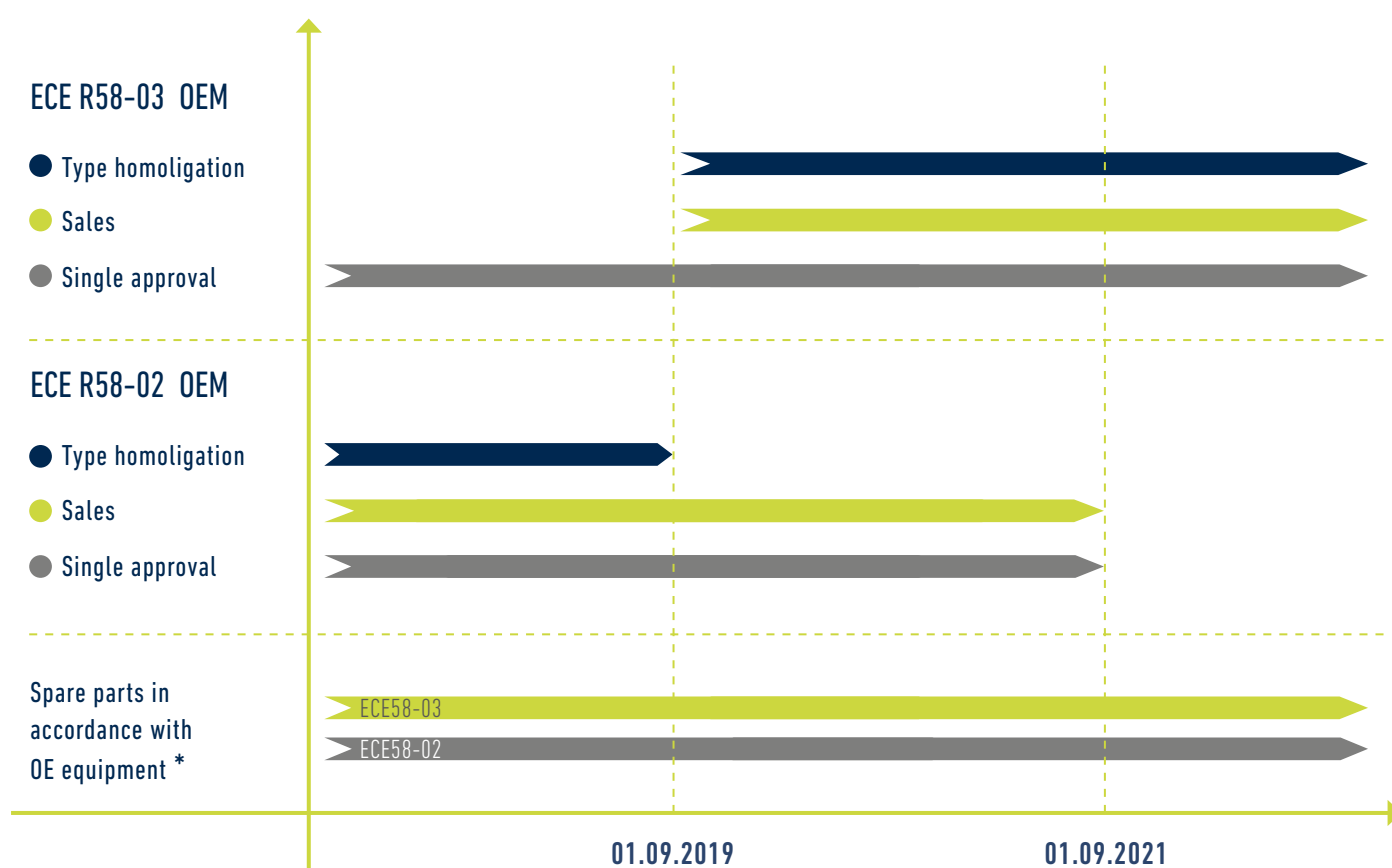
As of September 1, 2019 new increased regulations and safety standards ECE R58 Revision 3 (ECE R58-03) have been in effect for all **new, type-approved vehicle types**.

As of September 1, 2021 these regulations also will apply to **all type-approved vehicle types**.

In order to increase the safety in rear-end collisions, the test forces of the rear underrun protection bar for a truck (N2, N3 over 3.5 t) or trailer (O3, O4 over 3.5 t) are almost doubled.

During the period leading up to 1st of September 2021, you are able to select complete rear underrun protection bar from ERMAX based on the former regulation (R58-02) or the new regulation (R58-03) according to the categorization below.

TIME LINE



* Upgrade ECE R58-02 to ECE R58-03 is at any time permitted

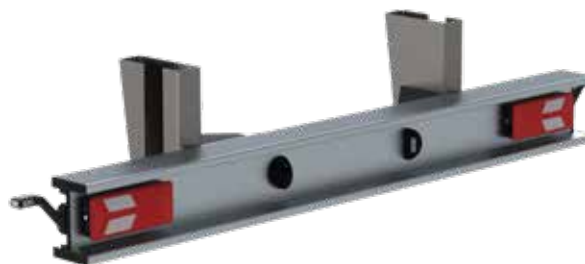


ERMAX underrun protection bar according to ECE58-03

Distances and dimensions

Legal requirements ECE R58 revision 3

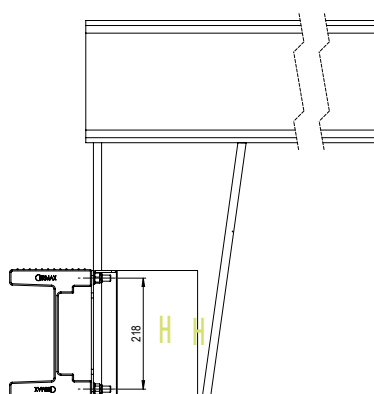
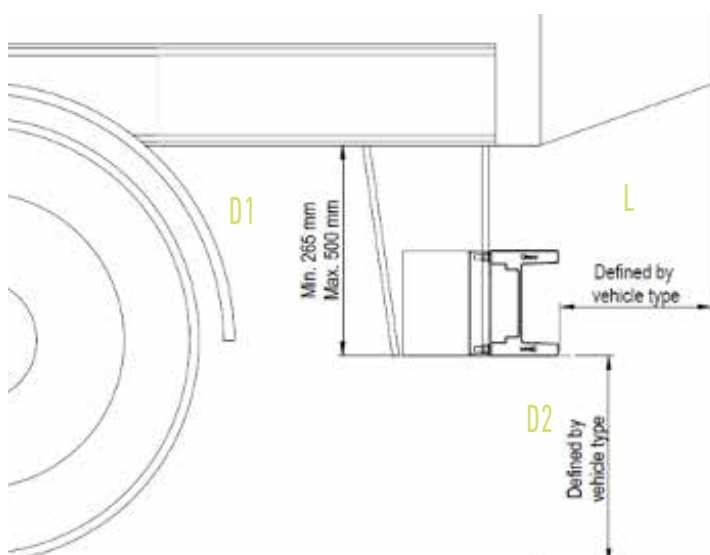
Since the rear underrun protection bar is a safety solution, it is governed by strict legal requirements. This increases safety for both the driver and other road users. That is why there are also legal requirements and safety clearances about where the underrun protection bar has to be placed on the vehicle.



The new ERMAS rear underrun protection bar with

- Total weight of only 28 kg
- Mounting brackets of 8 kg

meets the new requirements according to ECE R58-03.



L Maximum permissible overhang

300 mm (R58-03)

400 mm (R58-02)

D1 Permissible height of the consoles

Minimum 265 mm (R58-02 / R58-03)

Maximum 500 mm (R58-02 / R58-03)

D2 Maximum permissible ground clearance (vehicle not loaded)

450 mm (R58-03)

550 mm (R58-02)

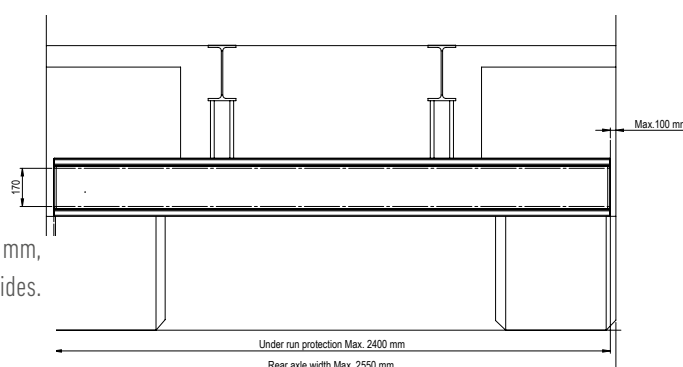
H Permissible minimum profile height of the underrun protection bar

120 mm (R58-03)

100 mm (R58-02)

The permissible dimensions can vary depending on the vehicle category and chassis type.

The side engagement of the rear underrun protection bar must be 0 - 100 mm, and must be the same size on both sides.



Impressive technology

Individual solutions as required

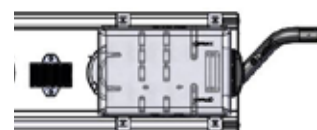
There are various designs of the rear underrun protection bar solutions from ERMAX. These designs consist of various components with innovative solutions and control units – offering a very flexible rear underrun protection bar customized for the individual vehicle and needs.

The following control units and solutions are integrated in the ERMAX rear underrun protection bar.

LED failure control

- Built-in intelligent control for monitoring and failure report of LED tail lights according to ECE R48 – for indicator and stop functions.
- The use of a technology which is NOT limited to ISO13207 and therefore suitable for all vehicles*.
- Facilitates the overall assembly of the vehicle significantly – no additional parts required.

* Valid for all known brands in the EU countries from



SIMAC® Control system – flashing side marker lights

- Intelligent control of flashing side marker lights SIMAC® according to ECE R48.
- Strong contribution to increasing road safety.
- Facilitates the overall assembly of the vehicle significantly – no additional parts required.

Junction box / Plug connections

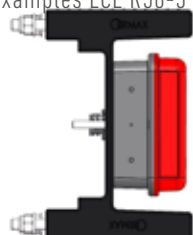
- ERMAX offers the classical solution with junction box where all cables from the lights are led into the box without external plugs.
- As an alternative solution ERMAX offers a solution with AMP and Super-Seal plugs connected behind the lights. This makes the direct access possible and thus a faster replacement by e.g. collision damages of a light.



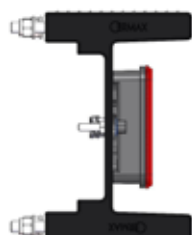
Always a safe choice no matter what light

- Due to the form of the profile – not only from the back – but also from the front, the lights are safely placed and thus protected from the front and rear side.
- Due to the over and underlying profiles the lights are protected against most collisions.

Examples ECE R58-3



TM10 Tail light



TM11 Tail light



TM5 Tail light



TM4 Tail light

Optimal use

Long-term quality installation

All plugs are designed to meet IP69K for use at the rear of the vehicle.

In order not just to secure a long-lasting functionality but also a long-lasting protected installation, every system with plugs also has a cover solution.

For solutions with junction box, a protective cap is mounted over the box.



Example with plugs behind the lights.

All plug connections are mounted under the protection cover and thus optimally protected.



Example with junction box.

All cables are mounted in the junction box and optimally protected by the protective cover.

The fully configured underrun protection bar can be installed via just one interface (without SIMAC) - through the pre-assembled rear cable with 15-pin bayonet socket together with 8 T-bolts. **Simple and time-optimized.**

Rear underrun protection bar with TM5 tail lights

Unbeatable durability

- Space-saving – ultra slim built-in depth of the TM5 tail lights
- Unsurpassed durability – impact resistant lens made of polycarbonate
- Increased traffic security – Eternal Light technology



Measure (WxDxH): 2780 (2400 mm without OEM) x 120 x 250 mm

Variant - ECE R58-02

Article no.	Type	Junction box	SIMAC	LED failure control	
				Direct indicator	Stop
098 258 100 92.0000.7588	LED	-	-	-	-
098 258 110 92.0000.7589	LED	-	-	✓	-
098 258 130 92.0000.7591	LED	-	✓	✓	-
098 258 140 92.0000.7592	LED	✓	-	-	-
098 258 150 92.0000.7593	LED	✓	-	✓	-
098 258 160 92.0000.7594	LED	✓	✓	-	-
098 258 170 92.0000.7595	LED	✓	✓	✓	-

Measure (WxDxH): 2780 (2400 mm without OEM) x 160 x 252 mm

Variant - ECE R58-03

Article no.	Type	Junction box	SIMAC	LED failure control	
				Direct indicator	Stop
098 259 100 92.0000.8262	LED	-	-	-	-
098 259 110 92.0000.8263	LED	-	-	✓	-
098 259 130 92.0000.8264	LED	-	✓	✓	-
098 259 140 92.0000.8265	LED	✓	-	-	-
098 259 150 92.0000.8266	LED	✓	-	✓	-
098 259 155 92.0000.8267	LED	✓	-	✓	✓
098 259 170 92.0000.8268	LED	✓	✓	✓	-
098 259 175 92.0000.8269	LED	✓	✓	✓	✓

Rear underrun protection bar with TM7 tail lights

Classical solution

- Compact round lights with a chrome look
- Easy mounting
- Classical LED look



Measure (WxDxH): 2780 (2400 mm without OEM) x 120 x 250 mm

Variant - ECE R58-02

Article no.	Type	Junction box	SIMAC	LED failure control	
				Direct indicator	Stop
098 258 200 92.0000.7596	LED	-	-	-	-
098 258 210 92.0000.7597	LED	-	-	✓	-
098 258 230 92.0000.7599	LED	-	✓	✓	-
098 258 240 92.0000.7600	LED	✓	-	-	-
098 258 250 92.0000.7601	LED	✓	-	✓	-
098 258 260 92.0000.7602	LED	✓	✓	-	-
098 258 270 92.0000.7603	LED	✓	✓	✓	-

Measure (WxDxH): 2780 (2400 mm without OEM) x 160 x 252 mm

Variant - ECE R58-03

Article no.	Type	Junction box	SIMAC	LED failure control	
				Direct indicator	Stop
098 259 200 92.0000.8270	LED	-	-	-	-
098 259 210 92.0000.8271	LED	-	-	✓	-
098 259 230 92.0000.8272	LED	-	✓	✓	-
098 259 240 92.0000.8273	LED	✓	-	-	-
098 259 250 92.0000.8274	LED	✓	-	✓	-
098 259 255 92.0000.8275	LED	✓	-	✓	✓
098 259 270 92.0000.8276	LED	✓	✓	✓	-
098 259 275 92.0000.8277	LED	✓	✓	✓	✓

Rear underrun protection bar with TM10 tail lights

Unbeatable durability

- Unsurpassed durability - impact resistant lens made of polycarbonate
- Increased traffic security – Eternal Light technology
- As full LED or hybrid



Measure (WxDxH): 2780 (2400 mm without OEM) x 100 x 250 mm

Variant - ECE R58-02

Article no.	Type	SIMAC	LED failure control	
			Direct indicator	Stop
098 258 300 92.0000.7524	Hybrid ▲	–	NA	NA
098 258 320 92.0000.7720	Hybrid ▲	✓	NA	NA
098 258 400 92.0000.7494	LED	– *	– *	– *

Measure (WxDxH): 2780 (2400 mm without OEM) x 160 x 252 mm

Variant - ECE R58-03

Article no.	Type	SIMAC	LED failure control	
			Direct indicator	Stop
098 259 320 92.0000.8278	Hybrid ▲	✓	NA	NA
098 259 450 92.0000.8279	LED	– *	– *	– *

▲ Position light, side marker light and license plate light as LED

* Failure control at the underrun protection bar with TM10 LED tail lights

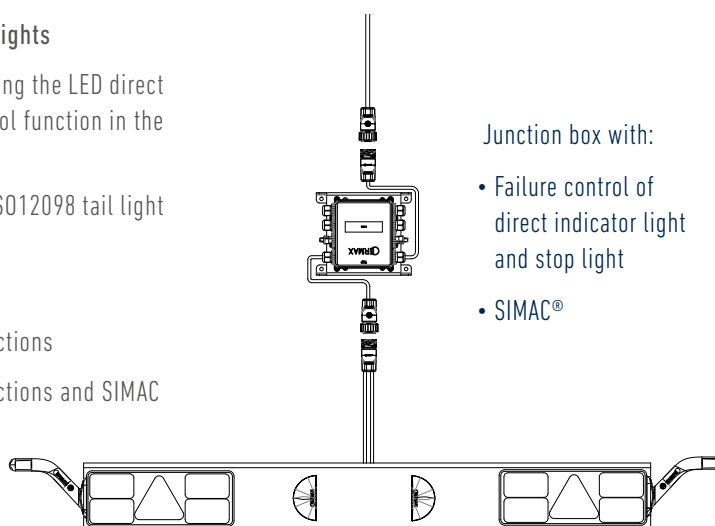
The combined LED control boxes from ERMAX offer the possibility of using the LED direct indicator light and stop light failure control as well as the SIMAC control function in the lighting installation.

The LED control boxes also have function as a junction box, where all ISO12098 tail light functions can be achieved.

There are 2 variants of the junction box:

098 298 160 - LED failure control of direct indicator and stop light functions

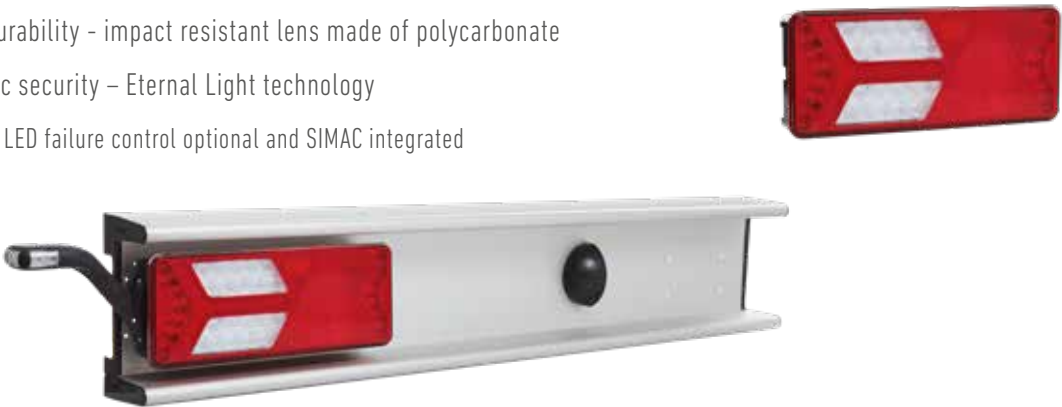
098 298 170 - LED failure control of direct indicator and stop light functions and SIMAC



Rear underrun protection bar with TM11 tail lights

Unsurpassed full LED functionality

- Unsurpassed durability - impact resistant lens made of polycarbonate
- Increased traffic security – Eternal Light technology
- High reliability - LED failure control optional and SIMAC integrated



Measure (WxDxH): 2780 (2400 mm without OEM) x 120 x 250 mm

Variant - ECE R58-02

Article no.	Type	SIMAC	LED failure control	
			Direct indicator	Stop
098 258 520 92.0000.7876	LED	✓	–	–
098 258 530 92.0000.7877	LED	✓	✓	–
098 258 580 92.0000.7878	LED	✓	✓	✓

Measure (WxDxH): 2780 (2400 mm without OEM) x 160 x 252 mm

Variant - ECE R58-03

Article no.	Type	SIMAC	LED failure control	
			Direct indicator	Stop
098 259 520 92.0000.8280	LED	✓	–	–
098 259 530 92.0000.8281	LED	✓	✓	–
098 259 580 92.0000.8282	LED	✓	✓	✓

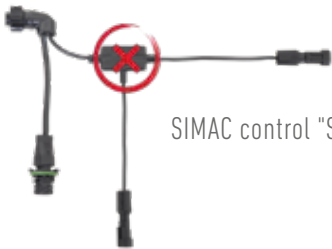
With the TM11 tail light the Ermax rear bumper has a real all-rounder on board: further to the standard functions the TM11 also has an optional LED indicator failure control and a flash function for the side marker lights (SIMAC) integrated in the light housing – mounting will never be easier!



TM11 LED



LED control unit "Snap-in"



SIMAC control "Snap-in"

Rear underrun protection bar with TM4 tail lights

A classic - new developed

- Classical elegant design - new developed
- LED failure control and SIMAC integrated



Integrated LED failure control for monitoring the direction indicator function and stop light function



Measure (WxDxH): 2780 (2400 mm without OEM) x 160 x 252 mm

Variant - ECE R58-03

* With D-approval

Article no.	Type	Junction box	SIMAC	LED failure control	
				Direct indicator	Stop
098 259 075 * 92.0000.XXXX	LED	✓	✓	✓	✓
098 259 095 ** 92.0000.XXXX	LED	✓	✓	✓	✓

** The triangular reflectors must be installed separately

Underrun protection bar with TM2 tail lights

- Tail light with bulb - the remaining lights are LED
- Easy mounting



Measure (WxDxH): 2780 (2400 mm without OEM) x 120 x 250 mm

Variant - ECE R58-02

Article no.	Type	SIMAC	LED failure control	
			Direct indicator	Stop
098 258 635	Bulb	NA	NA	NA

Measure (WxDxH): 2780 (2400 mm without OEM) x 160 x 252 mm

Variant - ECE R58-03

Article no.	Type	SIMAC	LED failure control	
			Direct indicator	Stop
098 259 635	Bulb	NA	NA	NA

Rear underrun protection bar without lights ECE R58-02 or ECE R58-03

Packaging

The underrun protection can also be supplied in an anodized version with or without holes - without lights.

Packaging as single in a box or as pallet packaging.

The different variants can be found on the following pages.



Only available as ECE R58-03

Safe delivery

Delivery in a maximally padded packaging, which ensures a safe and optimal transportation.



Individually

- packed as a single box



Pallet packaging

- ECE R58-02 with 25 pieces

- ECE R58-03 with 20 pieces

Rear underrun protection bar ECE R58-02

Anodized - without lights

Anodized aluminium - 3 variants packed individually in a cardboard box or pallet packaging.

End caps and T-bolts must be ordered separately.



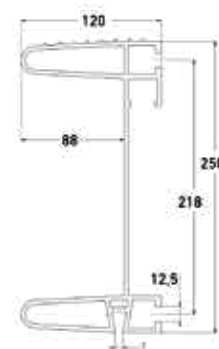
Pos 1



Pos 2



Pos 3



Pos 4



Pos 5

Variant - ECE R58-02

Article no.	Pos	Variant type	Drilling	Packaging
098 259 000 92.0000.6649	1	Without drilling	-	Individually (1 pcs)
098 258 000 92.0000.7128	2	For built-in lights (TM5, TM7)	6 x Ø135 mm	
098 258 001 92.0000.7122	3	For 7-function lights (TM10, TM11)	2 x Ø44 mm, 8 x Ø30 mm	
098 259 000-Bulk	1	Without drilling	-	Pallet 25 pieces

OBS.
End caps and T-bolts
must be ordered
separately

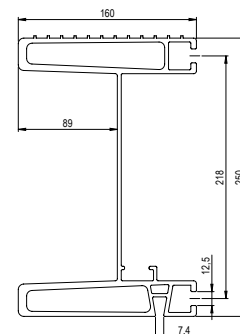
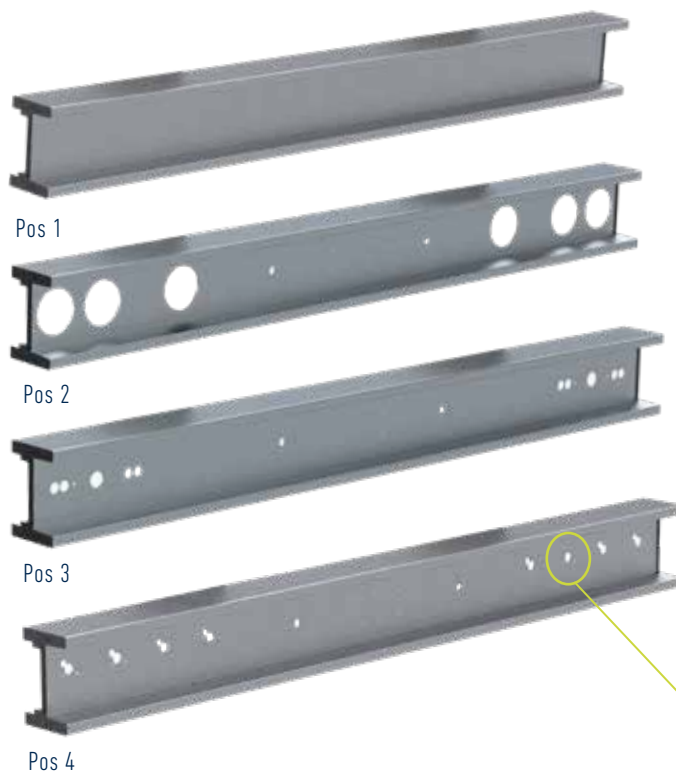
Article no.	Pos	Description	Packaging
098 299 610 92.0000.6561	4	End cap, plastic (2 pcs. per underrun protection bar)	Bag with 2 pcs.
099 110 004 92.0000.8285	5	T-bolts (4 pcs. per underrun protection bar)	Bag with 4 pcs.

Rear underrun protection bar ECE R58-03

Anodized - without lights

Anodized aluminium - 4 variants packed individually in a cardboard box or pallet packaging.

End caps and T-bolts must be ordered separately.



* If 2x 4 TM4 tail lights are to be mounted, an additional hole (right) for the cable from the rear light must be drilled.

Variant - ECE R58-03

Article no.	Pos	Variant type	Drilling	Packaging
098 259 005 92.0000.8259	1	Without drilling	-	Individually (1 pcs)
098 259 006 92.0000.8260	2	For built-in lights (TM5, TM7)	6 x Ø135 mm	
098 259 007 92.0000.8261	3	For 7-function lights (TM10, TM11)	2 x Ø44 mm, 8 x Ø30 mm	
098 259 008 * 92.0000.9153	4	For surface mounted lights (TM4)	16 x Ø7 mm, 8 x Ø28/20 mm	
099 259 005 92.0000.8310	1	Without drilling	-	Pallet 20 pcs
099 259 006 92.0000.8311	2	For built-in lights (TM5, TM7)	6 x Ø135 mm	
099 259 007 92.0000.8313	3	For 7-function lights (TM10, TM11)	2 x Ø44 mm, 8 x Ø30 mm	
099 259 008 * 92.0000.9154	4	For surface mounted lights (TM4)	16 x Ø7 mm, 8 x Ø28/20 mm	

OBS.
End caps and T-bolts
must be ordered
separately

Article no.	Pos	Description	Packaging
099 299 616 92.0000.8286	4	End cap, plastic (2 pcs. per underrun protection bar)	Bag with 2 pcs.
099 299 615 92.0000.8211	4	End cap, plastic (2 pcs. per underrun protection bar)	40 pcs.
099 110 004 92.0000.8285	5	T-bolts (8 pcs. per underrun protection bar)	Bag with 4 pcs .

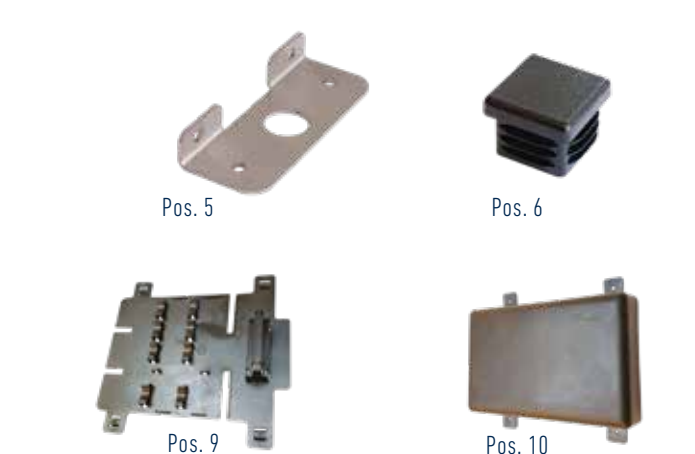
Spare parts and accessories ECE R58-01



The consoles mentioned in the certificate (pos. 1) are mounted at the chassis frame. The associated reinforcement brackets (pos. 2) must be used for specific widths of the chassis frame according to the guidance in the certificate.



Consoles as well as reinforcement brackets are offered from ERMAX as accessories, but may also be produced by the vehicle manufacturer, provided that the technical instructions in the certificate are followed exactly.



Ersatzteile & Zubehör

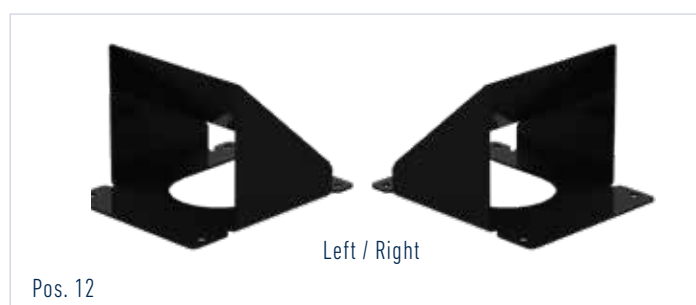
	Pos.	Artikelnummer
Console - Square profile for welding on the chassis frame	1	098 299 620 92.0000.7251
Reinforcement bracket - Left side 098 299 602 / right side 098 292 603 A frame width between 840-1250 requires 2 pcs. By use of these reinforcement brackets, additional 4 T-bolts will be needed. (099 110 004)	2	098 299 602 92.0000.6559 098 299 603 92.0000.6560
End cap, plastic - Bag with 2 pcs. (2 pieces per underrun protection bar are needed)	3	098 299 610 92.0000.6561
T-bolt M12x55 mm with square head - Bag with 4 pcs. (4 pieces per underrun protection bar are needed)	4	099 110 004 92.0000.8285
Stainless steel angle bracket for fixation of marker lamps for light bar	5	098 299 605 92.0000.6731
Square shaped clamp : 25x25x5mm / Thicknes : 1mm. Bags of 10 pcs.	6	098 299 612 92.0000.7215
Type approval label	7	099 110 001 92.0000.6702
Cover for junction box for underrun protection bar. Plastic	8	098 299 617 92.0000.8284
Base plate for rear underrun protection bar with TM5/TM7. Plastic	9	098 299 608 92.0000.7674
Cover for base plate. For rear bumper with TM5/7. To be used with base plate 098299608	10	098 299 609 92.0000.7674

Spare parts and accessories ECE R58-03



The consoles mentioned in the certificate (pos. 1) are mounted at the chassis frame. The associated reinforcement brackets (pos. 2) must always be present.

Depending upon the width of the chassis frame (distances between the consoles) the reinforcement brackets must be placed inside or outside the consoles in order to support the underrun protection bar.



Consoles as well as reinforcement brackets are offered from ERMAX as accessories, but may also be produced by the vehicle manufacturer, provided that the technical instructions in the certificate are followed exactly.

According to the certificate, the consoles may also be integrated in the chassis.



Ersatzteile & Zubehör

	Pos.	Artikelnummer
Console 1 - Profile for welding on the chassis frame	11	099 299 623 92.0000.8288
Console 2 - Profile for welding on the chassis frame	11	099 299 622 92.0000.8287
Reinforcement bracket - left / right (1 pcs) Frame distance 1250-1450 mm : The reinforcement brackets must be installed on the inside of the consoles. Frame distance 980-1249 mm : The reinforcement brackets must be mounted on the outside of the consoles. 4 x 099 110 004 T-bolts M12 x 55 mm are needed for each bracket / totally 8 pcs.	12	099 299 625 92.0000.8289
End cap, plastic - Bag with 2 pcs (2 pieces per underrun protection bar are needed)	14	099 299 616 92.0000.8286
T-bolt M12x55 mm with square head - Bag with 4 pcs. (8 pieces per underrun protection bar are needed)	4	099 110 004 92.0000.8285
Stainless steel angle bracket for fixation of marker lamps for light bar	5	098 299 605 92.0000.6731
Type approval label	15	099 110 001 92.0000.6702
Cover for junction box for underrun protection bar. Plastic	8	098 299 617 92.0000.8284
Base plate for rear underrun protection bar with TM5/TM7. Plastic	9	098 299 608 92.0000.7674
Cover for base plate. For rear bumper with TM5/7. To be used with base plate 098299608	10	098 299 609 92.0000.7674

The Lighting System

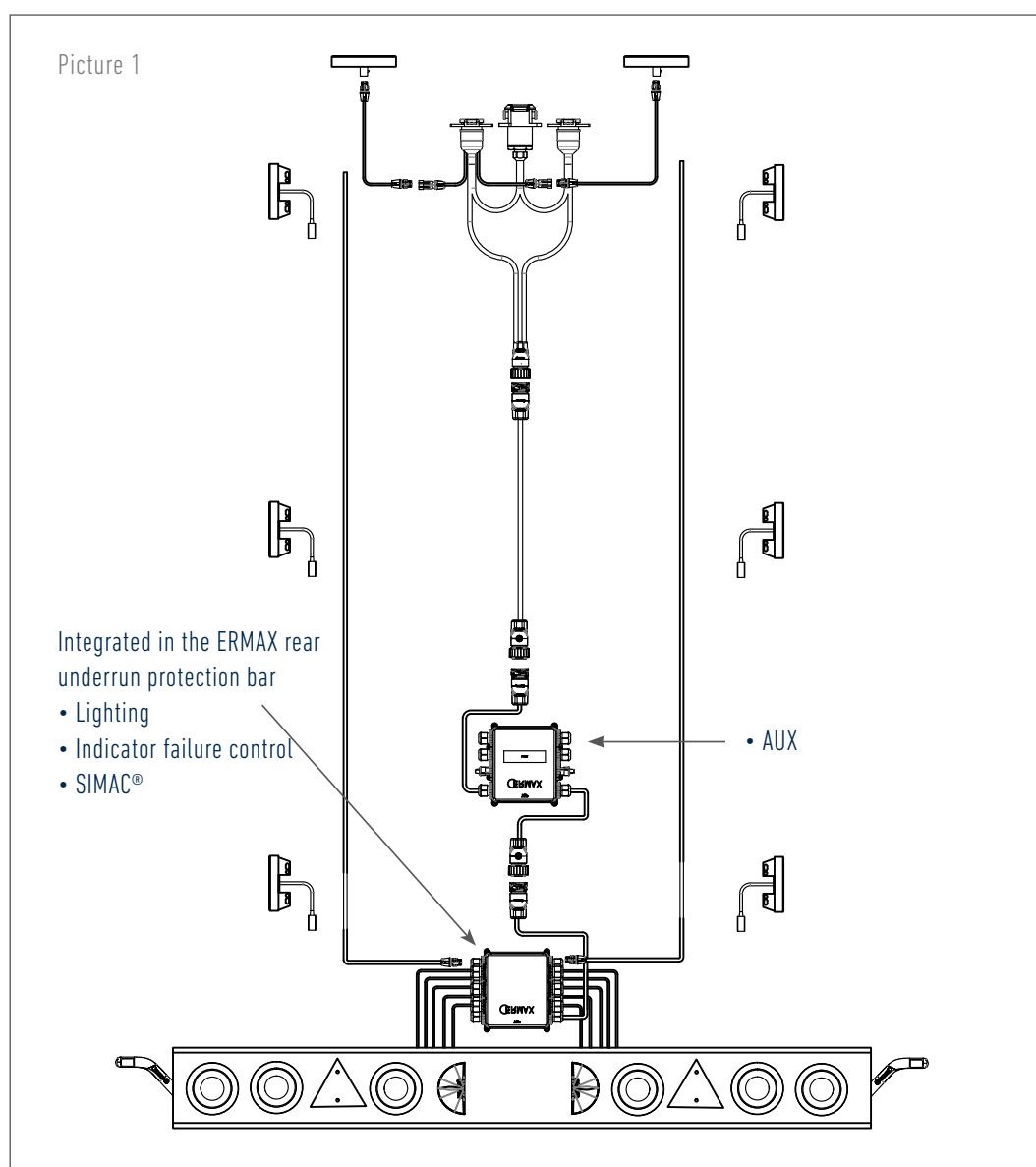
As supply source for other electrical applications

Flexibility & long-lasting benefits

The ERMAX lighting- and rear underrun protection bar solutions offer the best possible conditions for other electrical sources of additional systems e.g. lift axles, reverse alarm etc., to take over the existing ERMAX lighting. These can be removed from the cable source or connected to the junction box on the underrun protection bar.

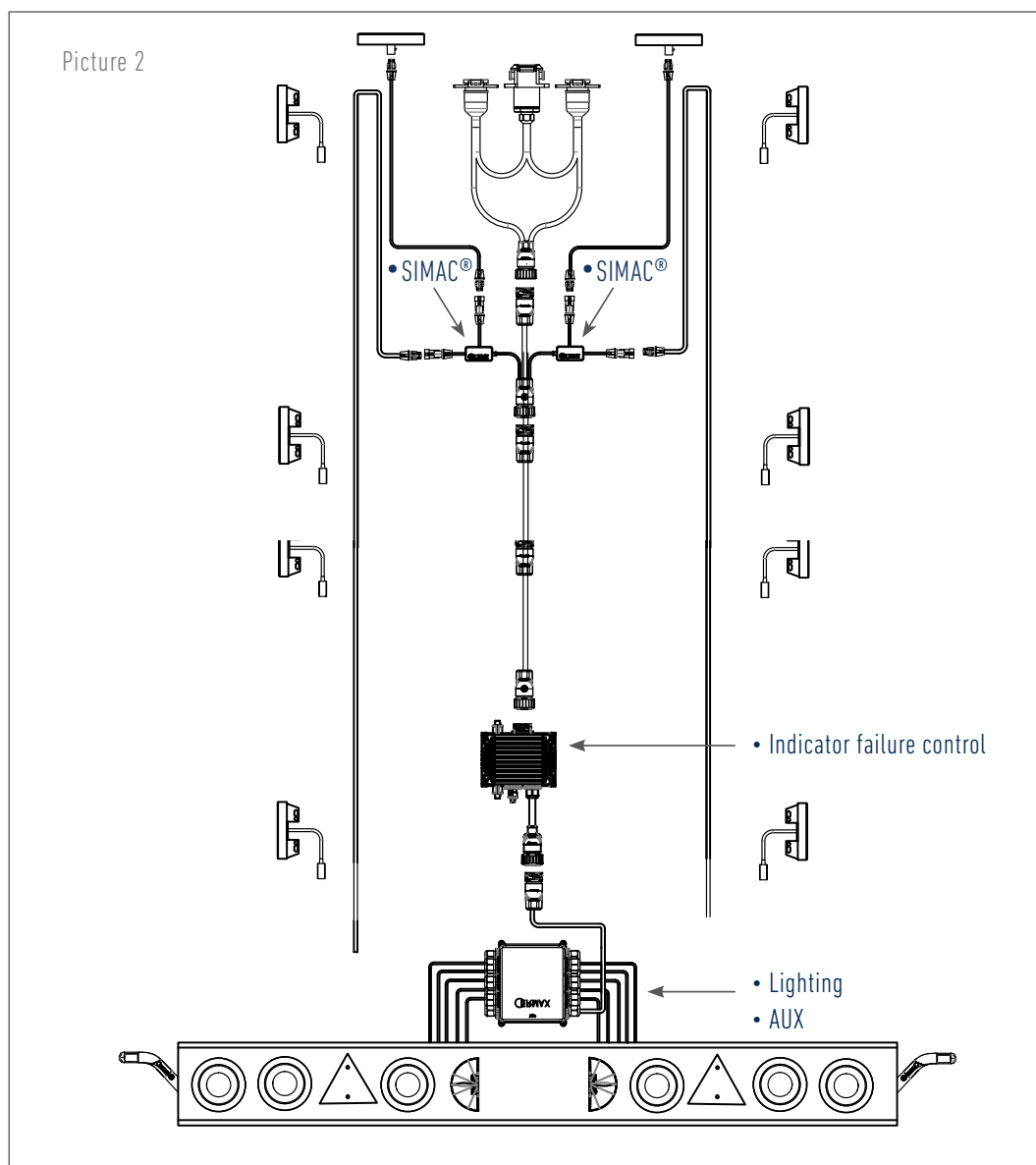
The legal requirement regarding lighting systems on a vehicle are still increasing. With ERMAX systems, this intelligence can be integrated in the junction box at the underrun protection bar. The requested additional functions by the legal requirements (e.g. AUX) are to be taken from a junction box inserted in the main cable in the front of the rear bumper (picture 1).

Example 1: Ermax configuration



The flexibility of the ERMAX configuration makes it possible, however, that the functions concerning the indicator failure control and SIMAC (the flashing side marker lights) can be inserted elsewhere in the system. With this configuration it is possible to use the AUX connections in the junction box on the rear underrun protection bar (picture 2).

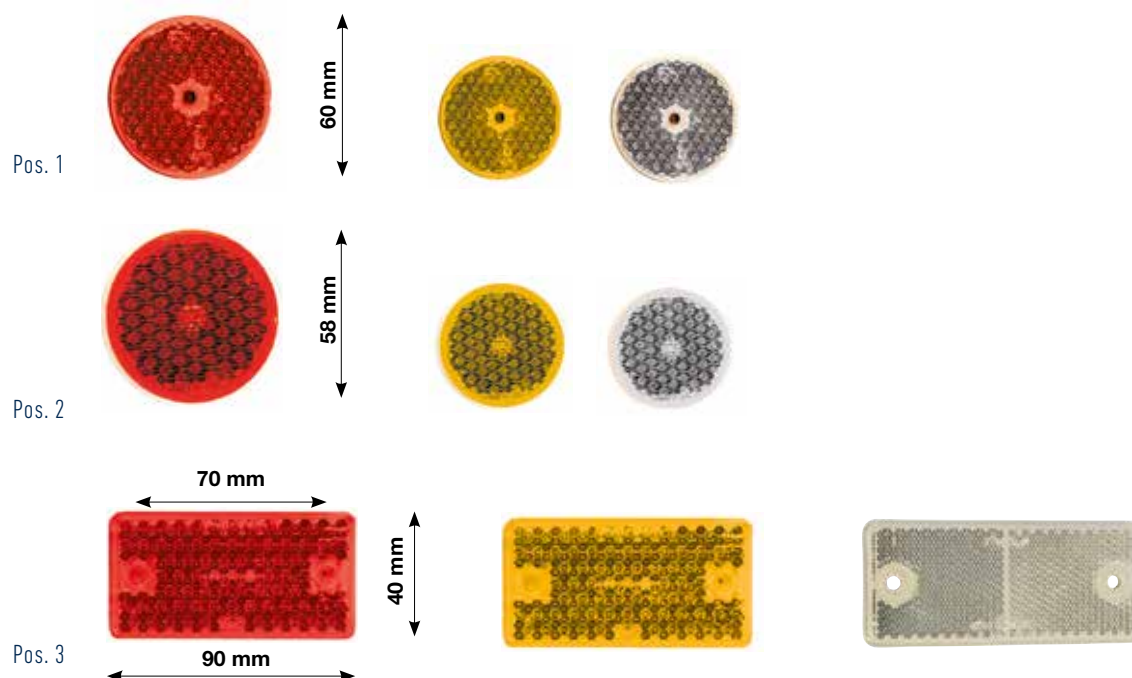
Example 2: ERMAX configuration



REFLEX REFLECTOR



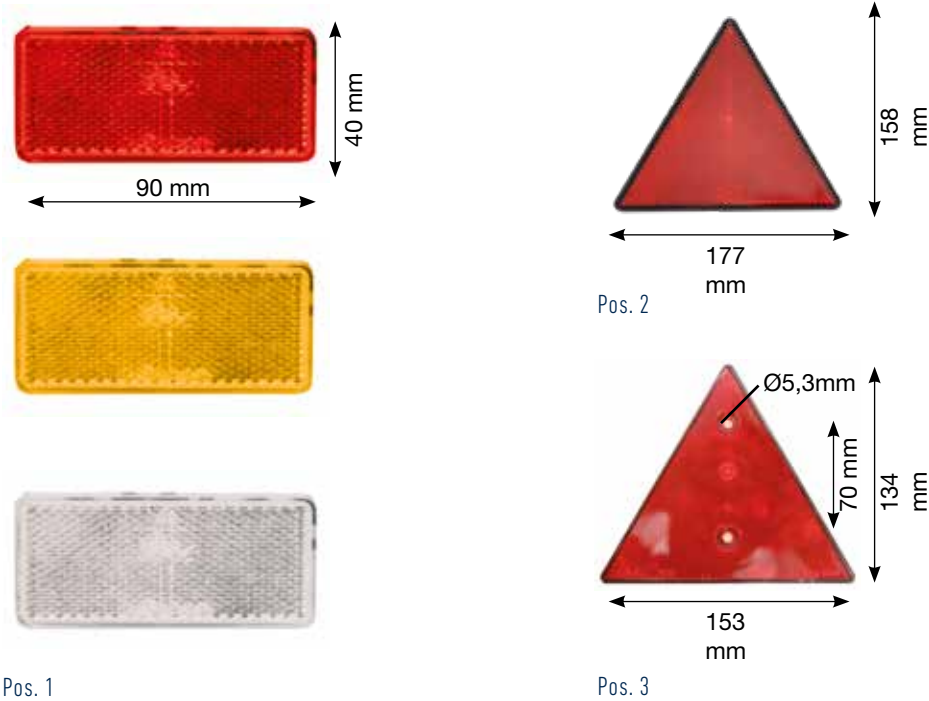
Reflex reflector with and without self-adhesive back



Colour		Dimension	Hole/screw	Self-adhesive	Packing unit	Pos.	Article No.
Red		Ø60 mm	Ø 6,3 mm		10 pcs	1	098 261 060 92.0000.1613
Yellow		Ø60 mm	Ø 6,3 mm		10 pcs	1	098 261 062 92.0000.1614
White		Ø 60 mm	Ø 6,3 mm		10 pcs	1	098 261 064 92.0000.1615
Red		Ø58 mm		✓	10 pcs	2	098 262 061 92.0000.1616
Yellow		Ø58 mm		✓	10 pcs	2	098 262 063 92.0000.1617
White		Ø58 mm		✓	10 pcs	2	098 262 065 92.0000.1618
Red		90 x 40 mm	Ø 4,3 mm/2 x 4 mm M5		10 pcs	3	098 264 120 92.0000.1619
Yellow		90 x 40 mm	Ø 4,3 mm/2 x 4 mm M5		10 pcs	3	098 264 122 92.0000.1620
White		90 x 40 mm	Ø 4,3 mm/2 x 4 mm M5		10 pcs	3	098 264 124 92.0000.1621
Red		90 x 40 mm	Ø 4,3 mm/2 x 4 mm M5	✓	10 pcs	3	098 265 130 92.0000.1622
Yellow		90 x 40 mm	Ø 4,3 mm/2 x 4 mm M5	✓	10 pcs	3	098 265 132 92.0000.1623
White		90 x 40 mm	Ø 4,3 mm/2 x 4 mm M5	✓	10 pcs	3	098 265 134 92.0000.1624

Reflex reflector

E



Colour		Dimension	Loch/screw	Self-adhesive	Packing unit	Pos.	Article No.
Red		90 x 40 mm		✓	10 pcs	1	098 265 140 92.0000.1625
Yellow		90 x 40 mm		✓	10 pcs	1	098 265 142 92.0000.1626
White		90 x 40 mm		✓	10 pcs	1	098 265 144 92.0000.1627
Red		177 x 158 mm	2 x M5		1 pcs	2	098 267 605 92.0000.7236
Black rear plate							
Red		158 x 140 mm	Ø 5,3 mm		10 pcs	3	098 267 610 92.0000.1050

Reflex marker boards for trailers

ECE Reg. 70.01



Pos. 1

1130 x 200 mm



Pos. 2

565 x 200 mm



Pos. 3

285 x 200 mm

Aluminum	Self-adhesive foil	Packing unit	Pos.	Article No.
1130 x 200 mm		1 pcs	1	098 269 417 92.0000.7999
	1130 x 200 mm	1 pcs	1	098 269 412 92.0000.1634
565 x 200 mm		2 pcs	2	098 269 419 92.0000.8000
	565 x 200 mm	2 pcs	2	098 269 414 92.0000.1636
285 x 200 mm		4 pcs	3	098 269 421 92.0000.8001
	285 x 200 mm	4 pcs	3	098 269 416 92.0000.1638

Contour marking

ECE 104



Colour	Self-adhesive contour marking, for rigid sides	Packing unit	Article No.
Red	50 m x 55 mm	50 meter per roll	098 269 200 92.0000.1632
White	50 m x 55 mm	50 meter per roll	098 269 204 92.0000.1009

INTERIOR LIGHTING

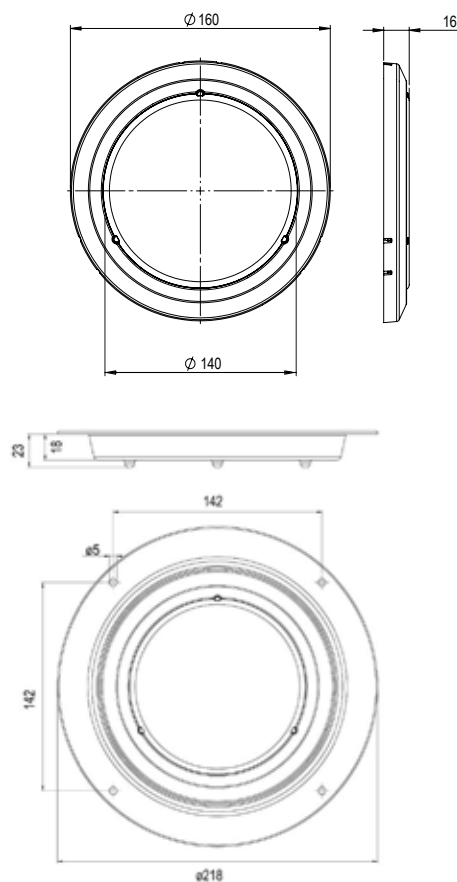


LED interior lights - Surface mounting and Built-in

EMC



Surface mounting



Built-in

Description

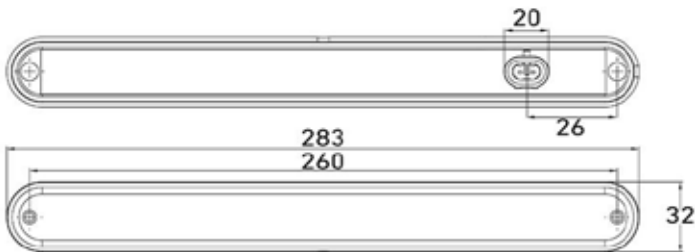
Lens:	Impact resistant polycarbonat
Housing:	Impact resistant polycarbonat
Mounting holes:	4 pcs Ø5 mm - Ø201 mm (Built-in)
Depth:	18 mm
Mounting holes:	3 pcs Ø3,8 mm - Ø138 mm (Surface mounting)

Lighting	IP-Rating	Lumen	Dimension	Operating voltage	Surface mounting	Built-in	Connection	Article No.
LED	IP67	294	Ø160 x 15,7 mm	12/24V	✓		1.500 mm cable with Click-in	098 274 070 92.0000.6612
LED	IP67	294	Ø160 x 15,7 mm	12/24 V	✓		2.500 mm cable with Open end	098 274 071 92.0000.6613
LED	IP67	294	Ø218 x 20 mm	12/24V		✓	1.500 mm cable with Click-in	098 274 072 92.0000.6614
LED	IP67	294	Ø218 x 20 mm	12/24 V		✓	2.500 mm cable with Open end	098 274 073 92.0000.6615

Spare parts

Bowl for LED interior light, Dimension: : Built-in Ø175 mm, outside Ø218 mm	098 291 070 92.0000.6671
---	------------------------------------

LED interior lights - Surface mounting or Built-in



Description

Lens:PMMA

Housing/holder:Polypropylen (PP)

Bolt distance:260 mm

Lighting	IP-Rating	Lumen	Dimension	Operating voltage	Surface mounting	Built-in	Connection	Article No.
LED	IP67	60	283 x 24 x 32 mm	24V	✓	✓	500 mm cable with Super Seal socket	098 274 725 92.0000.6558

REVERSE- & WORK LIGHTS

Lumen specification

The reversing lights in the following section are specified with a theoretical and an effective lumen.

The theoretical lumen is the calculated lumen of the light source

The effective lumen is the light measured outside the lens.



Standard product programme with large flexibility

Compact design, universally applicable and various connection possibilities

ERMAX reversing lights and work lights are available in 3 design types with different light performances / lumen.



LED Reverse light

Lumen:
Theoretical 650 / Effective 300



LED Work light

Lumen:
Theoretical 800 / Effective 600



LED Work light

Lumen:
Theoretical 1600 / Effective 1200

Approved as reversing light (ECE -R23) with 30° angling by vertical mounting



LED Work light

Lumen:
Theoretical 2400 / Effective 1800

Approved as reversing light (ECE -R23) with 35° angling by vertical mounting.



This type is also available with handle and on/off switch.



LED Reverse light

Lumen:
Theoretical 3.200 / Effective 2.400

Universally applicable

Mounting options

ERMAX working lights have a compact design with measures meaning that they can be mounted in a very narrow place. The compact design and symmetric light distribution give a large degree of flexibility when mounting. The work lights can be standing, hanging, rear or side mounted.

Mounting options ERMAX work lights



Standing



Hanging



Side



Rear



Easy maintenance

Various connection variations

ERMAX work lights are available with various connection variations – connection cable with Open end, Super Seal socket or “Deutsch” socket.

For connector variants, Ermax always offers a standard cable length of 300 millimeters to the first plug connection. The cable length can be adjusted according to need by means of standard extension cable or adapter cable. This ensures optimum ease of maintenance.

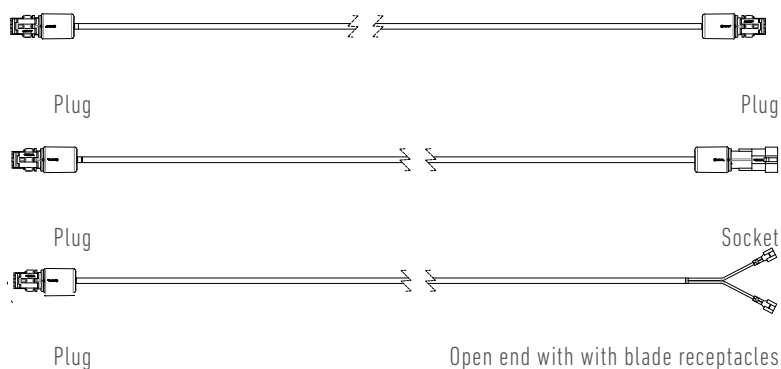
The large variety of cable solutions ensures the best installation without having to adjust the cable length (see page 23-27).

Connection / Extension possibilities ERMAX work lights

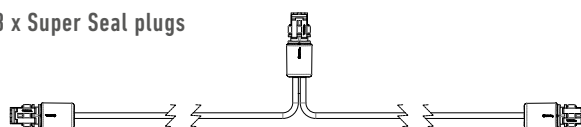


Super Seal socket

Extension cable with Super Seal connection

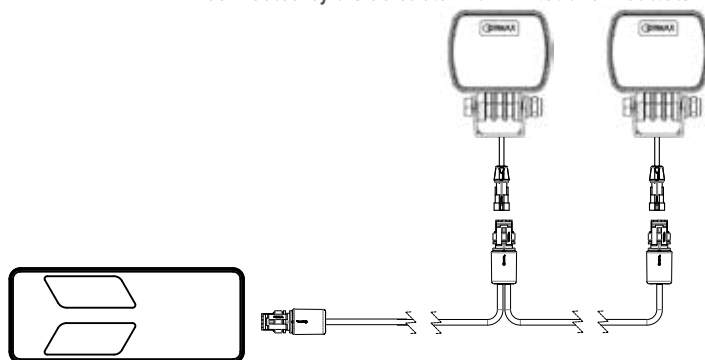


Y-Adapter with 3 x Super Seal plugs



Reverse light connected as a chain

-connected by a side cable with 1 inlet and 2 outlets with Super Seal plugs



2 pieces of Ermax reverse lights or work lights are allowed to be connected to an Ermax tail light (Max 52W)

Technical features ERMAX reverse lights and work lights

Technical specifications - Common to all variants

- Impact-resistant lens made of polycarbonate
- Housing made of aluminium, black lacquer (anti corrosion layers)
- Mounting bracket made of stainless steel, AISI 304 quality
- Mounting bolts M8 / 30 mm
- Multivolt 12/24V
- Working temperature -40 °C bis +65 °C
- Flood light pattern
- Colour temperature 6.500 °Kelvin
- Protection class IP69K
- Overheating and reverse polarity protection
- ADR and EMC/R10 approved
- ECE-R23 approved

Advantages of the newest LED light technology

- which are optimally utilised in the Ermax reverse lights and work lights

The advantages of the newest LED technology, which are optimally utilised in the ERMAX reverse lights and work lights - result in a product with a very high quality and extremely long life - and thus cost-effectiveness, which is a real highlight.

- High light output
- Extremely long lifetime
- 100% water & dustproof
- Low power consumption
- Maintenance free
- High shock and vibration resistance
- Effective heat conduction
- Increased profitability

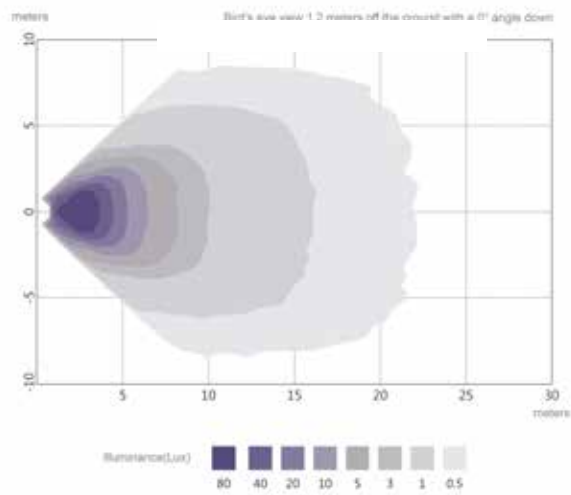


Reverse Light

Theoretical Lumen 650



Illumination



Bird's eye view 1,2 meter above the ground with an incline angle of 5°



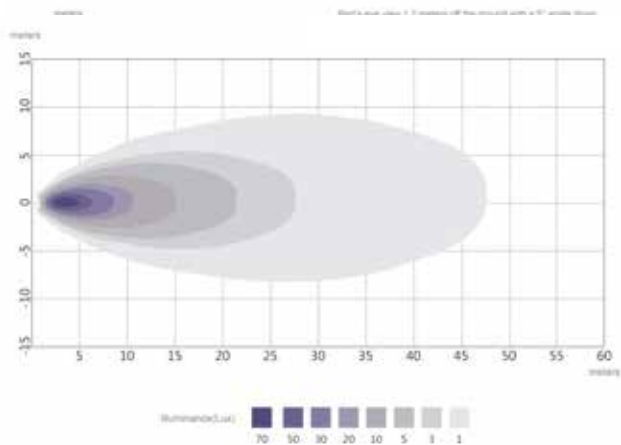
Operating voltage	Energy consumption	Connection	Cable length	Light source	Lumen Theoretical / effective	Light pattern	Article No.
12/24V	6,5 W	Open end	500 mm	6 x high-powered LED	650 / 300	Flood	098 256 250 92.0000.7834
12/24V	6,5 W	Super Seal socket	300 mm	6 x high-powered LED	650 / 300	Flood	098 256 255 92.0000.7835

Work Lights LED

Theoretical Lumen800



Illumination

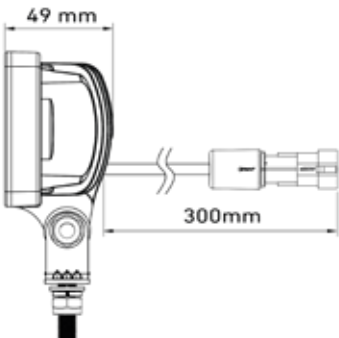
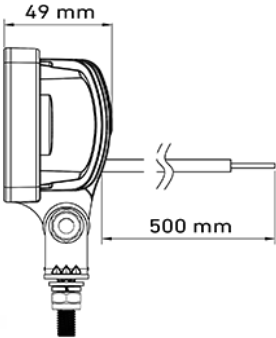
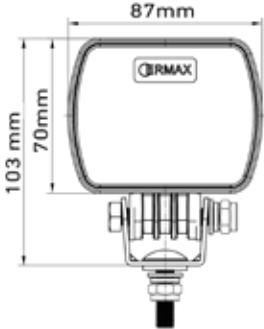


Bird's eye view 1,2 meter above the ground with an incline angle of 5°

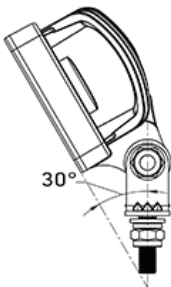
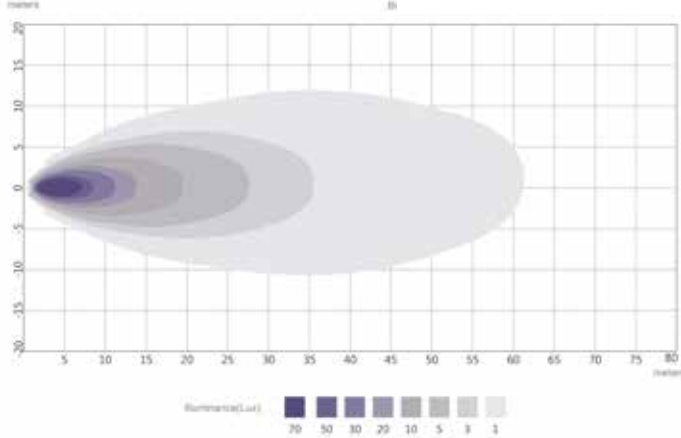


Operating voltage	Energy consumption	Connection	Cable length	Light source	Lumen Theoretical / effective	Light pattern	Article No.
12/24V	8 W	Open end	500 mm	6 x high-powered LED	800 / 600	Flood	098 174 250 92.0000.7825
12/24V	8 W	Super Seal socket	300 mm	6 x high-powered LED	800 / 600	Flood	098 174 255 92.0000.7826

Work Lights LED
Theoretical Lumen 1.600



Illumination



Approved as reverse light
- with 30° tilt when vertical mounted



Bird's eye view 1,2 meter above the ground with an incline angle of 5°

Operating voltage	Energy consumption	Connection	Cable length	Light source	Lumen Theoretical / effective	Light pattern	Article No.
12/ 24 V	16 W	Open end	500 mm	9 high-powered LED	1600 / 1200	Flood	098 174 260 92.0000.7827
12 / 24 V	16 W	Super Seal plug	1.000 mm	9 high-powered LED	1.600 / 1.200	Flood	098 174 264 92.0000.8168
12/ 24 V	16 W	Super Seal socket	300 mm	9 high-powered LED	1600 / 1200	Flood	098 174 265 92.0000.7828
12 / 24 V	16 W	Integrated Deutsch (Dt) socket	--	9 high-powered LED	1.600 / 1.200	Flood	098 174 267 92.0000.8064
12/ 24 V	16 W	Deutsch (DT) socket	300 mm	9 high-powered LED	1600 / 1200	Flood	098 174 268 92.0000.7829

Work Lights LED

Theoretical Lumen 2.400



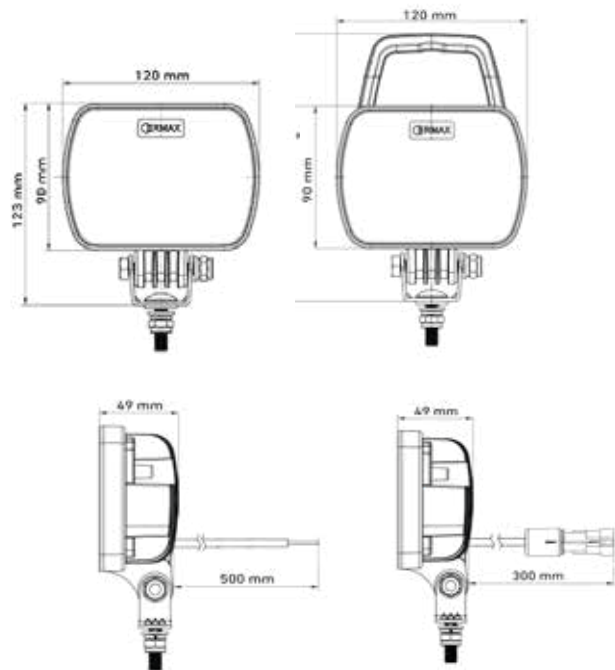
Pos. 1

Without on/off switch

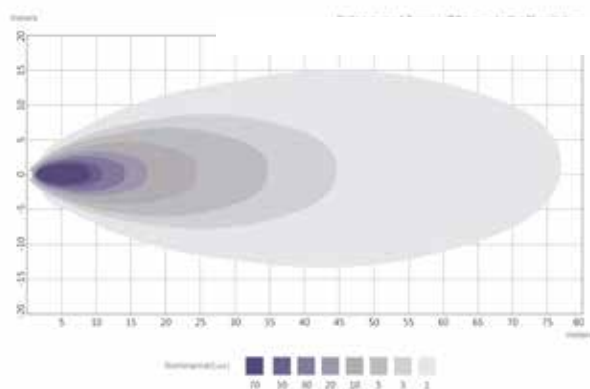


Pos. 2

With bracket and on/
off switch



Illumination



Approved as reverse light

- with 35° tilt when vertical mounted

Bird's eye view 1,2 meter above the ground with an incline angle of 5°

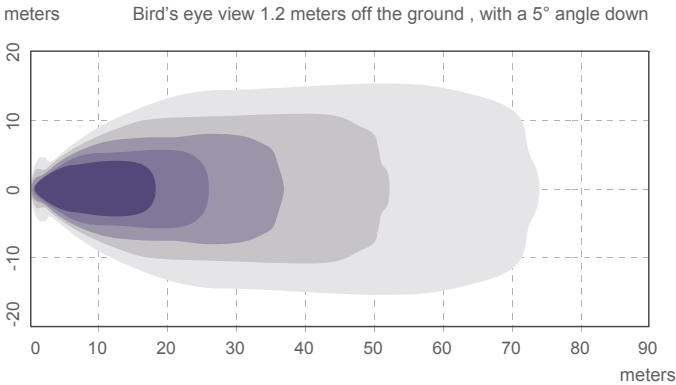
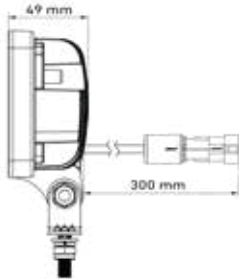
EMC



Operating voltage	Energy consumption	Connection	Cable length	Light source	Lumen Theoretical / effective	Light pattern	Pos.	Article No.
12/24V	25 W	Open end	500 mm	12 high-powered LED	2.400 / 1.800	Flood	1	098 174 270 92.0000.7830
12 / 24 V	25 W	Super Seal plug	1.000 mm	12 high-powered LED	2.400 / 1.800	Flood	1	098 174 274
12/24V	25 W	Super Seal socket	300 mm	12 high-powered LED	2.400 / 1.800	Flood	1	098 174 275
12 / 24 V	25 W	Integrated Deutsch (DT) socket	---	12 high-powered LED	2.400 / 1.800	Flood	1	098 174 277 92.0000.8066
12/24V	25 W	Deutsch (DT) socket	300 mm	12 high-powered LED	2.400 / 1.800	Flood	1	098 174 278 92.0000.7832
12/24V	25 W	Super Seal socket - with handle & switch	300 mm	12 high-powered LED	2.400 / 1.800	Flood	2	098 174 279 92.0000.7833

Work Lights LED

Theoretical Lumen: 3.200

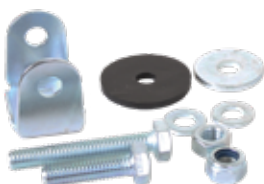


Operating voltage	Energy consumption	Connection	Cable length	Light source	Lumen Theoretical / effective	Light pattern	Pos.	Article No.
12 / 24 V	25 W	Super Seal socket	300 mm	12 LEDs	3.200 / 2.400	Flood	1	098 174 285 92.0000.8067
12 / 24 V	24 W	Integrated Deutsch (DT) socket	---	12 LEDs	3.200 / 2.400	Flood	2	098 174 287 92.0000.8068

Plug connections – spare parts and accessories

ERMAX Reverse Lights & Work Lights

The ERMAX plug connector accessory programme offers solutions for almost any application. Matching mount brackets can also be found in our programme.



Pos. 1



Pos. 2



Pos. 3



Pos. 4



Pos. 5



Pos. 6



Pos. 7



Pos. 8



Pos. 9

Mounting bracket for 37 mm light fixation - Kit set with	1	098 296 174 92.0000.7115
Super Seal plug 2 poled, Diameter yellow seal Ø 1,8 - 2,4 mm, Blade receptacle 0,5 - 1,0 mm ²	2	099 110 019 92.0000.1686
Super Seal socket 2 pole, Diameter yellow seal Ø 1,8 - 2,4 mm, Blade receptacle 0,5 - 1,0 mm ²	3	099 110 018 92.0000.1685
Rubber grommet for 2 pole Super Seal plug	4	099 110 712 92.0000.1687
T-coupling for 2 pole Super Seal plug (3 socktes)	5	099 111 415 92.0000.1692
Blanking plug for 2 pole Super Seal socket - black plastic	6	099 110 028 92.0000.0004
Blanking plug for 2 pole Super Seal plug - black plastic	7	099 110 029 92.0000.0023
Deutsch (DT) plug, with blade receptacles 0,75-2,0 mm ²	8	098 291 690 92.0000.6493
Deutsch (DT) socket, with blade terminals 0,75-2,0 mm ²	9	099 111 043 92.0000.8141

REVERSE GEAR ALARM



Reverse gear alarm



Description

Housing: Black ABS with galvanized mounting bracket
Cyklus: 60/min
Distance mounting holes: 22 mm (Hole Ø 5,2 mm)

IP Rating	Sound outlet	Frequency range	Consumption	Operating voltage	Dimension	Connection	Article No.
IP54	102 dB	2,6 kHz	10W	12/24V	58,8 x 37 mm	250 mm cable with Super Seal plug	090 450 350 92.0000.6857

WARNING LIGHTS



LED Warning lights - Surface mounting

XA1

ECE R65

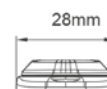
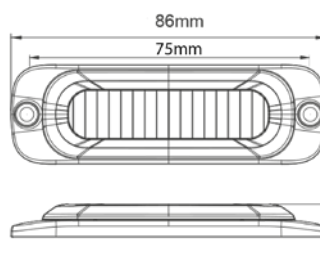
EMC R10



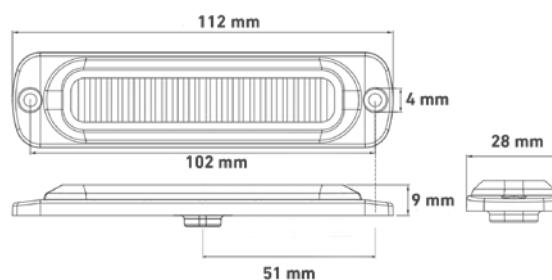
Pos. 1



Pos. 2



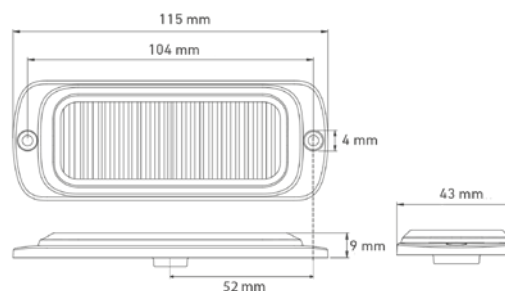
Pos. 3



Pos. 4



Pos. 5



Description

Lens: Impact resistant clear polycarbonate

Housing: Impact resistant aluminum

Working temperature: -30°C to +80°C

Approved for horizontal mounting

Build-in- and programming instructions are available at: www.ermas.dk

Indicator-colour	Operating voltage	IP Rating	Connection	Cable length	Bolt distance	Dimension	Light source	Flash pattern	Pos.	Article No.
	12/24V	IP69K	Open end	2500 mm	77 mm	86 x 9 x 28 mm	3 x LED	12	1	098 286 444 92.0000.6897
	12/24V	IP69K	Super Seal socket	250 mm	77 mm	86 x 9 x 28 mm	3 x LED	12	2	098 286 445 92.0000.7205
	12/24V	IP69K	Open end	2500 mm	102 mm	112 x 9 x 28 mm	6 x LED	19	3	098 286 446 92.0000.6898
	12/24V	IP69K	Open end	2500 mm	104 mm	115 x 9 x 43,4 mm	12 x LED	25	4	098 286 448 92.0000.6899
	12/24V	IP69K	Super Seal socket	250 mm	104 mm	115 x 9 x 43,4 mm	12 x LED	25	5	098 286 449 92.0000.7558

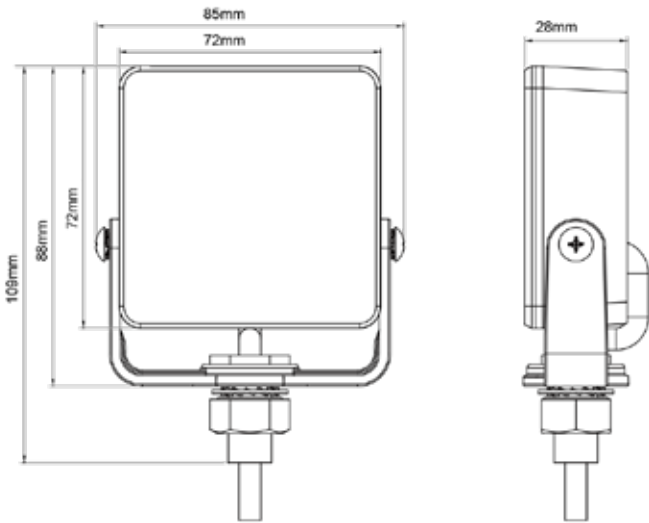
LED Warning lights

ECE R65

EMC R10



Pos. 1



Description

Lens:

Impact resistant clear polycarbonate

Housing:

Aluminum

Working temperature:

-30°C to +80°C

Build-in- and programming instructions are available at: www.ermas.dk

Indicator- colour	Operating voltage	IP Rating	Connection	Cable length	Mounting	Dimension	Light source	Flash pattern	Article No.
	12/24V	IP69K	Open end	120 mm	U-shaped mounting bracket with ø13mm hole	72 x 72 x 28 mm	4 x LED	5	098 286 290 92.0000.6762

WARNING BEACONS



Small, compact and long durability

3 flash patterns all with R65 approval and CISPR 25 class 3 - **PREMIUM**

The new warning light from ERMAX

The warning light with LED technology convinces with a modern design and robust construction. The compact design of the series is suitable for all kinds of heavy vehicles, guaranteeing visibility and safety.

Whether single flash, double flash or rotating light, all 3 flash patterns can be set in compliance with R65 – unique in Europe!

The mounting possibilities are either surface mounting or pole mounting/DIN. The warning lights are available with orange or transparent lens.

This series is E-approved according to ECE R65 and also approved with CISPR 25 class 3 and ADR – and due to the high degree of electromagnetic compatibility the warning light can be placed anywhere.



Surface mounting



Pole mounting/DIN



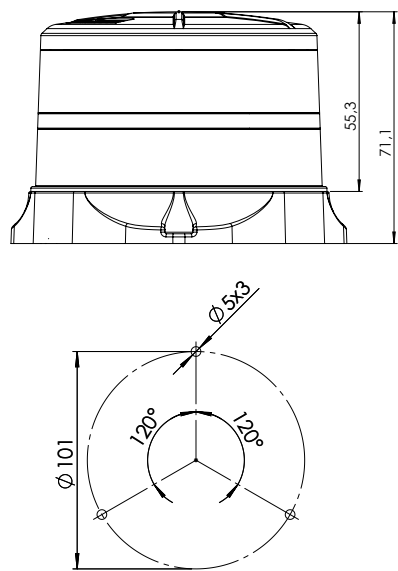
ERMAX warning lights - Why ?

- 1 Newest light and LED technology**
Small and powerful, long durability and an optimum signal picture with a small power consumption..
- 2 Unique design**
Unique reflection with clear lens and very strong light.
- 3 Long lifetime and durability**
Impact-resistant lens of polycarbonate and housing top of aluminium.
- 4 3 Flash Patterns approved**
All 3 flash patterns with high warning effect are ECE R65 compliant – unique in Europe
- 5 Unique availability**
The compact design offers flexibility in mounting.
- 6 Absorb vibrations**
The flexible pipe socket avoids damages to the lights by impact or collision.
- 4 2 warning signals**
Choose between flashing warning signal or rotating warning signal.
- 6 First-class approved quality**
All products go through our strict quality criteria and testing methods to ensure the high product quality.

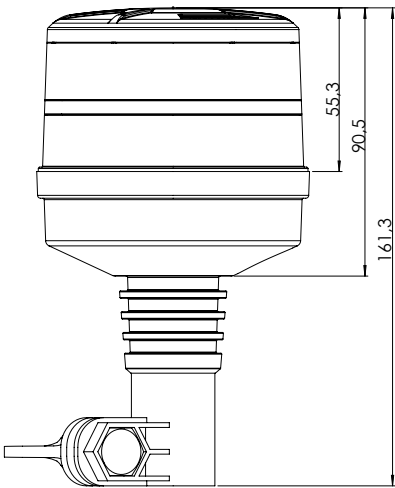
LED Warning lights 12/24V

Technical details - Premium variants with 3 flash patterns, R65 approval and CISPR 25 class 3

Surface mounting



Pole mounting/DIN



Description - Surface mounting

- Lens: Impact resitante polycarbonate
- Housing: Impact resitante polycarbonate
- Housing top: Aluminium
- Sealing: EVA
- Light colour: Amber
- Measures Ø x H: Ø115 x 71 mm
- Hole pattern: Ø101 mm / 3 x 87 mm/ Ø4,5 mm
- Working temperature: -40°C bis +65°C°
- IP-Rating: IP6K9K

Description - Pole mounting/DIN

- Lens: Impact resitante polycarbonate
- Housing: TPE
- Housing top: Aluminium
- Light colour: Amber
- Measures Ø x H: Ø91 x 161 mm
- Working temperature:- 40°C bis +65°C°
- IP-Rating: IP6K9K

Radio interference (CISPR 25): Klasse 3

ECE R65

EMC

TA1



Mounting	Colour light lens	Connections	Measures	Voltage	Consumption - Max	Flash pattern	Artikel no.
Surface	Transperent glass	500 mm cable open-end Ø6 mm, 3 x 0,75 mm ²	Ø115 x 71 mm	10-30V	27W	3 (R65) Single 480 ms Double 400 ms Rotating 400 ms	098 287 200
Surface	Amber glass	500 mm cable open-end Ø6 mm, 3 x 0,75 mm ²	Ø115 x 71 mm	10-30V	27W		098 287 205
Pole (DIN)	Transperent glass	Integrated plug in the socket, DIN 4165	Ø91 x 161 mm	10-30V	27W		098 287 230
Pole (DIN)	Amber glass	Integrated plug in the socket, DIN 4165	Ø91 x 161 mm	10-30V	27W		098 287 235

Wenn more flash patterns are needed

10 flash patterns – 1 flash pattern with R65 approval – STANDARD

These 4 variants have similar characteristics as the premium types – the only difference is that this series has a cover of polycarbonate instead of aluminium and has 10 different flash patterns – of these 1 flash pattern with R65 approval.

The warning lights are available with orange or transparent lens and the mounting possibilities are either surface mounting or pole mounting/DIN, and the series are ADR approved. The two types for surface mounting are delivered with an adapter for Ø130 mm hole configuration.



Surface mounting



Adapter ring

10 flash patterns

- ___ Single flash 480ms (Reg. 65 approved)
- ___ Single flash 800ms
- ___ Double flash 400ms
- ___ Double flash 800ms
- ___ Triple flash
- ___ Quad flash
- ___ ISO-fase flash 400ms
- ___ ISO-fase flash 800ms
- ___ Rotating 400ms
- ___ Rotating 800ms



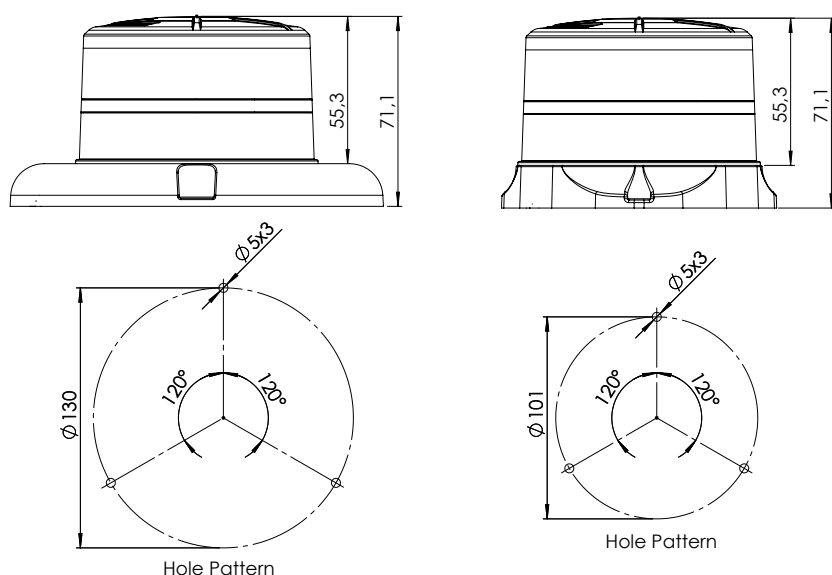
Pole mounting/DIN



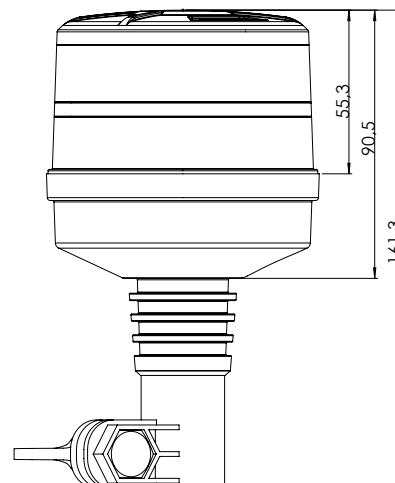
LED Warning lights 12/24V

Technical details - **Standard** variants with 10 flash patterns

Surface mounting



Pole mounting/DIN



Description - Surface mounting

Lens: Impact resitante polycarbonate
 Housing: Impact resitante polycarbonate
 Housing top: Impact resitante polycarbonate
 Sealing: EVA
 Light colour: Amber
 Measures Ø x H: Ø140 x 71 mm
 Hole pattern: Ø130 mm / 3 x 112 mm / Ø4,5 mm
 Working temperature: -40°C bis +65°C
 IP-Rating: IP6K9K

Description - Pole mounting/DIN

Lens: Impact resitante polycarbonate
 Housing: TPE
 Housing top: Impact resitante polycarbonate
 Light colour: Amber
 Measures Ø x H: Ø91 x 161 mm
 Working temperature: -40°C bis +65°C
 IP-Rating: IP6K9K

ECE R65

EMC



Mounting	Colour light lens	Connections	Measures	Voltage	Consumption	Flash pattern	Artikel no.
Surface	Transperent glass	500 mm cable open-end Ø6 mm, 3 x 0,75 mm ²	Ø140 x 71 mm	10-30V	23W	See page 4	098 287 250
Surface	Amber glass	500 mm cable open-end Ø6 mm, 3 x 0,75 mm ²	Ø140 x 71 mm	10-30V	23W		098 287 255
Pole (DIN)	Transperent glass	Integrated plug in the socket, DIN 4165	Ø91 x 161 mm	10-30V	23W		098 287 280
Pole (DIN)	Amber glass	Integrated plug in the socket, DIN 4165	Ø91 x 161 mm	10-30V	23W		098 287 285

The adapter ring makes it possible to adapt the LED beacon to mounting holes Ø130 mm - Measurements, Ø x H: Ø140 x 16 mm
 Bolt distance: Ø130 mm / 3 x 112 mm / Ø4,5 mm
 Material: Polycarbonate

098 292 640

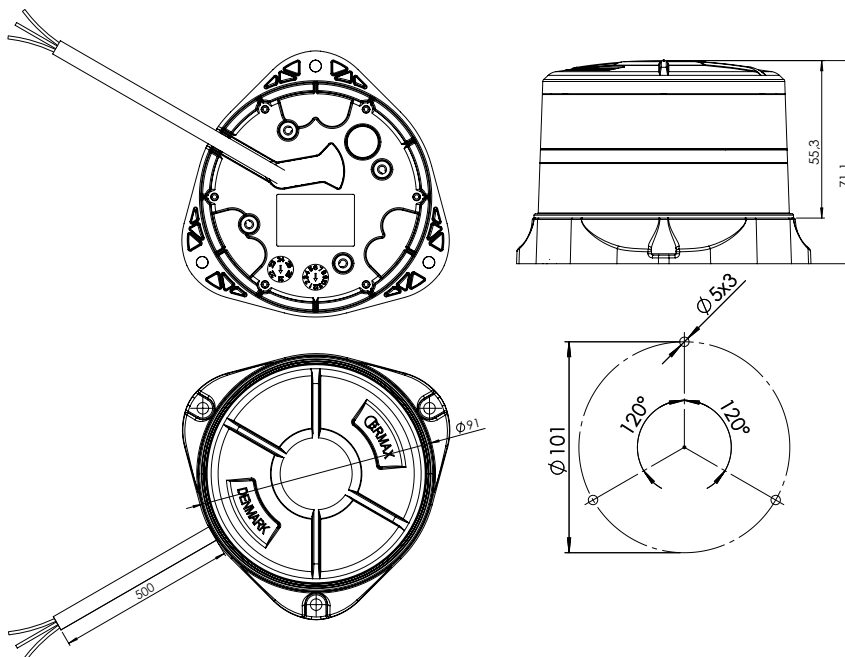
LED Warning lights 12/24V

Technical details and flash pattern selection

Surface mounting

Connection:

- Red: Permanent power supply +
- Black: Ground
- Yellow: Choose flash pattern / synchronizing



Flash pattern choosing - Surface mounting

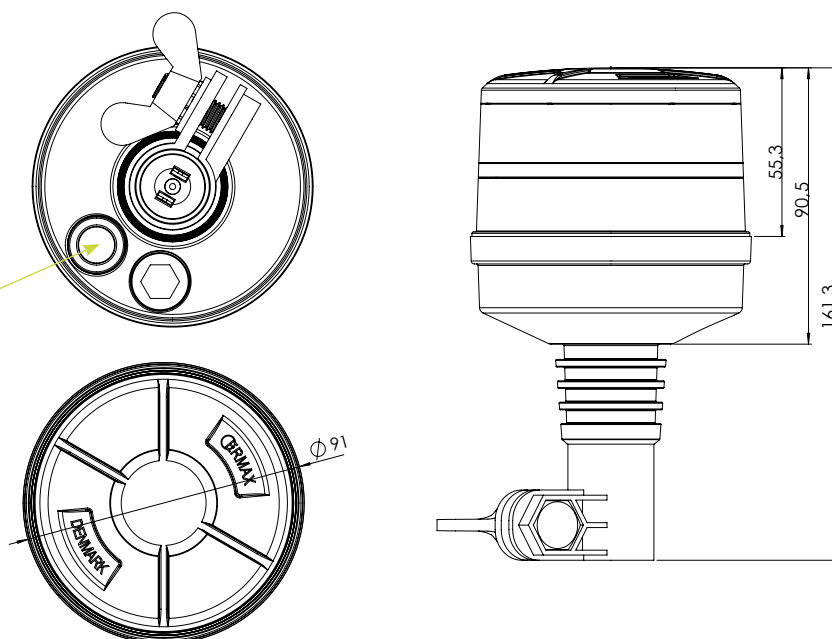
Apply yellow cable to +, hold briefly (0.5-2 sec) and select flash pattern.

To synchronize more lights, all lights must be adjusted to the same flash pattern. Then all yellow cables will be connected to each other.

If the yellow cable is placed at + for more than 2 seconds, the light return to flash pattern 1.

Pole mounting/DIN

Press the bottom in order to change the light pattern



Choose flash pattern - Pole mounting/DIN

To choose flash pattern, press the red bottom shortly (0.5 – 2 sec).

If pressed at the red bottom for more than 2 seconds, the light return to flash pattern 1.

LED Warning beacons 12-24V - ECE REG.65

E ECE R65 EMC



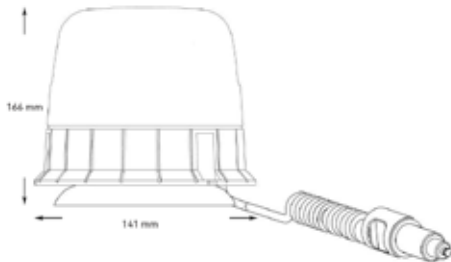
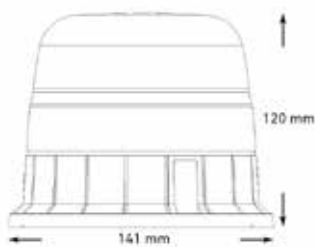
Pos. 1



Pos. 2



Pos. 3



Description

Lens:	Polycarbonate
Housing:	Compound thermoplastic
Working temperature:	-40°C - +60°C
Color:	Amber

Mounting	IP Rating	Connection	Dimension	Operating voltage	Consumption	Pos.	Article No.
Firm surface mounting	IP69	150 mm cable Open end	Ø141 x 120 mm	12/24V	9W	1	098 287 400 92.0000.6599
Magnetic base	IP56	Coil cable with plug	Ø141 x 166 mm	12/24V	9W	2	098 287 420 92.0000.6601
For mounting bushes	IP69	Integrated plug in Socket	Ø128 x 125 mm	12/24V	9W	3	098 287 410 92.0000.6600

LED Warning beacons 12-24V - ECE REG.65



ECE R65

EMC



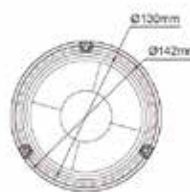
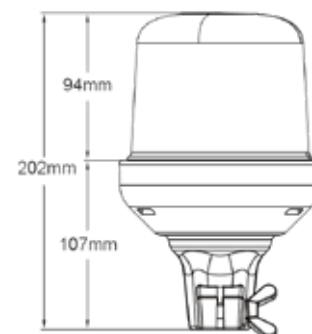
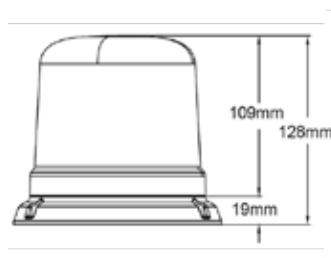
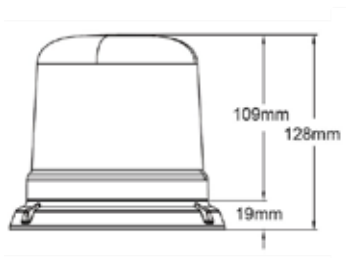
Pos. 1



Pos. 2



Pos. 3



Description

Lens:	Polycarbonate
Housing:	Polycarbonate
Working temperature:	-30°C to +65°C
LED units:	10 x 3W
Color:	Amber

Built-in- and programming instructions at: www.ermas.dk

Mounting	IP Rating	Connection	Dimension	Operating voltage	Consumption (depending on flash patterns)	Flash pattern	Pos.	Article No.
Firm mounting	IP66	400 mm cable Open end	Ø142 x 128 mm	12/24V	21-42W	11	1	098 287 938 92.0000.6451
Magnet	IP66	Coil cable with plug	Ø142 x 128 mm	12/24V	21-42W	11	2	098 287 940 92.0000.6452
For mounting bushes	IP66	Integrated plug in Socket	Ø130 x 202 mm	12/24V	21-42W	11	3	098 287 936 92.0000.6450

LED Warning beacons 12-24V - ECE REG.65

E ECE R65



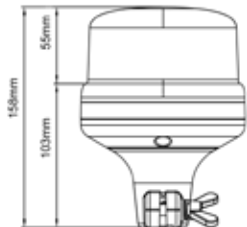
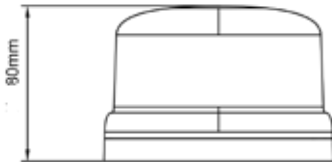
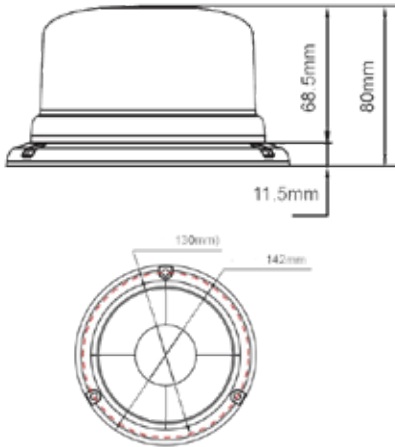
Pos. 1



Pos. 2



Pos. 3



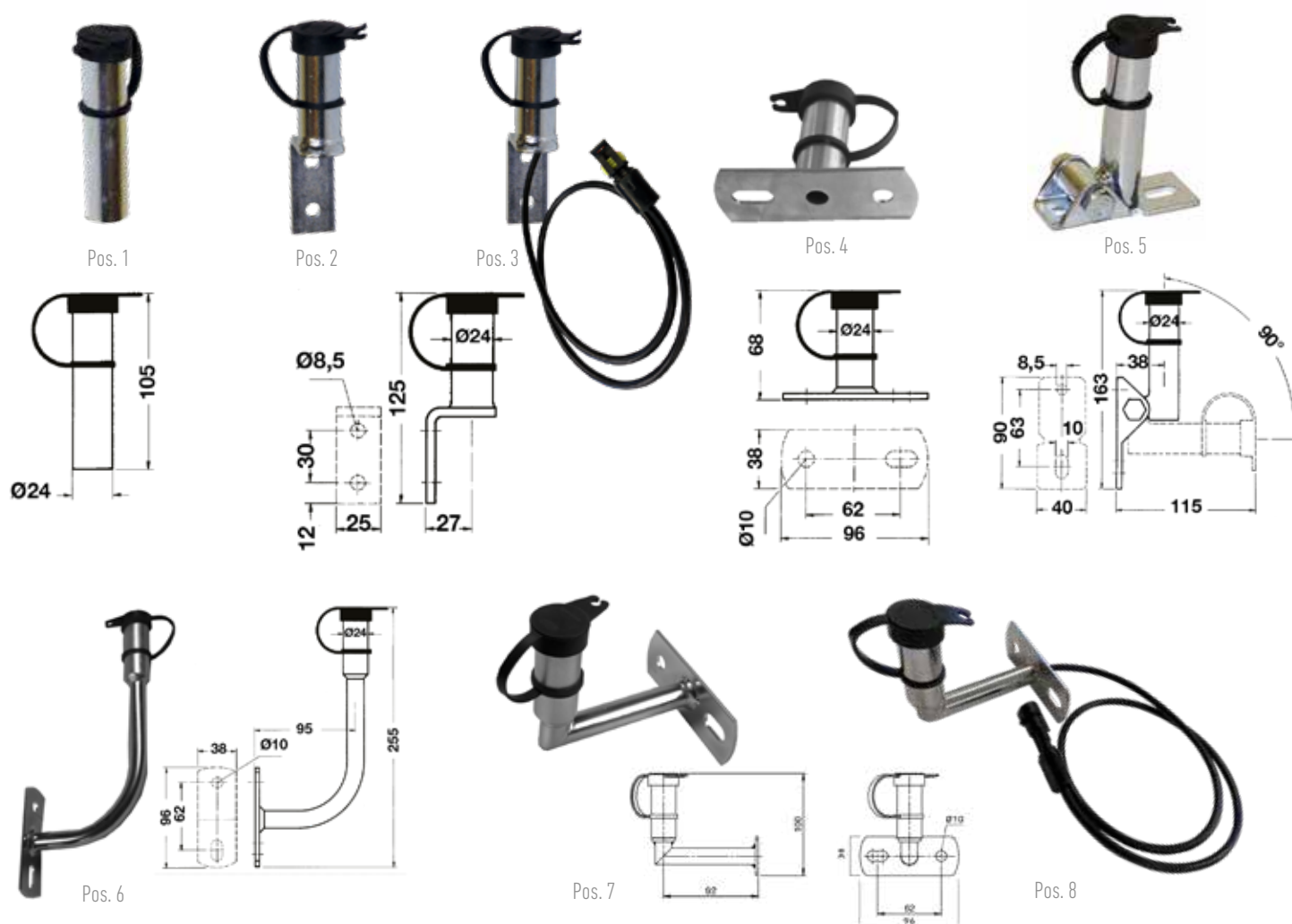
Description

Lens: Polycarbonate
Housing: Polycarbonate
Working temperature: -30°C to +65°C
LED units: 8 x 3W
Color: Amber

Built-in- and programming instructions at: www.ermas.dk

Mounting	IP Rating	Connection	Dimension	Operating voltage	Consumption (depending on flash patterns)	Flash pattern	Pos.	Article No.
Firm mounting	IPX5	400 mm cable Open end	Ø142x 80 mm	12/24V	15-30W	11	1	098 287 944 92.0000.6454
Magnetic base	IPX5	Coil cable with plug	Ø142 x 80 mm	12/24V	15-30W	11	2	098 287 946 92.0000.6455
For mounting bushes	IPX5	Integrated plug in Socket	Ø130 x 158 mm	12/24V	15-30W	11	3	098 287 942 92.0000.6453

Mounting equipment for Warning beacons



Galvanized steel tube and with protection cap

DIN Norm	Form	Mounting	Dimension	Connection	Cable	Pos.	Article No.
DIN 72 591	Straight	-	Ø24 x 105 mm	2 poled socket	--	1	098 295 561
DIN 72 591	Straight	Angled bracket	Ø24 x 125 mm	2 poled socket	--	2	098 295 562
DIN 72 591	Straight	Angled bracket	Ø24 x 125 mm	2 poled socket	900 mm cable with Super Seal plug	3	098 295 595
DIN 72 591	Straight	Flush mounting	Ø24 x 128 mm	2 poled socket	--	4	098 295 564
DIN 72 591	Straight	adjustable bracket	Ø24 x 115 mm	2 poled socket	--	5	098 295 567
DIN 72 591	90° angled	Flush mounting	Ø24 x 255 mm	2 poled socket	--	6	098 295 565
DIN 72 591	90° angled	Flush mounting	Ø24 x 100 mm	2 poled socket	--	7	098 295 583
DIN 72 591	90° angled	Flush mounting *	Ø24 x 100 mm	2 poled socket	800 mm cable with Super Seal socket	8	098 295 585

* Mit 800 mm Cable with Super Seal socket

SIMAC[®] Solutions

Control of flashing side marker lights



The ERMAX solution is called SIMAC®

Compliant to legislation with unique flexibility

Control of flashing side marker lights ECE 48 since November 2017

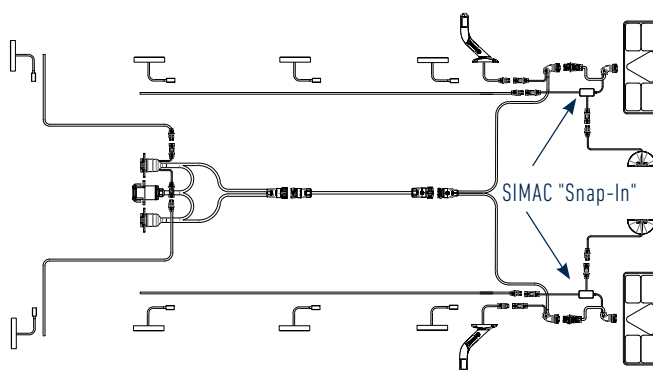
With the ECE regulation No. 48 (Changes series 06) it is prescribed that the side marker lights must flash synchronously and simultaneously with the direction indicators (in the tail light) – this is mandatory for vehicles – class 03 and 04 - being homologated after November 18 2017.

Ermax SIMAC® ensures the compliance with the legislation
– we will advise the optimal application

SIMAC: side marker light Control

SIMAC "Snap-In" Modul

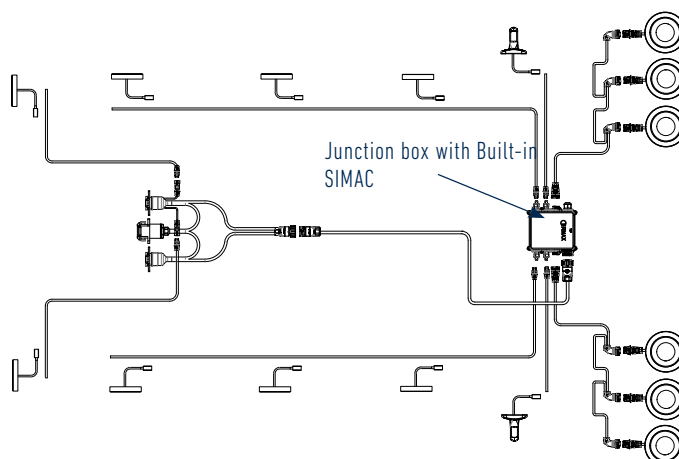
- Ideal for any application, even in retrofit
- The flexible solution in order to keep an existing kit configuration almost unchanged



Product information in the cable section

SIMAC integrated in the junction box

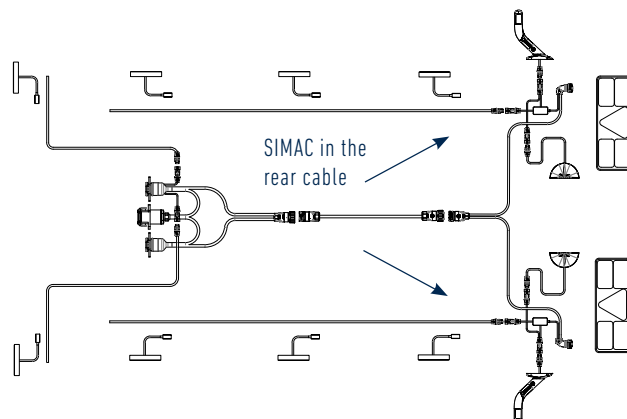
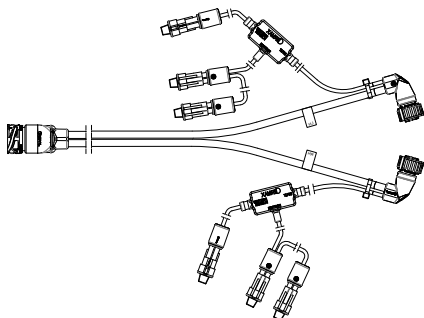
- Mounted in a secure and protected position with ideal plug connection to the system
- The best possible solution especially when 3 & 2 function lights are being used



Product information in the junction box section

SIMAC integrated in the rear cable

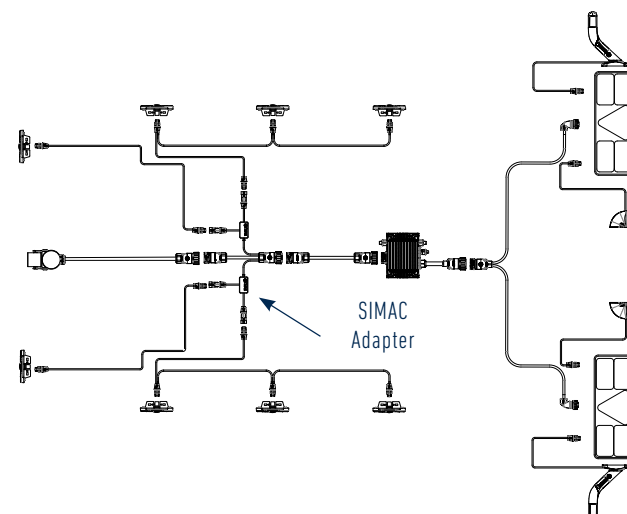
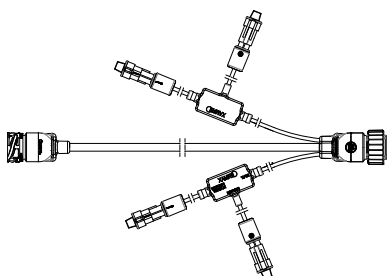
- Optimised design for easy mounting
- Ideal for the lean high-volume solution



Product information in the cable section

SIMAC as adapter in the main cable

- Allows mounting of side cables from front to back
- Recommendable when a LED control box is used in the cable system



Product information in the cable section

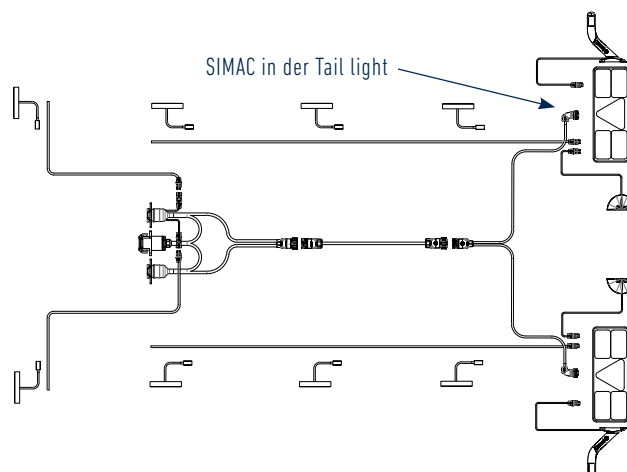
SIMAC in der tail light integrated

- The easy and ideal solution without external modules
- No further parts or components needed



TM10 LED

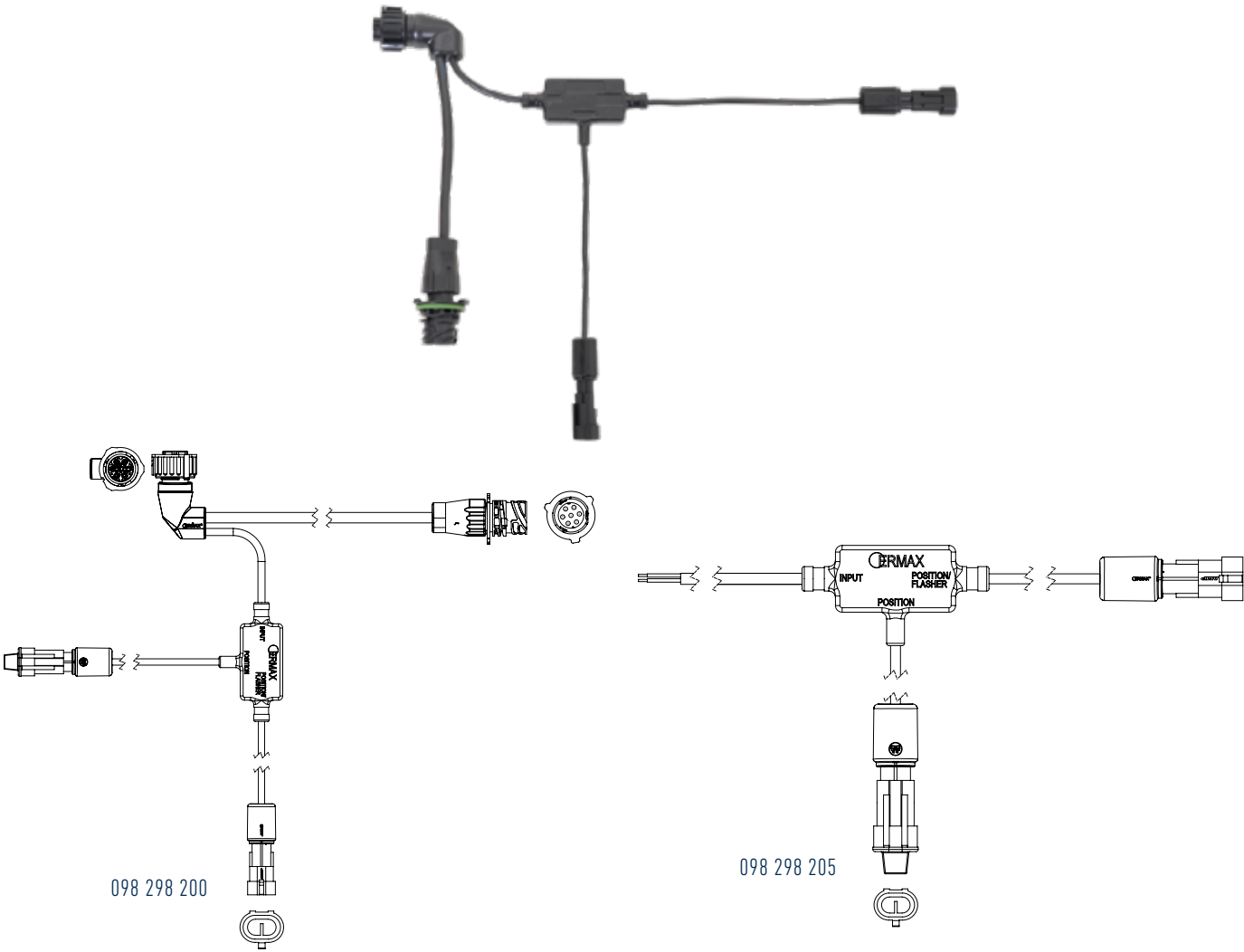
TM11 LED



Product information in the TM10 tail light section

SIMAC - Side marker control unit

EMC



Controlling the side marker lights. By activating the direction indicator, the side marker light will flash simultaneously.
To be connected between rearcable and tail light.
With connections for outer end marker light (permanent position light) and for side marker chain
One unit for each side is required.

IP Rating	Inlet	Outlet	Operating Voltage	Article No.
IP67	1x7 poled AMP socket + 1x7 Poled AMP plug	1x Super Seal socket of 200 mm cable for permanent position light 1x Super Seal socket of 200 mm cable for side marker chain.	12/24V	098 298 200 92.0000.6918
IP67	3 core Open end cable Ground: White Position: Green Dir. indicator: Yellow	1x Super Seal socket of 200mm cable for permanent position light 1x Super Seal socket of 200mm cable for side marker chain.	12/24V	098 298 205 92.0000.6919

CABLE



Front cable



Application/ Description	Article No.
--------------------------	-------------

Front cable with 15 poled socket, straight
ISO Standard: 12098
With Ermax bayonet plug
Conductor cross-section: 12x1 mm² + 3x2,5 mm²
Cable type: FLRYY / PVC

15 core cable 600 mm
socket, straight

194 006 500

92.0000.0002

15 core cable 6000 mm
socket, straight

194 060 500

92.0000.6165

15 core cable 7.500 mm
socket, straight

194 075 500

92.0000.5922

15 core cable 13.000 mm
socket, straight

194 130 500

92.0000.1699

15 core cable 15.000 mm
socket, angled

194 150 500

92.0000.7483



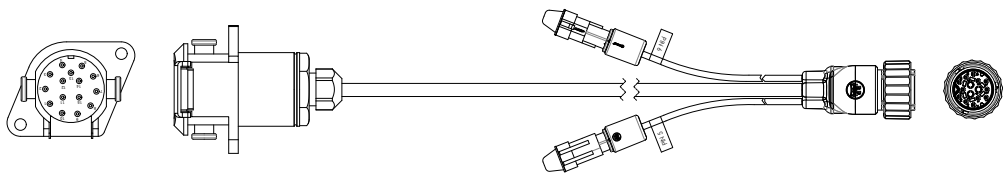
SIMAC Friendly

Front cable with 15 poled socket, straight
2x2 core outlet with Super Seal socket ISO 12098 pin
5 position left + pin 6 position right
ISO Standard: 12098
With Ermax bayonet plug
Cable type: FLRYY / PVC

15 core cable 600 mm
With 2x2 poled outlet pin 5+6
Conductor cross-section: 12x1 mm² + 3x2,5 mm²

194 006 501

92.0000.1696



Front cable



Application/ Description	Article No.
--------------------------	-------------

Front cable with 15 poled plug, straight

ISO Standard: 12098
With Ermax bayonet plug
Conductor cross-section: 7x1 mm² + 2x2,5 mm²
Cable type: FLRYY / PVC

9 core cable 1.000 mm
Pin-Nr. 9 connected to pin 12 (ISO 12098 Aux 3)

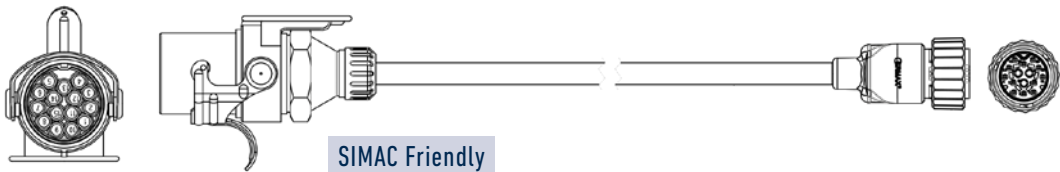
9 core cable 4.800 mm
Pin-Nr. 9 connected to pin 12 (ISO 12098 Aux 3)

294 010 100

92.0000.6170

294 048 100

92.0000.0029



SIMAC Friendly

This front cable is SIMAC Friendly in connection with adapter 394 003 504

Front cable with 15 poled plug, straight

ISO Standard: 12098
With Ermax bayonet plug
Conductor cross-section: 12x1 mm² + 3x2,5 mm²
Cable type: FLRYY / PVC

15 core cable 1.000 mm

15 core cable 4.800 mm

15 core cable 7.000 mm

294 010 500

92.0000.7676

294 048 500

92.0000.0025

294 070 500

92.0000.6512



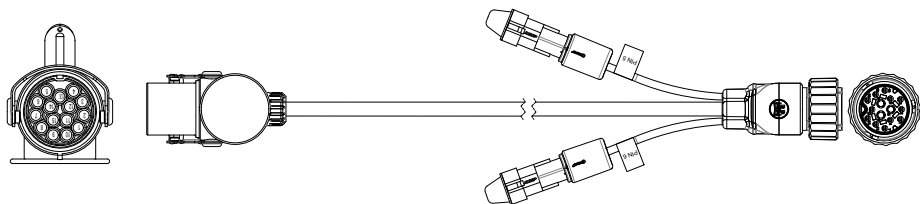
SIMAC Friendly

15 core cable 4.800 mm

2x2 core outlet with Super Seal socket, pin ISO 12098 5 left position + pin 6 right position.

294 048 501

92.0000.6468



Front cable

Application/ Description

Article No.

Front cable with 14 poled VBG-socket

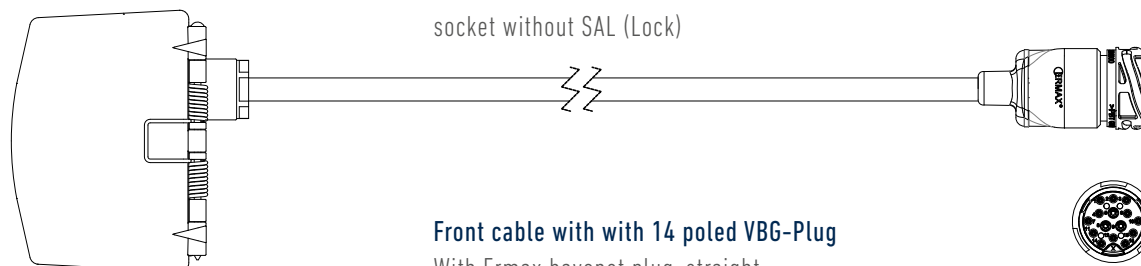
With Ermax bayonet plug, straight

Conductor cross-section: $12 \times 1 \text{ mm}^2 + 3 \times 2,5 \text{ mm}^2$

Cable type: FLRYY / PVC

15 core cable 400 mm

socket without SAL (Lock)

**194 004 490**

92.0000.6714

Front cable with with 14 poled VBG-Plug

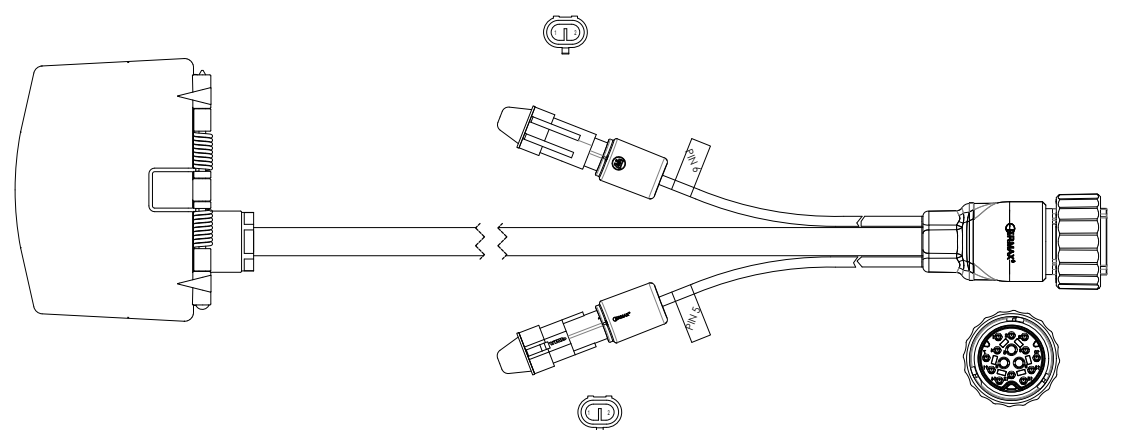
With Ermax bayonet plug, straight

Conductor cross-section: $12 \times 1 \text{ mm}^2 + 3 \times 2,5 \text{ mm}^2$

Cable type: FLRYY / PVC

15 core cable 4.800 mm

Plug with SAL (Lock)

**294 048 491**

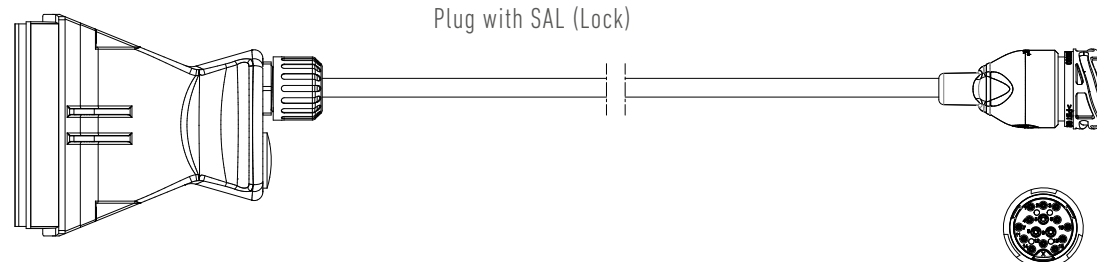
92.0000.6274

Front cable with 14 poled 15 VBG-plug

Ermax bayonet plug, straight

Conductor cross section: $12 \times 1 \text{ mm}^2 + 3 \times 2,5 \text{ mm}^2$ **15 core 4800 mm**

Plug with SAL (Lock)

**294 048 493**

92.0000.7732

Front cable

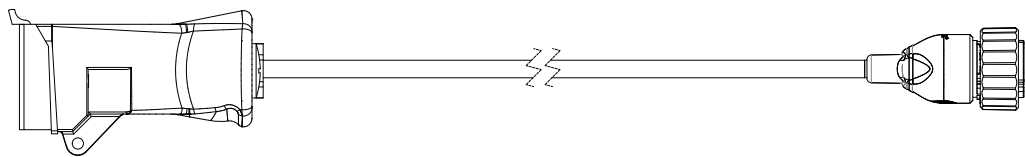
Application/ Description	Article No.
--------------------------	-------------

Front cable with 14 poled VBG-plug
With Ermax bayonet plug, straight
Conductor cross-section: 12x1 mm² + 3x2,5 mm²
Cable type: FLRYY / PVC

SIMAC Friendly

15 core cable 4.800 mm
Plug with SAL (Lock)

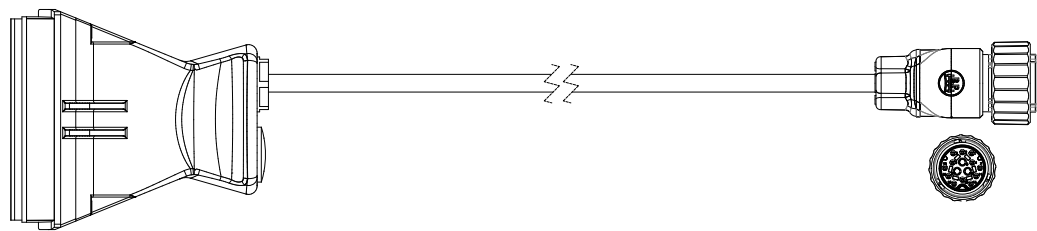
294 048 491
92.0000.6274



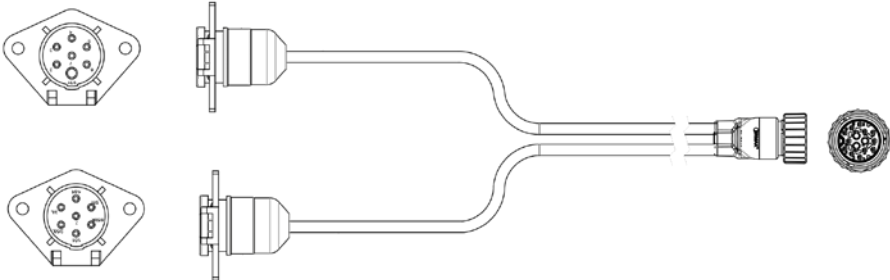
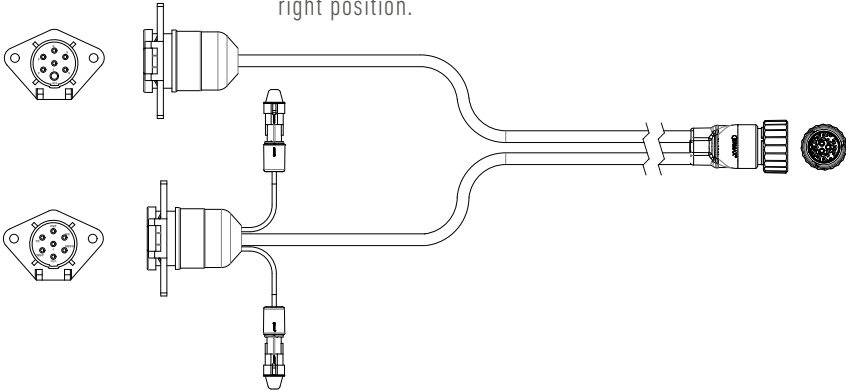
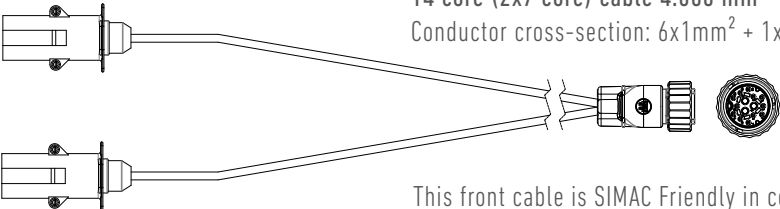
Front cable with with 14 poled VBG-Plug
With Ermax bayonet plug, straight
Conductor cross-section: 12x1 mm² + 3x2,5 mm²
Cable type: FLRYY / PVC

15 core cable 4.800 mm
Plug with SAL (Lock)

294 048 493
92.0000.7732



Front cable

Application/ Description		Article No.
Front cable with 2x7 poled socket, straight ISO Standard: 1185 + 3731 With Ermax bayonet plug Cable type: FLRYY / PVC Pin-Nr.11 in Ermax bayonet plug not connected (Aux 1 / brake wear sensor) 14 core (2x7 core) cable 600 mm Conductor cross-section: 6x1mm² + 1x2,5mm² 		194 006 430 92.0000.1695
SIMAC Friendly 14 core (2x7 core) cable 600 mm Conductor cross-section: 6 x 1 mm² + 1 x 2,5 mm² 2x2 core outlet with Super Seal socket, ISO 12098 pin 5 left position + pin 6 right position. 		194 006 433 92.0000.5376
Front cable with 2x7 poled socket, straight ISO Standard: 1185 + 3731 With Ermax bayonet plug Cable type: FLRYY / PVC Pin-Nr.11 in Ermax bayonet plug not connected (Aux 1 / brake wear sensor) 14 core (2x7 core) cable 4.800 mm Conductor cross-section: 6x1mm² + 1x2,5mm²  SIMAC Friendly This front cable is SIMAC Friendly in connection with adapter 394 003 504		294 048 430 92.0000.1700

Front cable

Application/ Description

Article No.

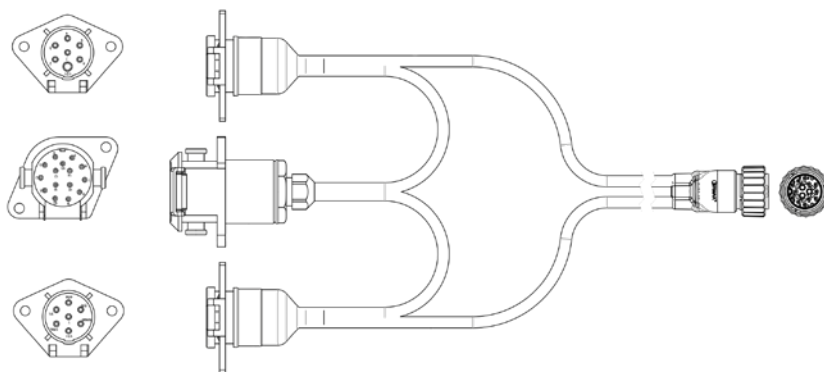
Front cable with 15+2x7 poled socket, straight

ISO Standard: 12098 + 1185 + 3731

With Ermax bayonet plug

Cable type: FLRYY / PVC

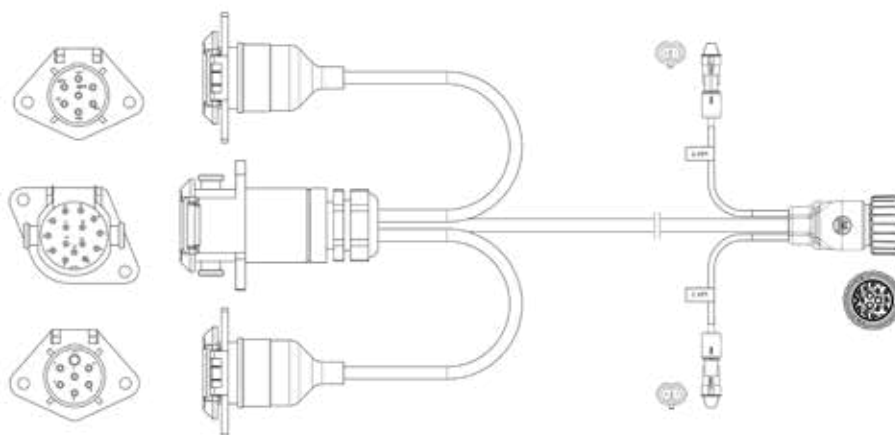
Pin-Nr.11 in Ermax bayonet plug not connected

14 core (2x7 core) cable 600 mmConductor cross-section: $6 \times 1 \text{ mm}^2 + 1 \times 2,5 \text{ mm}^2$ **194 006 410**

92.0000.0033

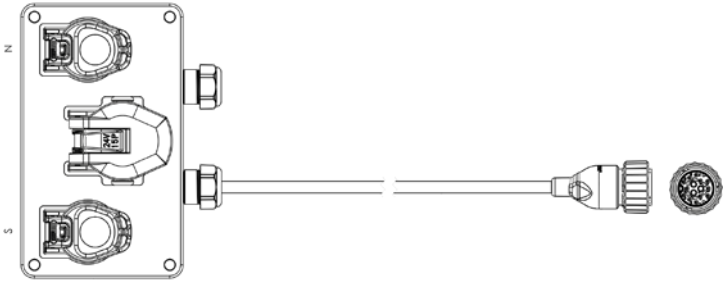
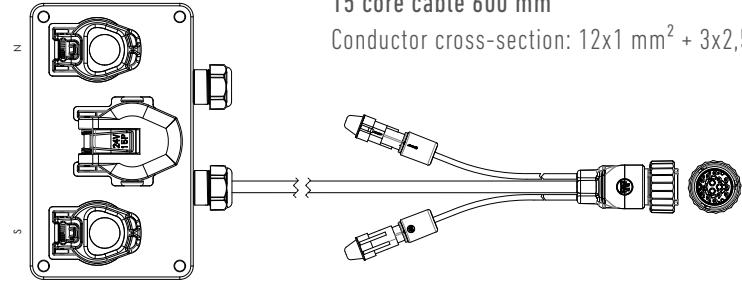
SIMAC Friendly**15 core + 2x7 core cable - 600 mm**Conductor cross-section: $12 \times 1 \text{ mm}^2 + 3 \times 2,5 \text{ mm}^2$

With 2x2 poled outlet with Super Seal socket pin 5+6 LH+RH position

**194 006 511**

92.0000.7953

Front cable

Application/ Description		Article No.
Frontbox with 15+2x7 poled socket, straight ISO Standard: 12098 + 1185 + 3731 With Ermax bayonet plug Cable type: FLRYY / PVC 15 core cable 600 mm Conductor cross-section: 12x1 mm² + 3x2,5 mm² 		194 006 570 92.0000.1697
SIMAC Friendly Frontbox with 15+2x7 poled socket 2x2 core outlet with Super Seal socket, ISO 12098 pin 5 left position + pin 6 right position. ISO Standard: 12098 + 1185 + 3731 With Ermax bayonet plug Cable type: FLRYY / PVC 15 core cable 600 mm Conductor cross-section: 12x1 mm² + 3x2,5 mm², 2x1mm² 		194 006 571 92.0000.1698
Spare parts / Accessories  Pos. 1Pos. 2		
Rubber grommet for front screw connection in frontbox. Suitable for 099865050, 194006570 and 194006571		1 099 110 230 92.0000.7046
Rubber grommet for front screw connection in frontbox. Suitable for 099865050, 194006570 and 194006571		2 099 110 231 92.0000.7047

159

Main cable



Application/ Description

Article No.

Main cable

Ermax bayonet plug > socket

Conductor cross-section: $8 \times 1 \text{ mm}^2 + 1 \times 2,5 \text{ mm}^2 / 2 \times 1 \text{ mm}^2$

Cable type: FLRYY / PVC

9. core is connected to pin 12 (ISO 12098 Aux 3)

2x2 poled outlet with Super Seal socket (ISO 12098 Pin 7 stop / Pin 12 lift axle Aux 3)

9 core 9.000 mm 2x2 poled Aux. Pin 7+12 rear

394 090 101

92.0000.1710

9 core 13.000 mm 2x2 poled Aux. Pin 7+12 rear

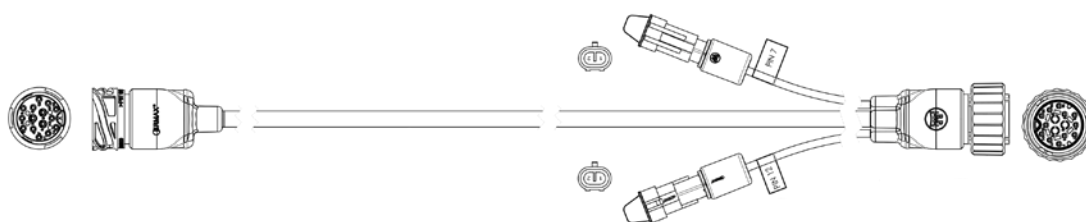
394 130 101

92.0000.1715

9 core 15.000 mm 2x2 poled Aux. Pin 7+12 rear

394 150 101

92.0000.1722

**Main cable**

Ermax bayonet plug > socket

Conductor cross-section: $8 \times 1 \text{ mm}^2 + 1 \times 2,5 \text{ mm}^2 / 2 \times 1 \text{ mm}^2$

Cable type: FLRYY / PVC

9. core is connected to pin 12 (ISO 12098 Aux 3)

2x2 poled outlet with Super Seal socket (ISO 12098 Pin 8 reverse light / Pin 12 lift axle Aux 3)

9 core 6.000 mm 2x2 poled Aux. Pin 8+12 rear

394 060 102

92.0000.5384

9 core 9.000 mm 2x2 poled Aux. Pin 8+12 rear

394 090 102

92.0000.1711

9 core 13.000 mm 2x2 poled Aux. Pin 8+12 rear

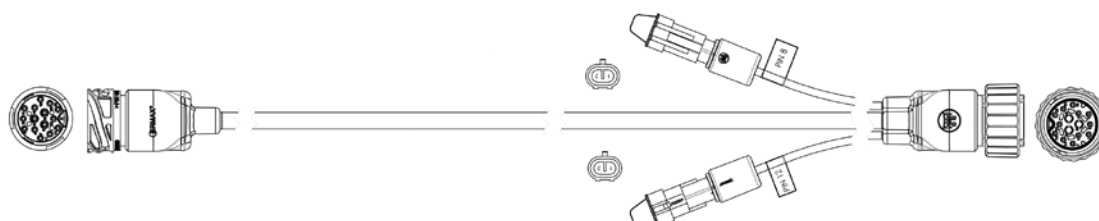
394 130 102

92.0000.1716

9 core 15.000 mm 2x2 poled Aux. Pin 8+12 rear

394 150 102

92.0000.1723



Main cable



Application/ Description	Article No.
--------------------------	-------------

Main cable

Ermax bayonet plug > socket
Conductor cross-section: 8x1 mm²+1x2,5 mm² / 2x1 mm²
Cable type: FLRYY / PVC
2x2 poled outlet with Super Seal socket (ISO 12098 pin 8 reverse light / pin 9 permanent positive)

9 core 9.000 mm 2x2 poled Aux. pin 8+9 rear

394 090 105

92.0000.1712

9 core 13.000 mm 2x2 poled Aux. pin 8+9 rear

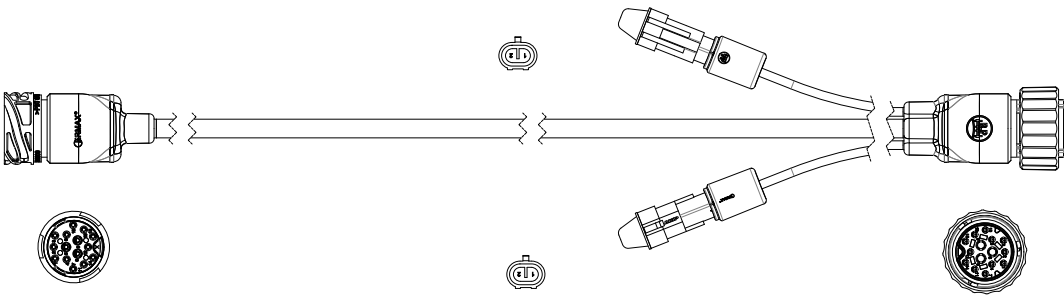
394 130 105

92.0000.1717

9 core 15.000 mm 2x2 poled Aux. pin 8+9 rear

394 150 105

92.0000.1724



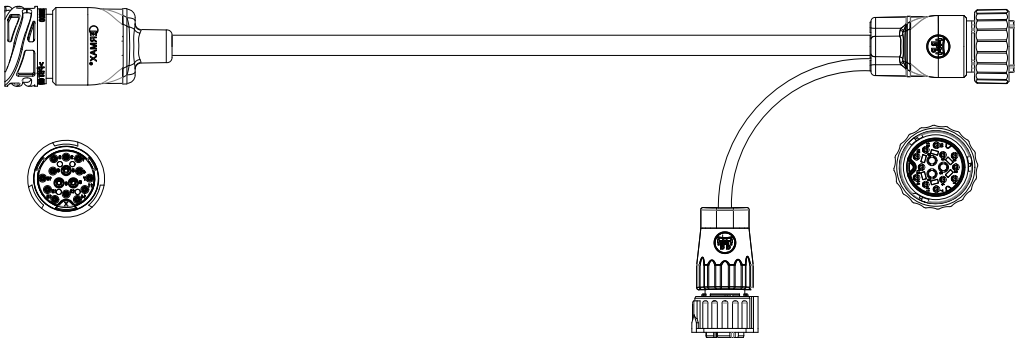
Main cable

Ermax bayonet plug > socket
Conductor cross-section: 8x1 mm²+1x2,5 mm² and 6x1 mm²+1x2,5 mm²
Cable type: FLRYY / PVC
with 7 core outlet and 7 poled AMP 1.5 plug

9 core 6.000 mm

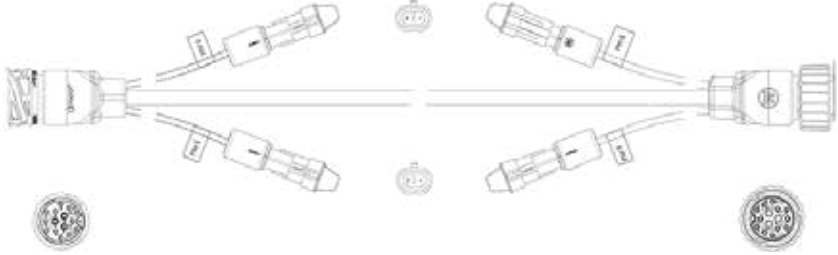
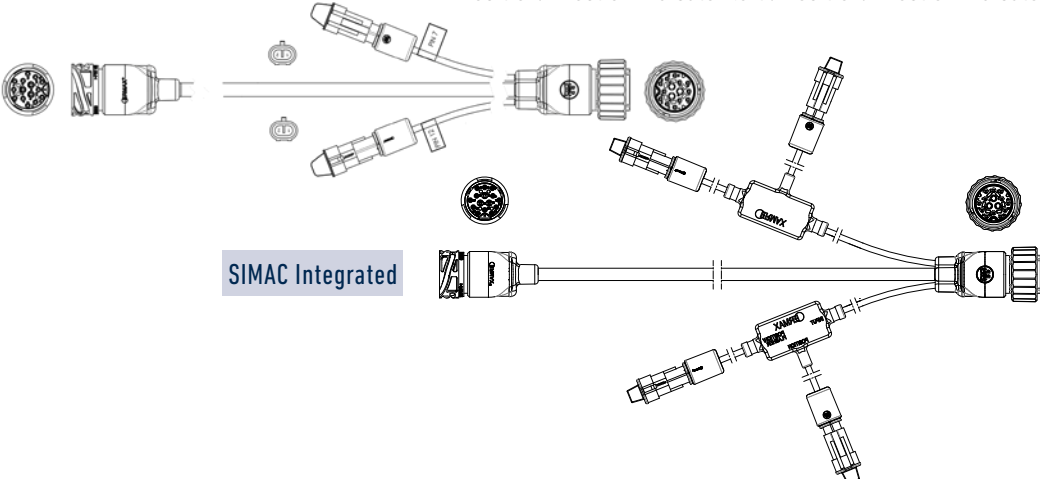
394 060 107

92.0000.6883



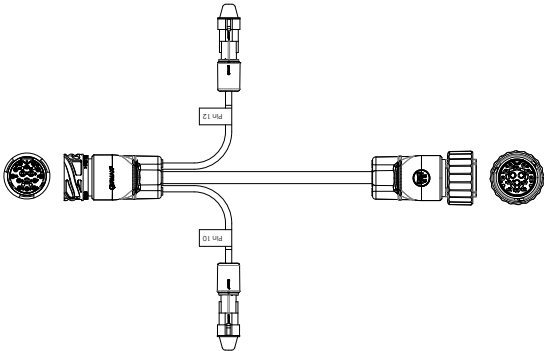
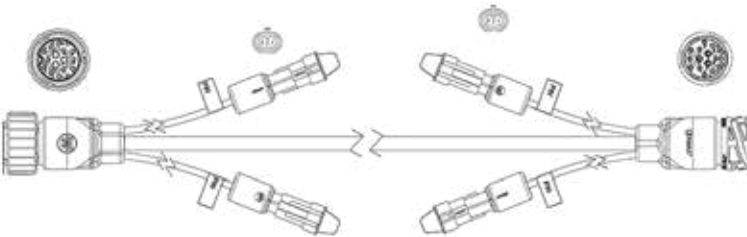
Main cable



Application/ Description		Article No.
Main cable 4x2 poled Aux with Super Seal socket (ISO 12098 pin 8 reverse light / pin 9 permanent positive, pin 5 left position / 6 right position) Ermax bayonet plug > socket Cable type: FLRYY / PVC 9 core 9.000 mm Conductor cross-section: 8x1 mm²+1x2,5 mm² + 2x1mm² 		394 090 115 92.0000.5360
Main cable / Intermediate / Adapter Ermax bayonet plug > socket Conductor cross-section: 12x1 mm²+3x2,5 mm² / 2x1 mm² Cable type: FLRYY / PVC Pin-Nr. 9 connected to pin 12 (ISO 12098 Aux 3) 2x2 poled outlet with Super Seal socket (ISO 12098) 15 core 300 mm 2x2 poled Aux. Pin 7+12 rear Pin 7 stop / Pin 12 lift axle Aux 3) 15 core 300 mm 2x2 poled Aux. Pin 8+12 rear Pin 8 reverse light / Pin 12 lift axle Aux 3) 15 core 300 mm 2x2 poled Aux. Pin5+6 rear Pin 8 reverse light / Pin 9 permanent positive 15 core 300 mm 2x2 poled Pin 5 + 6 (Position R/L) Pin 5 position left / Pin 6 position right 15 core 300 mm 2xSIMAC (Position R/L) Pin 5 position left / Pin 6 position right Position/Direction indicator left / Position/Direction indicator right 		394 003 501 92.0000.1701 394 003 502 92.0000.1702 394 003 505 92.0000.6087 394 003 504 92.0000.7042 394 003 506 92.0000.7481

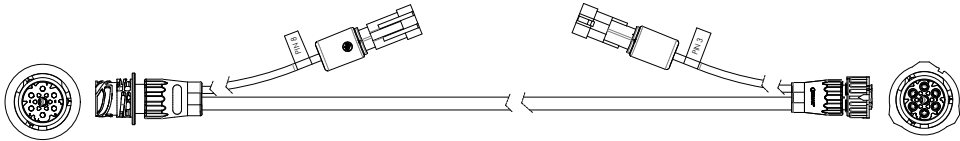
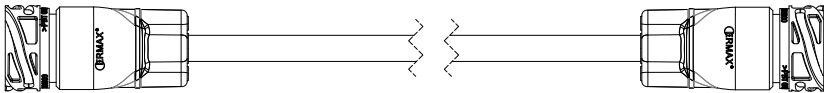
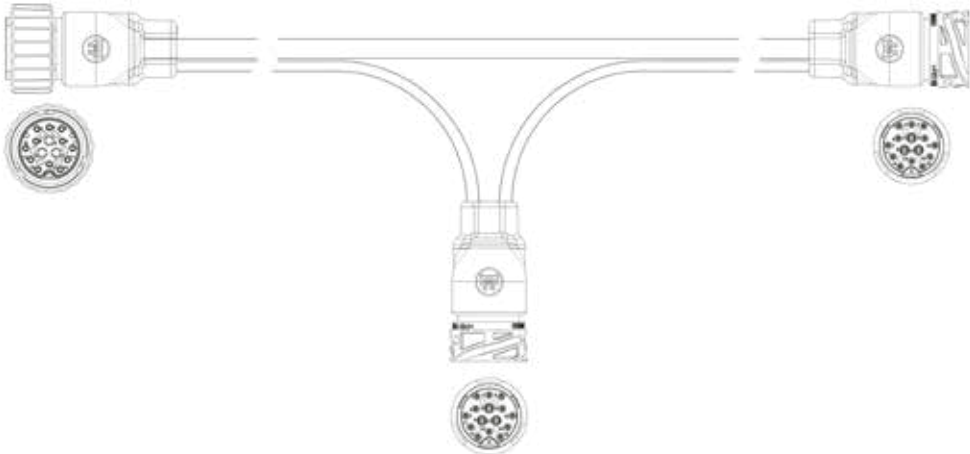
Main cable



Application/ Description	Article No.
Main cable (Adapter) Ermamax bayonet plug > socket 2x2 poled outlet with Super Seal socket (ISO 12098 Pin 10 brake-wear sensor / Pin 12 lift axle Aux 3) 2x2 poled Aux. pin 10+12 rear Cable type: FLRYY / PVC 15 core 300 mm Conductor cross-section: 12x1 mm²+3x2,5 mm² / 2x1 mm² 	394 003 530 92.0000.5359
Main cable (Adapter) 15 core 300 mm Ermamax bayonet plug > socket Conductor cross-section : 12 x 1,0 mm² + 3 x 2,5mm² / 2 x 1,0mm² Cable type : FLRYY / PVC 15 core 300 mm 4x2 poled outlet with Super Seal socket ISO12098 Pin 9, Pin 10, Pin 11, Pin 12 Front : AUX2 and AUX3 Rear : AUX1 and permanent positive 24V 15 core 300 mm 4x2 poled outlet with Super Seal socket ISO12098 Pin 7, Pin 8, Pin 10, Pin 12 Front : AUX1 and AUX3 Rear : Stop- and reverse light 15 core 300 mm 4x2 poled outlet with Super Seal socket ISO12098 Pin 7, Pin 8, Pin 10, Pin 12 Front : AUX1 and AUX3 Rear : 7 stop light + 8 reversing light 15 core 300 mm 4x2 poled outlet with Super Seal socket ISO12098 Pin 9, Pin10, Pin 11, Pin 12, Pin14, Pin 15 Front : permanent positive and AUX3 Rear : AUX1, AUX2 and CAN H, CAN L 	394 003 526 92.0000.6086 394 003 533 92.0000.6086 394 020 533 92.0000.6687 394 003 534 92.0000.7005

Main cable



Application/ Description	Article No.
Main cable (Adapter) AMP 1,5 Plug > socket 2x2 poled outlet with Super Seal socket (ISO 12098 pin 8 reverse light / pin 3 rear fog light) Cable type: FLRYY / PVC 7 core 300 mm 2x2 poled aux. pin 8+3 Conductor cross-section: 6x1 mm²+1x2,5 mm² / 2x1 mm² 	394 003 001 92.0000.5358
Main cable (Adapter) Ermax bayonet socket > socket Cable type: FLRYY / PVC 15 core 300 mm Conductor cross-section: 12x1 mm²+3x2,5 mm² 	394 003 560 92.0000.5359
Main cable (Adapter) Ermax bayonet socket > socket Cable type: FLRYY / PVC 15 core 300 mm Conductor cross-section: 8x1,0 mm²+1x2,5 mm²+7x1,0 mm² 	394 003 160 92.0000.7816

Main cable



Application/ Description	Article No.
--------------------------	-------------

Main cable, Open end

Ermox bayonet socket > Open end with blade receptacles 6,3x0,8 mm
Conductor cross-section: 12x1 mm² + 3x2,5 mm²
Cable type: FLRYY / PVC
For mounting in junction box

15 core 500 mm

394 005 551
92.0000.0032

15 core 6.000 mm

394 060 551
92.0000.1705

15 core 9.000 mm

394 090 551
92.0000.0030

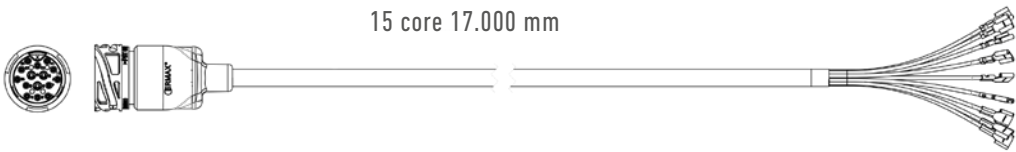
15 core 13.000 mm

394 150 551
92.0000.1725

15 core 15.000 mm

15 core 17.000 mm

394 170 551
92.0000.7272



Main cable, Open end (Front cable)

Open end with blade receptacles 6,3x0,8 mm > Ermox bayonet plug
Conductor cross-section: 12x1 mm² + 3x2,5 mm²
Cable type: FLRYY / PVC
For mounting front box / plug

15 core 600 mm

394 006 571
92.0000.1703

15 core 6.000 mm

394 060 571
92.0000.1706

15 core 9.000 mm

394 090 571
92.0000.1713

15 core 13.000 mm

394 130 571
92.0000.1719

15 core 15.000 mm

394 150 571
92.0000.1726



Rear cable



Application/ Description	Article No.
--------------------------	-------------

Rear cable

Ermamax bayonet socket > 2xAMP-1.5-plug, angled
Cable type: FLRYY / PVC

2x6 core 2.500 mm
Conductor cross-section: 6x1 mm²

494 025 600

92.0000.1737

2x6 core 2.500 mm
With 2x2 poled outlet for side marker light
Conductor cross-section: 6x1 mm² / 2x1 mm²

494 025 601

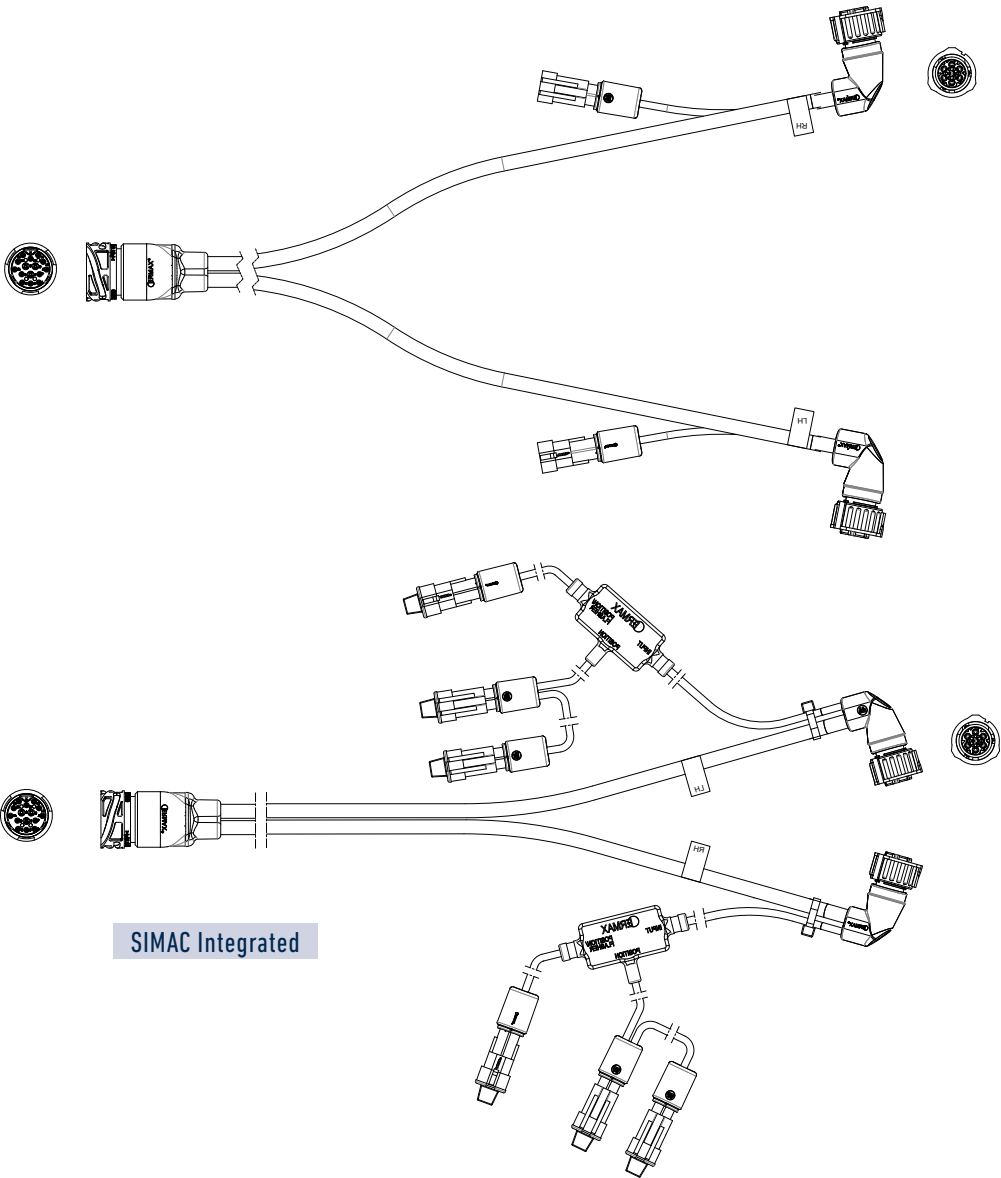
92.0000.1738

SIMAC Integrated

2x6 core 2.500 mm
With SIMAC-Function integrated and 4x2 poled outlet for position light

494 025 651

92.0000.7403



SIMAC Integrated

Rear cable



Application/ Description	Article No.
--------------------------	-------------

Rear cable

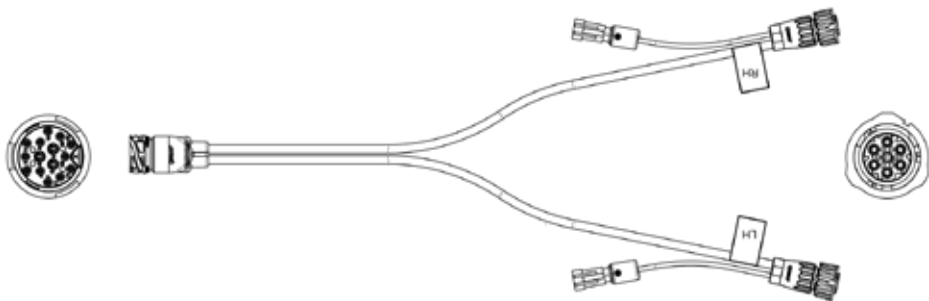
Ermex bayonet socket > 2xAMP 1.5 plug, straight
Cable type: FLRYY / PVC

2x6 core 2.500 mm
Conductor cross-section: 6x1 mm²

494 025 602
92.0000.1739

2x6 core 2.500 mm
With 2x2 poled outlet with Super Seal socket for side marker light
Conductor cross-section: 6x1 mm² / 2x1 mm²

494 025 603
92.0000.1740

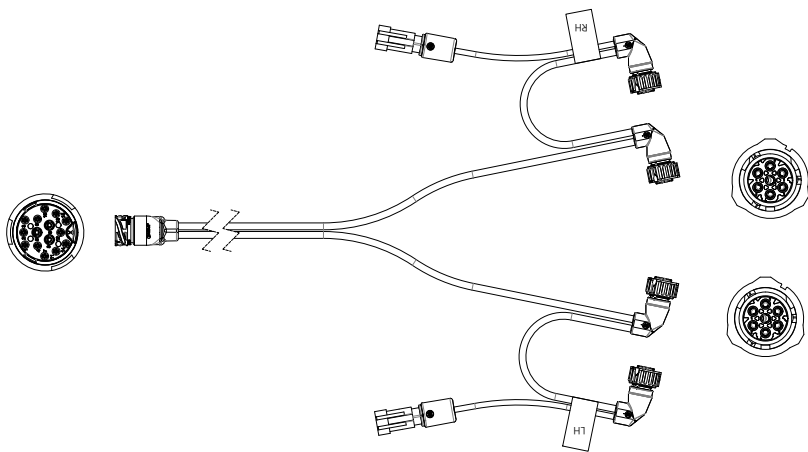


Rear cable, chain

Ermex bayonet socket > 2x2 AMP 1.5 plug, angled
Conductor cross-section: 6x1 mm² / 2x1 mm²
Cable type: FLRYY / PVC

2x6 core 2.500 mm
With 2x2 poled outlet with Super Seal socket for side marker light

494 025 604
92.0000.1741



Rear cable

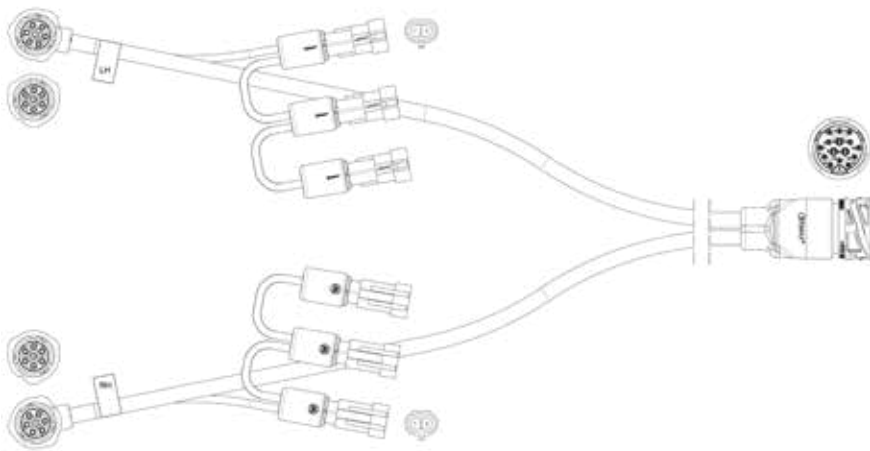


Application/ Description	Article No.
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Rear cable
Ermax bayonet socket > 2x1 AMP 1.5 plug, angled
Conductor cross-section: 6x1 mm² / 2x0,5 mm²
Cable type: FLRYY / PVC

2x6 core 2.500 mm
With 2x3 pcs 2-poled outlet with Super Seal socket for side marker light

494 025 607
92.0000.7710



Rear cable

Application/ Description	Article No.
--------------------------	-------------

Rear cable, chain

Ermac bayonet socket > 2x3 AMP 1.5 plug, angled
Conductor cross-section: 6x1 mm² / 2x1 mm²
Cable type: FLRYY / PVC

2x6 core 2.500 mm
With 2x2 poled outlet with Super Seal socket for side marker light

494 025 606

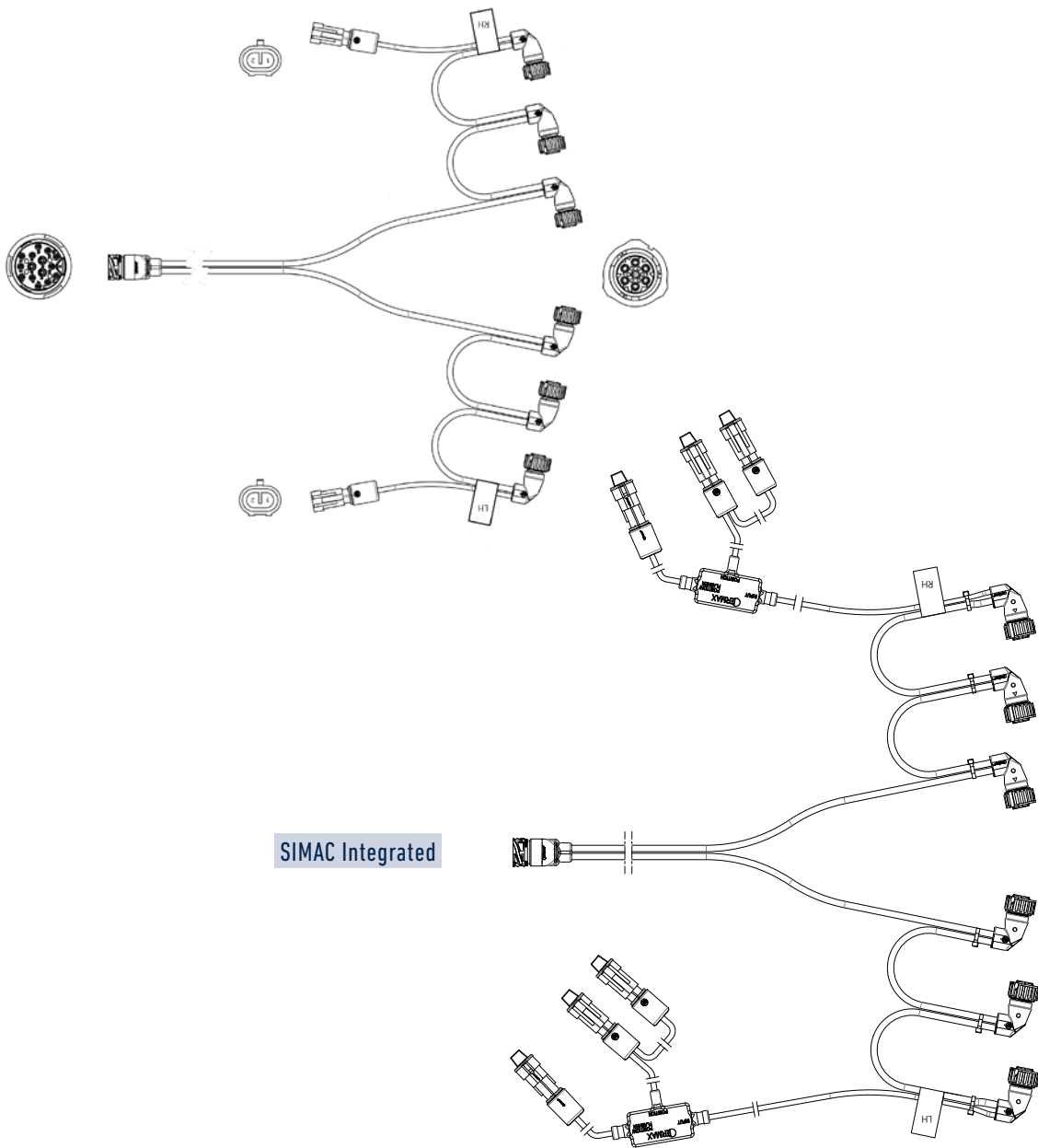
92.0000.1016

SIMAC Integrated

2x6 core 2.500 mm
With SIMAC-Function integrated and 4x2 poled outlet for position light

494 025 656

92.0000.7404



Rear cable



Application/ Description	Article No.
--------------------------	-------------

Rear cable, chain

Ermax bayonet socket > 2x4 AMP 1.5 plug, angled

Conductor cross-section: 6x1 mm² / 2x1 mm²

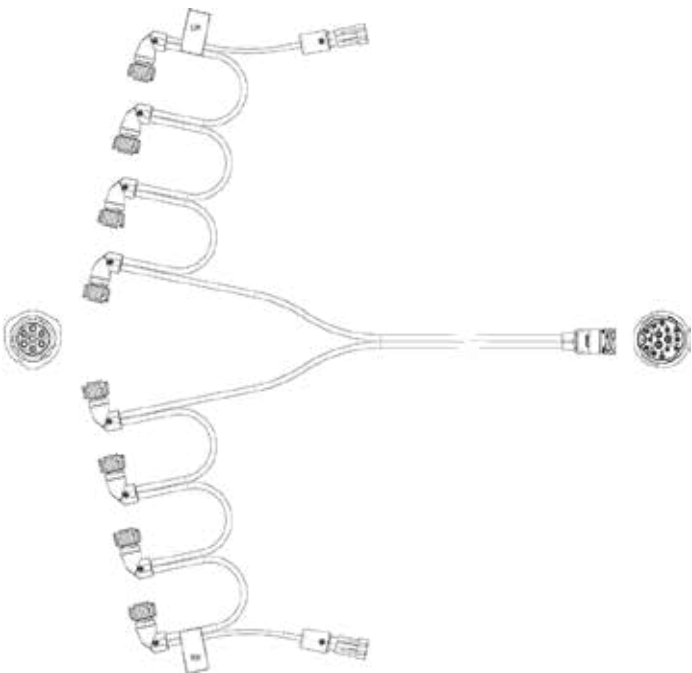
Cable type: FLRYY / PVC

2x6 core 2.900 mm

With 2x2 poled outlet with Super Seal socket for side marker light

494 029 608

92.0000.6340



Rear cable



Application/ Description	Article No.
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Rear cable, single

AMP-1.5 plug, straight > AMP-1.5 plug, angled
Cable type: FLRYY / PVC
For mounting in Ermax junction box

6 core 1.500 mm

Conductor cross-section: 6x1 mm²

494 015 610

92.0000.5386

6 core 2.000 mm

Conductor cross-section: 6x1 mm²

494 020 610

92.0000.0038

6 core 2.000 mm

With 2 poled outlet for side marker light
Conductor cross-section: 6x1 mm² / 2x1 mm²

494 020 611

92.0000.1735

6 core 2.500 mm

Conductor cross-section: 6x1 mm²

494 025 610

92.0000.5389

6 core 2.000 mm

With 2 poligem outlet for side marker light
Conductor cross-section: 6x1 mm² / 2x1 mm²

494 025 611

92.0000.5390

6 core 3.000 mm

Conductor cross-section: 6x1 mm²

494 030 610

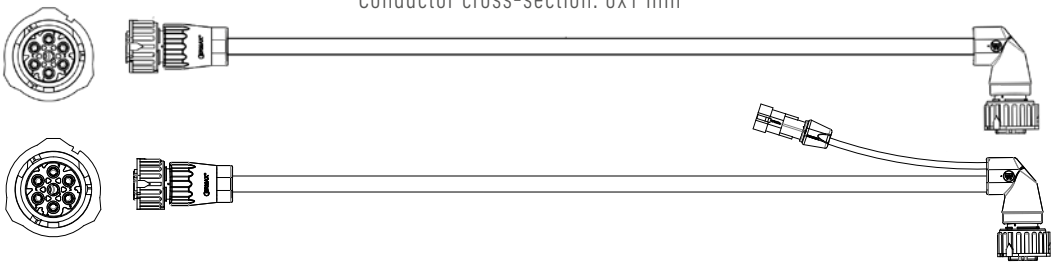
92.0000.1742

6 core 5.000 mm

Conductor cross-section: 6x1 mm²

494 050 610

92.0000.1744



Rear cable, single

AMP 1.5 plug, straight > AMP 1.5 plug, straight
Cable type: FLRYY / PVC

6 core 5.000 mm

Conductor cross-section: 6x1 mm²

494 050 612

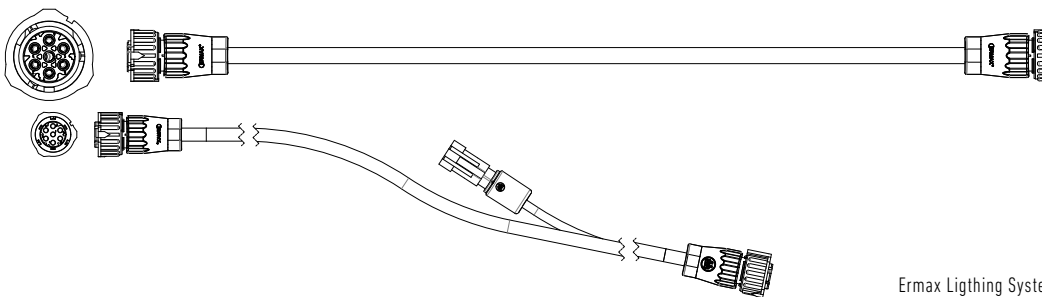
92.0000.1745

6 core 2.500 mm

With 2 poled outlet with "Super Seal" socket for side marker light
Conductor cross-section: 6x1 mm² / 2x1 mm²

494 025 613

92.0000.5391



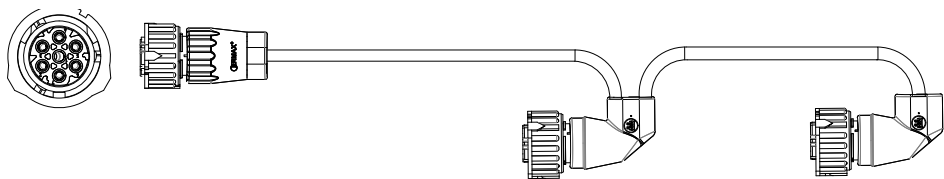
Rear cable



Application/ Description	Article No.
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Rear cable, single, chain
AMP 1,5-socket > 2xAMP-1.5 plug, angled
Cable type: FLRYY / PVC
For mounting in Ermax junction box

6 core 2.100 mm
Conductor cross-section: 6x1 mm²

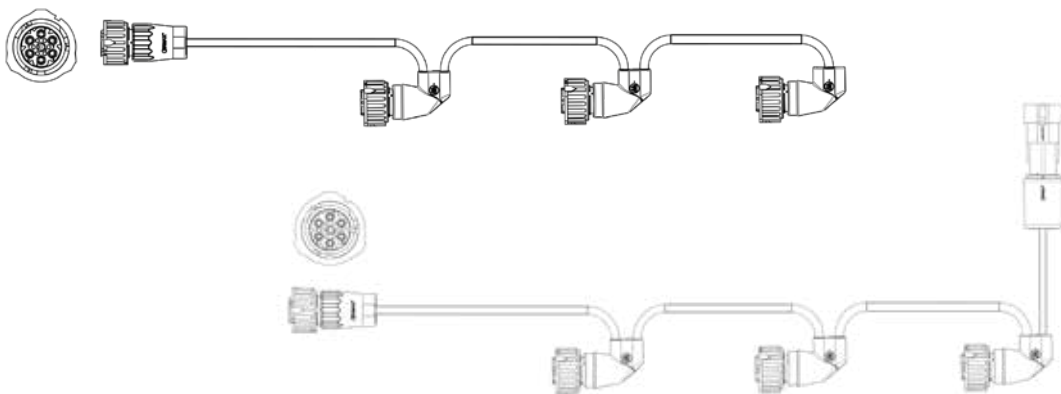


494 021 620
92.0000.1736

Rear cable, single, chain
AMP 1,5 plug, straight > 3xAMP-1,5 plug, angled
Cable type: FLRYY / PVC
For mounting in Ermax junction box

6 core 2.100 mm
Conductor cross-section: 6x1 mm²

6 core 2.100 mm
With 2 poled outlet with Super Seal socket for side marker light
Conductor cross-section: 6x1 mm² / 2x0,5 mm²



494 021 630
92.0000.1012

494 021 631
92.0000.7850

Heckkabel



Anwendung / Beschreibung

Artikel-Nr.

Rear cable, single, chain

AMP 1,5-socket > 4xAMP-1.5 plug, angled

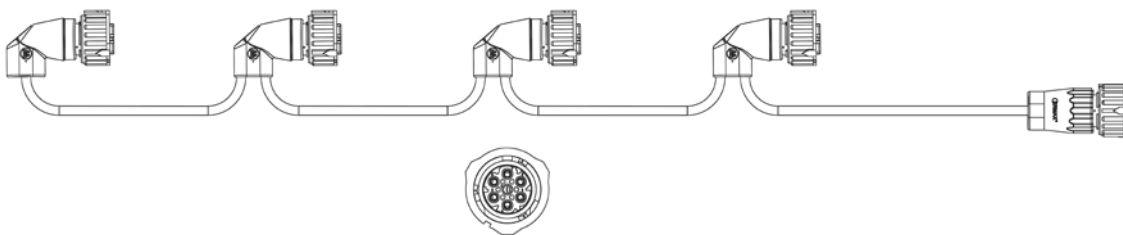
Cable type: FLRYY / PVC

For mounting in Ermax junction box

6 core 3.000 mm

Conductor cross-section: 6x1 mm²**494 030 642**

92.0000.6039

**MARK:** No stop light in plug 2**Rear cable, single, chain**

Open end with blade receptacles 6,3 x 0.8 mm > 3 x AMP 1.5 plug, angled.

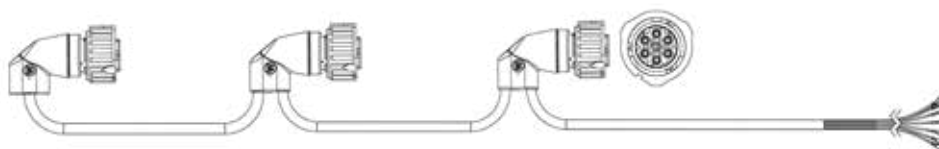
Distance between plugs: 400 mm

Cable type: FLRYY / PVC

6 core 2.100 mm

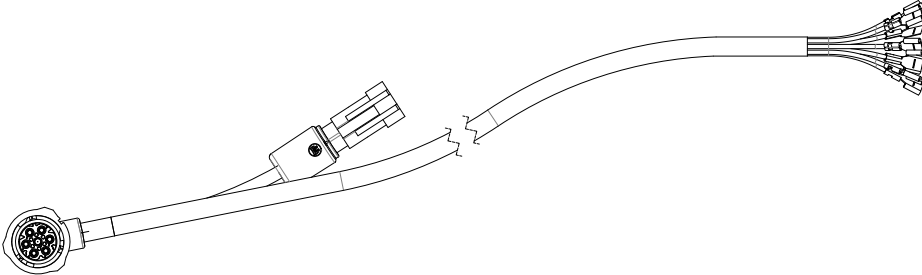
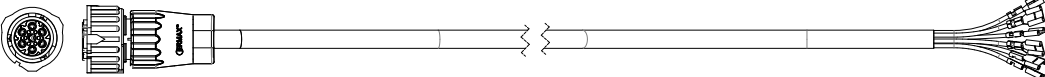
Conductor cross-section: 6x1 mm²**494 021 657**

92.0000.5892



Rear cable

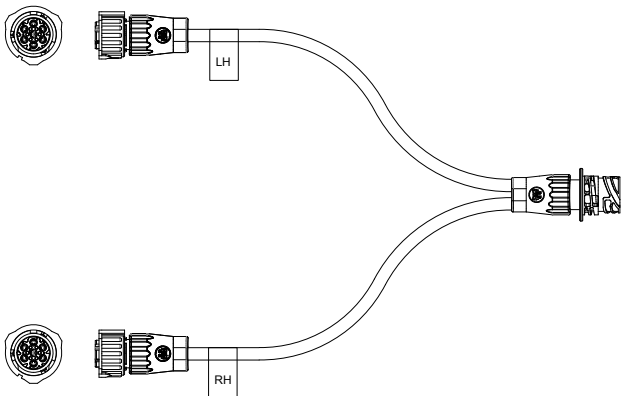
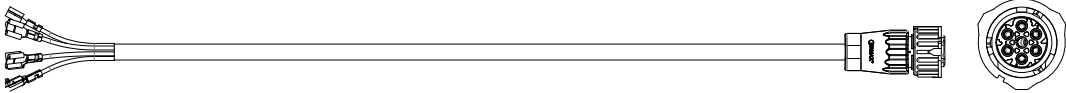


Application/ Description	Article No.
Rear cable, single, Open end Open end with blade receptacles 6,3x0,8 mm > AMP 1,5 plug, angled Cable type: FLRYY / PVC For mounting in junction box	
6 core 1.800 mm Conductor cross-section: 6x1 mm²	494 015 651 92.0000.5387
6 core 1.800 mm Conductor cross-section: 6x1 mm²	494 018 651 92.0000.1731
6 core 1.800 mm With 2 poled outlet with Super Seal socket for side marker light Conductor cross-section: 6x1 mm² / 2x1 mm²	494 018 652 92.0000.1732
6 core 3.000 mm Conductor cross-section: 6x1 mm²	494 030 651 92.0000.5392
6 core 5.500 mm Conductor cross-section: 6x1 mm²	494 055 651 92.0000.7148
	
	
Rear cable, single, Open end Open end with blade receptacles 6,3x0,8 mm > AMP 1.5 plug, straight Conductor cross-section: 6x1 mm² For mounting in Junction box Cable type: FLRYY / PVC	
6 core 1.500 mm	494 015 653 92.0000.1730
6 core 3.000 mm	494 030 653 92.0000.1743
	

Rear cable



Application/ Description	Article No.
Rear cable, single, Open end (for 3 Functions light) Open end with blade receptacles 6,3x0,8 mm > AMP 1,5 plug, straight Cable type: FLRYY / PVC 4 core 2.000 mm Conductor cross-section: 3x1 mm² + 1x2,5 mm² 4 core 5.500 mm Conductor cross-section: 3x1 mm² + 1x2,5 mm²	494 020 453 92.0000.1734 494 055 453 92.0000.5723
Rear cable AMP 1.5 socket > 2xAMP 1.5 plug For connection with tail light right and left Functions: Position-, stop- and dir. indicator light Cable type: FLRYY / PVC 2x4 core 1.500 mm Conductor cross-section: 3x1mm² + 1x2,5 mm²	494 015 420 92.0000.5362



Rear cable / Y-adapter



Application/ Description

Article No.

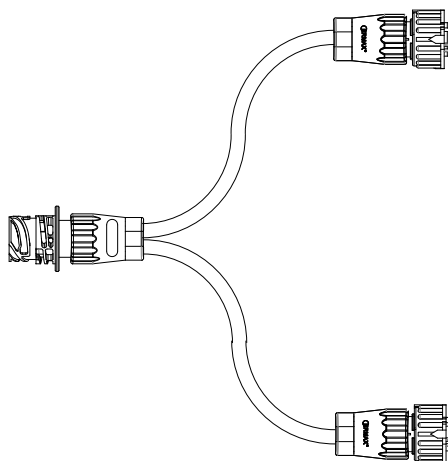
Y-Adapter cable kabel

1 x AMP 1.5 socket, straight > 2 x AMP 1.5 plug, straight

Cable type: FLRYY / PVC

6 core 2 x 500 mmConductor cross-section: $5 \times 1 \text{ mm}^2 + 1 \times 2,5 \text{ mm}^2$ **894 005 640**

92.0000.1778

**Y-Adapter cable**

1 x AMP 1,5 plug + 2 x AMP 1,5 socket

Conductor cross-section: $5 \times 1 \text{ mm}^2 + 1 \times 2,5 \text{ mm}^2 / 2 \times 1 \text{ mm}^2$

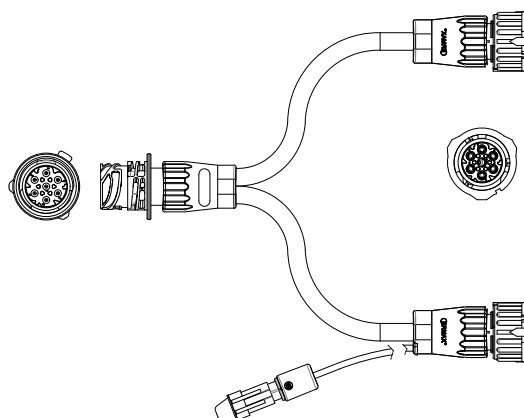
Cable type: FLRYY / PVC

6 core 2 x 300 mm

with 1x2 core outlet (200 mm) with Super Seal socket for position-, or side marker light

894 003 641

92.0000.5727



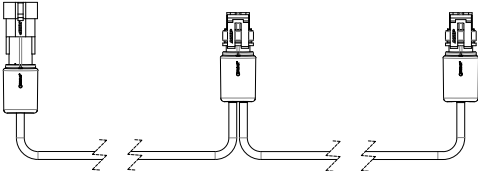
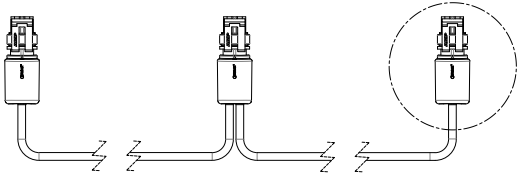
Cable for side marker



Application/ Description	Article No.
Side cable, flat with Super Seal plug Conductor cross-section: 2x1,5 mm ² Cable type: FLYYF	
2.000 mm for Click-in System	594 020 000 92.0000.7387
4.000 mm for Click-In System	594 040 000 92.0000.5394
7.000 mm for Click-In System	594 070 000 92.0000.1746
9.000 mm for Click-In System	594 090 000 92.0000.0006
10.000 mm for Click-In System	594 100 000 92.0000.5395
13.000 mm for Click-In System	594 130 000 92.0000.0001
15.000 mm for Click-In System	594 150 000 92.0000.1002
17.000 mm for Click-In System	594 170 000 92.0000.1747
18.000 mm for Click-In System	594 180 000 92.0000.1748
19.000 mm for Click-In System	594 190 000 92.0000.1749
21.000 mm for Click-In System	594 210 000 92.0000.5396
MARK: Can be used with main cable 394 060 107	

Cable for side marker



Application/ Description		Article No.
Side cable, chain Suitable as extension cable for side cable chains 1 x inlet with Super Seal socket + 2 x outlet with Super Seal plug Conductor cross-section: 2x0,5 mm² Cable type: FLRYY / PVC 3.900 mm distance between socket/Plug: 1x200 mm + 1x3700 mm 5200 mm distance between socket/Plug: 1 x 200mm + 1 x 5000 mm 		694 039 201 92.0000.1752 694 052 201 92.0000.6094
Side cable, chain 1 x inlet + 2 x outlet with Super Seal plug Conductor cross-section: 2x0,5 mm² Cable type: FLRYY / PVC 3.000 mm dDistance between plugs: 1x1700 mm + 1x1300 mm 4.200 mm distance between plugs: 1x1200 mm + 1x3000 mm. 5.300 mm distance between plugs: 1x300 mm + 1x5000 mm. 		694 030 200 92.0000.5399 694 042 200 92.0000.6046 694 053 200 92.0000.6074
Side cable, chain 1 x inlet Open end with blade receptacles 6,3x0,8 mm > + 3 x outlet with Super Seal plug Conductor cross-section: 2x0,5 mm² Cable type: FLRYY / PVC 600 mm Distance between Open end and plug: 250 mm +200 mm + 200 mm 		694 006 350 92.0000.1750

Cable for side marker



Application/ Description

Article No.

Side cable, chain

1 x inlet + 3 x outlet with Super Seal plug

Conductor cross-section: 2x0,5 mm²

Cable type: FLRYY / PVC

2.500 mm

distance between plugs: 500 mm + 1500 mm + 500 mm

694 025 300

92.0000.5398

3.200 mm

distance between plugs: 500 mm + 1700 mm + 1000 mm

694 032 300

92.0000.5924

4.000 mm

distance between plugs: 1000 mm + 2000 mm + 1000 mm

694 040 300

92.0000.5400

8.000 mm

distance between plugs: 2000 mm + 2000 mm + 4000 mm

694 080 300

92.0000.5402

9.400 mm

distance between plugs: 2000 mm + 3700 mm + 3700 mm

694 094 300

92.0000.6636

11.500 mm

Abstand zwischen Steckern: 1500 mm + 5000 mm + 5000 mm

694 115 300

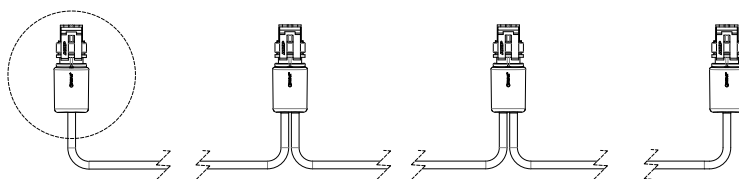
92.0000.6544

13.500 mm

distance between plugs: 4100 mm + 3900 mm + 5500 mm

694 135 300

92.0000.7060



Cable for side marker



Application/ Description

Article No.

Side cable, chain

1 x inlet and 4 x outlet with Super Seal plug

Conductor cross-section: 2x0,5 mm²

Cable type: FLRYY / PVC.

800 mm

distance between plugs: 200 mm

11.700 mm

distance between plugs: 1200 mm + 500 mm + 5000 mm + 5000 mm

12.400 mm

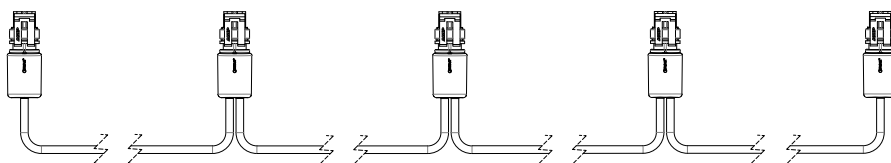
distance between plugs: 3200 mm + 2800 mm + 3200 mm + 3200 mm

17.500 mm

distance between plugs: 7000 mm - 3500 mm - 3500 mm - 3500 mm

19.500 mm

distance between plugs: 9000 mm - 3500 mm - 3500 mm - 3500 mm

**694 008 400**

92.0000.1751

694 117 400

92.0000.6079

694 124 400

92.0000.6079

694 175 400

92.0000.6637

694 195 400

92.0000.5799

Side cable, chain

1 x inlet + 5 x outlet with Super Seal plug

Conductor cross-section: 2x0,5 mm²

Cable type: FLRYY / PVC

15.100 mm

distance between plugs: 2x3200 mm + 2x4000 mm 1x700 mm

18.200 mm

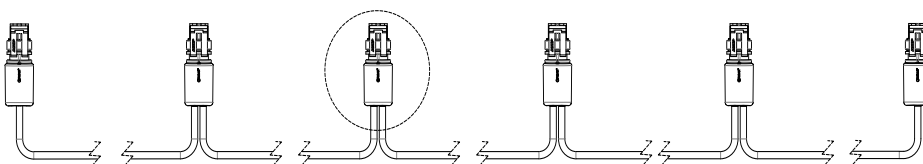
distance between plugs: 1x4200 mm + 1x4150 mm + 1x4100 mm + 1x5000 mm + 1x750 mm mm

22.500 mm

distance between plugs: 1x9000 mm + 3x3500 mm + 1x3000 mm

23.100 mm

distance between plugs: 1x6600 mm + 1x6100 mm + 1x5400 mm + 1x4500 mm + 1x500 mm

**694 151 500**

92.0000.5925

694 182 500

92.0000.6638

694 225 500

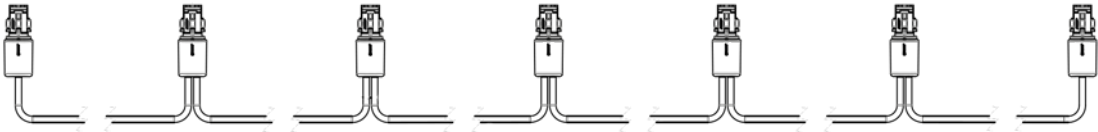
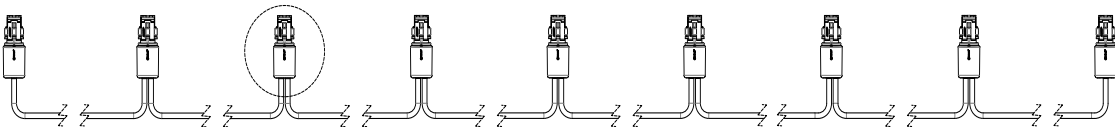
92.0000.6581

694 231 500

92.0000.6581

Cable for side marker



Application/ Description	Article No.
Side cable, chain 1 x inlet + 6 x outlet with Super Seal plug Conductor cross-section: 2x0,5 mm² Cable type: FLRYY / PVC 11.500 mm distance between plugs: 1x1500 mm + 2x2400 mm 1x2500 mm, 1x1700 mm, 1x1000 mm 16.200 mm distance between plugs: 1x1200 mm + 5x3000 mm 17.500 mm distance between plugs: 2x1500 mm + 1x4000 mm + 3x 3500 mm 20.500 mm distance between plugs: 1x2000 mm + 5x3700 mm 	694 115 600 92.0000.6987 694 162 600 92.0000.0026 694 175 600 92.0000.6580 694 205 600 92.0000.0039
Side cable, chain 1 x inlet + 8 x outlet with Super Seal plug Conductor cross-section: 2x0,5 mm² Cable type: FLRYY / PVC 31.500 mm distance between plugs: 1x7500 mm + 6x3500 mm + 1x3000 mm 	694 315 800 92.0000.6623

Extension cable



Application/ Description	Article No.
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Extension cable, 2 core
Super Seal socket > Super Seal plug
Conductor cross-section: 2x1 mm²
Cable type: FLRYY / PVC

1.000 mm	794 010 200 92.0000.0005
1.500 mm	794 015 200 92.0000.0040
2.000 mm	794 020 200 92.0000.7799
3.000 mm	794 030 200 92.0000.0024
4.000 mm	794 040 200 92.0000.0024
5.000 mm	794 050 200 92.0000.0022
6.000 mm	794 060 200 92.0000.5407
15.000 mm	794 150 200 92.0000.6704



Extension cable



Application/ Description

Article No.

Extension cable, 2 core

Super Seal plug > Super Seal plug

Conductor cross-section: 2x1 mm²

Cable type: FLRYY / PVC

200 mm

794 002 230

92.0000.5364

500 mm

794 005 230

92.0000.5365

1.000 mm

794 010 230

92.0000.1758

1.500 mm

794 015 230

92.0000.1763

2.000 mm

794 020 230

92.0000.5405

2.500 mm

794 025 230

92.0000.5406

3.000 mm

794 030 230

92.0000.1769

5.000 mm

794 050 230

92.0000.1774

6.000 mm

794 060 230

92.0000.1774

7.500 mm

794 075 230

92.0000.5408

10.000 mm

794 100 230

92.0000.5410

11.500 mm

794 115 230

92.0000.5412

15.000 mm

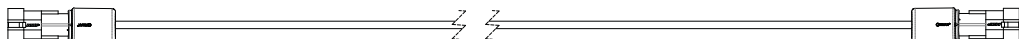
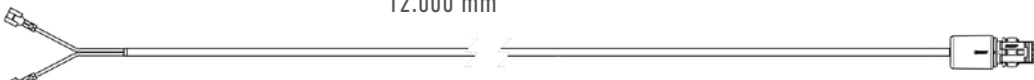
794 150 230

92.0000.5413



Extension cable



Application/ Description		Article No.
Extension cable, 2 core Super Seal socket > Super Seal socket Conductor cross-section: 2x1 mm² Cable type: FLRYY / PVC		
1.500 mm		794 015 240 92.0000.5404
Extension cable, 2 core Super Seal plug > Open end with blade receptacles 6,3 x 0,8 mm Conductor cross-section: 2x1 mm² Cable type: FLRYY / PVC		
500 mm		794 005 251 92.0000.1754
1.000 mm		794 010 251 92.0000.1759
1.500 mm		794 015 251 92.0000.1764
2.000 mm		794 020 251 92.0000.1767
2.500 mm		794 025 251 92.0000.9240
4.000 mm		794 040 251 92.0000.1773
6.000 mm		794 060 251 92.0000.1775
8.000 mm		794 080 251 92.0000.1776
10.500 mm		794 105 251 92.0000.5411
12.000 mm		794 120 251 92.0000.9241

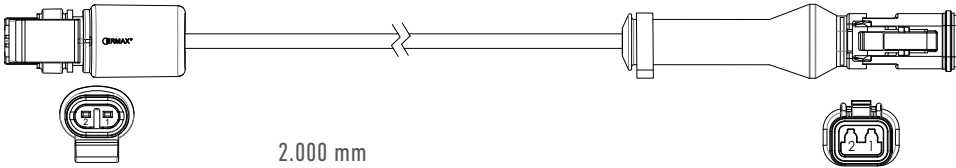
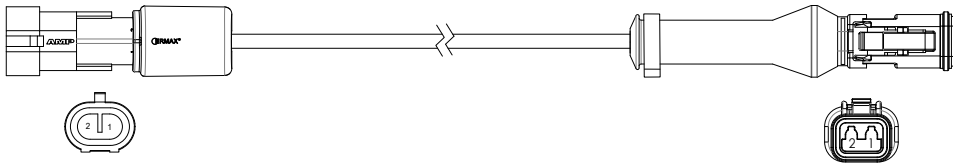
Extension cable



Application/ Description		Article No.
Extension cable, 2 core Click-In adapter > Super Seal plug Conductor cross-section: 2x1 mm² Cable type: FLRYY / PVC		
500 mm		794 005 261 92.0000.1755
1.000 mm		794 010 261 92.0000.5403
1.500 mm		794 015 261 92.0000.1765.
Extension cable, 2 core Super Seal socket > Open end with blade receptacles 6,3 x 0,8 mm Conductor cross-section: 2x1 mm² Cable type: FLRYY / PVC		
500 mm		794 005 220 92.0000.1753
1.500 mm		794 015 220 92.0000.1762
2.500 mm		794 025 220 92.0000.6514
3.500 mm		794 035 220 92.0000.1770
5.000 mm		794 050 220 92.0000.6515.
Extension cable, 2 core Click-In adapter > Super Seal socket Conductor cross-section: 2x1 mm² Cable type: FLRYY / PVC		
500 mm		794 005 270 92.0000.1756
1.500 mm		794 015 270 92.0000.1766
3.500 mm		794 035 270 92.0000.1771

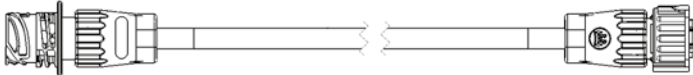
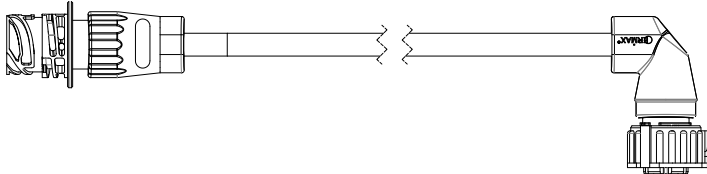
Extension cable



Application/ Description	Article No.
Extension cable 2 core DT2, 1500 mm 2-pin Deutsch connector (DT) plug > Open End Conductor cross section: 2x1 mm² Cable type: FLRYY /PVC	
1.500 mm	794 015 255 92.0000.8292
2.500 mm	794 025 255 92.0000.8240
	
Extension cable 2 core Conductor cross section: 2 x 1 mm² Type: FLRYY / PVC	
2000 mm	794 020 210 92.0000.9319
Super Seal plug > DT plug Connection: Super Seal plug pin 1 > DT plug pin 2 Super Seal plug pin 2 > DT plug pin 1	
	
2.000 mm	794 020 215 92.0000.9320
Super Seal plug > DT plug Connection: Super Seal plug pin 1 > DT plug pin 2 Super Seal plug pin 2 > DT plug pin 1	
	

Extension cable



Application/ Description	Article No.
Extension cable, 6 core AMP 1.5 socket, straight > AMP 1.5 plug, straight Conductor cross-section: 5x1mm²+1x2,5mm² Cable type: FLRYY / PVC 6 core 3.500 mm 6 core 5.000 mm 6 core 6.000 mm 6 core 12.500 mm 	794 035 600 92.0000.7266 794 050 600 92.0000.6476 794 060 600 92.0000.7362 794 125 600 92.0000.5366
Extension cable, 7 core Conductor cross-section: 6x1 mm² + 1x2,5 mm² Cable type: FLRYY / PVC 1.000 mm AMP 1.5 socket, straight > AMP 1.5 plug, straight 1.000 mm AMP 1.5 socket, > AMP 1.5 plug angled 2.000 mm AMP 1.5 socket, straight > AMP 1.5 plug, straight  	794 010 700 92.0000.1760 794 010 701 92.0000.1761 794 020 700 92.0000.1768

Extension cable

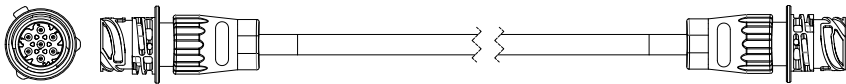


Application/ Description	Article No.
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Extension cable, 7 core
Conductor cross-section: 6x1 mm² + 1x2,5 mm²
Cable type: FLRYY / PVC

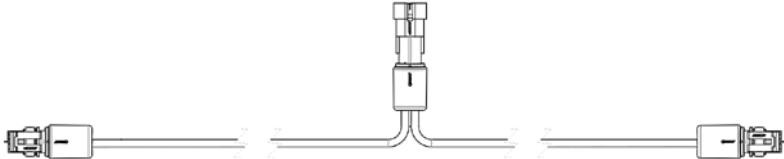
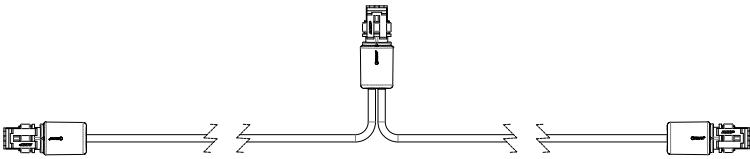
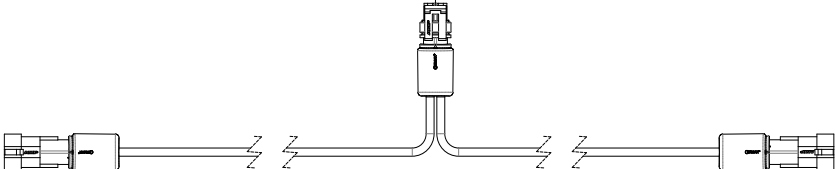
300 mm
AMP 1,5 socket, straight > AMP 1,5 socket, straight

794 003 740
92.0000.6303



Y-Adapter cable



Application/ Description	Article No.
Y-Adapter cable, 2 core Conductor cross-section: 2x1 mm² Cable type: FLRYY / PVC 2 x 500 mm 1 x Super Seal socket + 2 x Super Seal plug 2 x 1.000 mm 1 x Super Seal socket + 2 x Super Seal plug 	894 005 200 92.0000.0027 894 010 200 92.0000.1779
Y-Adapter cable, 2 core Conductor cross-section: 2x1 mm² Cable type: FLRYY / PVC / PVC 2 x 500 mm 3 x Super Seal plug 2 x 2000 mm 3 x Super Seal plug 2 x 3000 mm 3 x Super Seal plug 2 x 4000 mm 3 x Super Seal plug 2 x 6000 mm 3 x Super Seal plug 	894 005 230 92.0000.1777 894 020 230 92.0000.6988 894 030 230 92.0000.6989 894 040 230 92.0000.5414 894 060 230 92.0000.6348
Y-Adapter cable, 2 core Conductor cross-section: 2x1 mm² Cable type: FLRYY / PVC 2 x 500 mm Super Seal socket 1 x Super Seal plug + 2 x Super Seal socket 	894 005 240 92.0000.5367

Y-Adapterkabel



Application/ Description

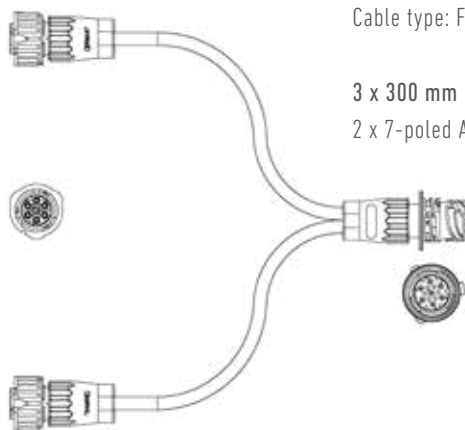
Article No.

Y-Adapter cable, 7 corerConductor cross-section: $7 \times 1 \text{ mm}^2$

Cable type: FLRYY / PVC

3 x 300 mm

2 x 7-poled AMP plug > 1 x 7-poled AMP 1,5 socket

**894 003 740**

92.0000.8131

Y-Adapter cable, 7 corerConductor cross-section: $5 \times 1 \text{ mm}^2 + 1 \times 2,5 \text{ mm}^2$

Cable type: FLRYY / PVC

2 x 500 mm

2 x 7-poled AMP plug > 1 x 7-poled AMP 1,5 socket

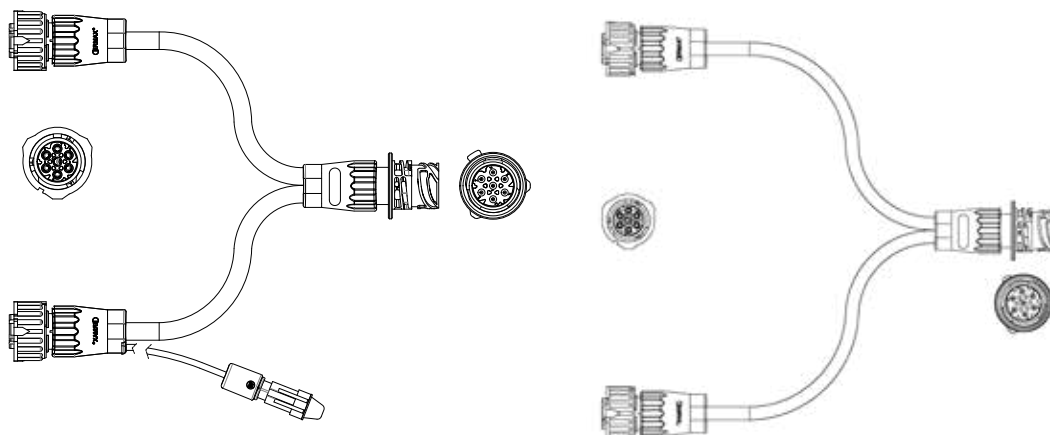
Y-Adapter cable, 6 corer

For connection of one extra tail lamp.

Conductor cross section: $5 \times 1 \text{ mm}^2 + 1 \times 2,5 \text{ mm}^2 / 2 \times 1 \text{ mm}^2$

Cable type: FLRYY/PVC

2 x 300 mm

1 x AMP 1,5 Plug, straight + 2 x AMP 1,5 socket, straight
with 1x2 core outlet (200 mm) with Super Seal socket for position- or side
marker light**894 005 640**

92.0000.1778

894 003 641

92.0000.5727

Adapter cable

EMC



Adapter cable for Ermax tail lights

Cable type: FLRYY / PVC

Connection	Cable length	Conductor cross-section		Pos	Article No.
Aspöck ASS2 7 poled socket > 7 poled AMP 1.5 bayonet plug, angled	200 mm	5x1 mm ² + 1x2,5 mm ²	Left	1	994 002 062 92.0000.6289
Aspöck ASS2 7 poled socket > 7 poled AMP 1.5 bayonet plug, angled	200 mm	5x1 mm ² + 1x2,5 mm ²	Right	1	994 002 063 92.0000.6290
Hella 7 poled plug > 7 poled AMP 1.5 bayonet plug	300 mm	6x1 mm ²	Left / Right	2	994 003 064 92.0000.7678
Hella 15 poled plug > Ermax 15 poled bayonet plug	200 mm	12x1 mm ² + 3x2,5 mm ²	---	3	994 002 151 92.0000.7677
Aspöck ASS3 17 poled plug > Ermax 15 poled bayonet plug	200 mm	12x1 mm ² + 3x2,5 mm ²	---	4	994 002 150 92.0000.6721

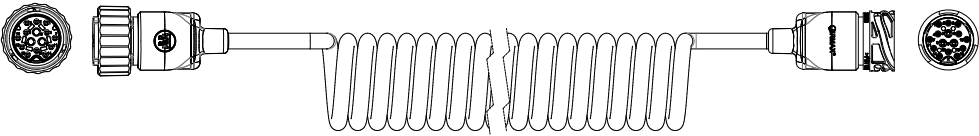
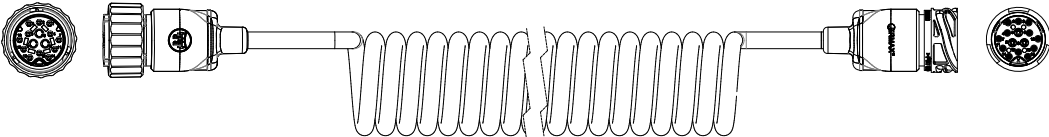
Coil cable



Application/ Description	Article No.
Coil cable Open end > Open end Outer diameter: Ø 28 mm Number of coils: 64 Cable type: PUR Conductor cross-section: 3x1mm² 3.000 mm 3 core	994 030 390 92.0000.5369
Coil cable Open end > Open end Outer diameter: Ø 35 mm Number of coils: 52 Cable type: PUR Conductor cross-section: 6x1mm²+1x2,5mm² 3.500 mm 7 core	994 035 790 92.0000.1785
Coil cable AMP 1.5 plug > socket Outer diameter: Ø 35 mm Number of coils: 52 Cable type: PUR Conductor cross-section: 6x1mm²+1x2,5mm² 3.500 mm 7 core	994 035 700 92.0000.1784

Coil cable



Application/ Description	Article No.
Coil cable Open end > Open end Conductor cross-section: 7x1mm²+2x2,5mm² Number of coils: 26 Inside diameter: ø 50 mm 3.500 mm 9 core 	994 035 990 92.0000.1787
Coil cable Ermax bayonet plug > socket Conductor cross-section: 12x1mm²+3x2,5mm² Number of coils: 23 Inside diameter: ø 65 mm 4.000 mm 15 core 	994 040 151 92.0000.1790
Coil cable 15-poled AMP plug ARD approved Conductor cross-section: 12x1mm²+3x2,5mm² Outer diameter: Ø 66 mm 4.000 mm 15 core 	994 165 813 92.0000.7312

Coil cable



Application/ Description	Article No.
Coil cable ABS with socket ISO 7638-1 Conductor cross-section: 2x4mm²+3x1,5mm² 5-poled Inside diameter: ø 22 mm Outer diamteter: Ø 48 mm 4.000 mm 5 core 	090 195 440 92.0000.7564
Coil cable 7 poled ESB with socket, ISO 7638-1 Conductor cross-section: 2x1,5mm²+2x4,0mm²+3x1,5mm² Inside diameter: ø 22 mm Outer diameter: Ø 48 mm 3.500 mm 7 core 	090 195 835 92.0000.6953
Coil cable 7 poled ESB with socket, ISO 7638-1 Conductor cross-section: 2x1,5mm²+2x4,0mm²+3x1,5mm² Inside diameter: ø 22 mm Outer diameter: Ø 48 mm 4000 mm 7 core 	090 195 840 92.0000.7565

WIDE LOAD MARKER SIGNS



WIDE LOAD MARKER SIGN – Complete Kit-Set

Standardised Security

Ermax have 2 Series of wide load marker sign kits making it possible to deliver standardised solutions covering almost every need. One Proff series and one ADR series.

The wide load marker signs – built of standard parts from the Ermax programme – are easy to mount and connect, and secure a simple operation and operational reliability in the daily work.

Both series are built up with a electro galvanized holder and a square pipe for fastening at the vehicle. The wide load marker sign has 3 flexible outer end marker lights mounted with red, white and orange light. The lights are made of rubber and the LED light module is made of impact resistant polycarbonate which resists a tough environment and handling in the daily work.

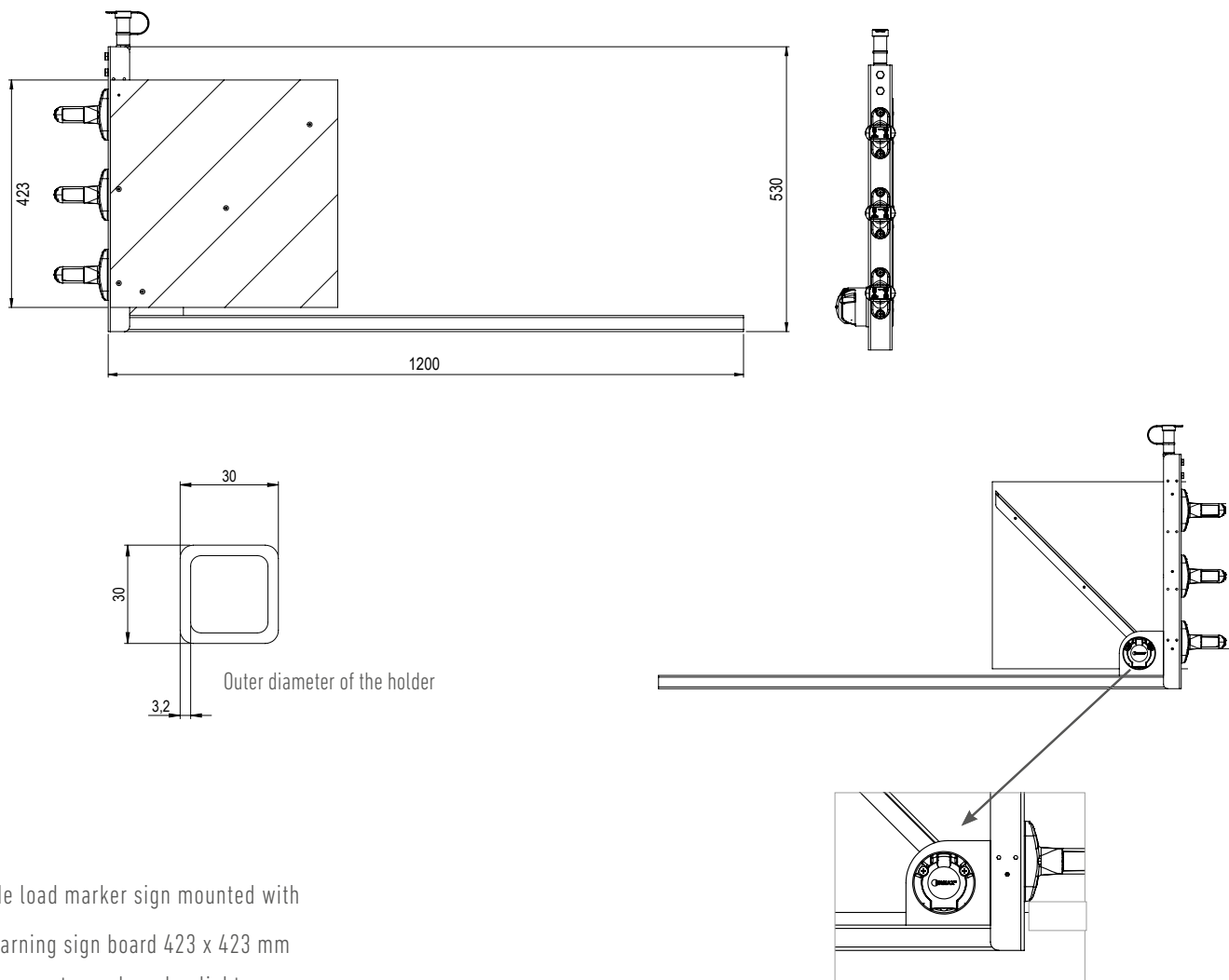
The Proff series has a pipe piece (ISO 72591) for mounting and connecting of the warning light. The connection to the wide load marker signs are made by means of a 7-poled ISO 1724 socket. Thus, a standard coil cable ISO 1724 (e.g. Ermax article number 090 180 165) can be used for connection at the vehicle. It is a commercially available cable and not a special cable, which means that defective or approaching cables can be replaced quickly = shorter service life in case of defects.

The ADR series is connected by means of a Super Seal plug, and the series is thus ADR approved in its basis configuration. Only the mounting of the warning light – due to the open plugs in the appurtenant connecting pipe – cannot be ADR approved.

For this series a coil cable (e.g. article number 994 030 300) can be used, which is connected to a corresponding Super Seal connection at the vehicle, which opens the possibility for mounting of further lights.



Wide load marker signs - Proff Series

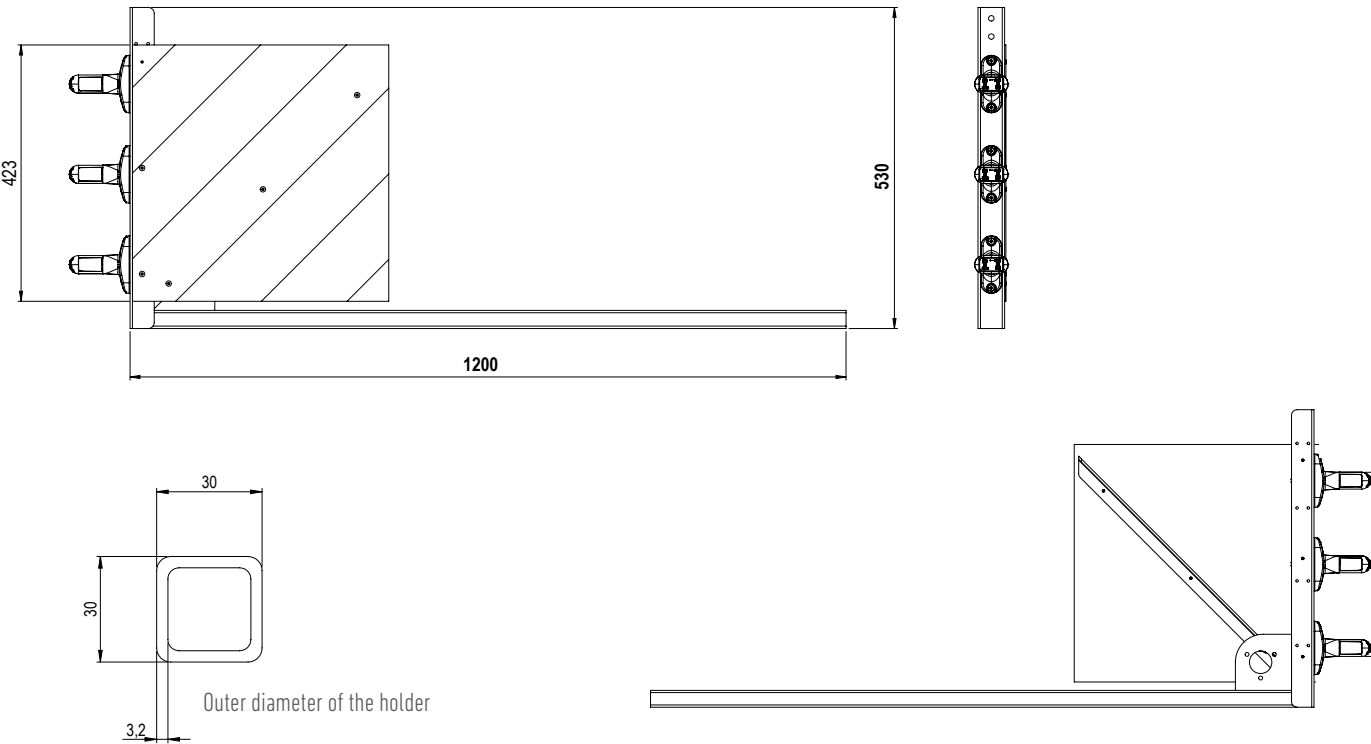


- Wide load marker sign mounted with
- Warning sign board 423 x 423 mm
 - 3 pcs outer end marker lights
 - Mounting bracket for warning beacons
 - Plug connection through ISO1724 socket

Placement	Dimension (L x B)	Material	Connection	Article No.
Rear - left	1.200 x 530 mm	Electro galvanized	Socket ISO 1724	098 269 800 92.0000.7608
Rear - right	1.200 x 530 mm	Electro galvanized	Socket ISO 1724	098 269 805 92.0000.7609
Front - left	1.200 x 530 mm	Electro galvanized	Socket ISO 1724	098 269 810 92.0000.7610
Front - right	1.200 x 530 mm	Electro galvanized	Socket ISO 1724	098 269 815 92.0000.7611

Complete kit of 4 Wide load marker signs consisting of 098 269 800 + 805 + 810 + 815	098 269 820 92.0000.7612
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Wide load marker signs - ADR Series

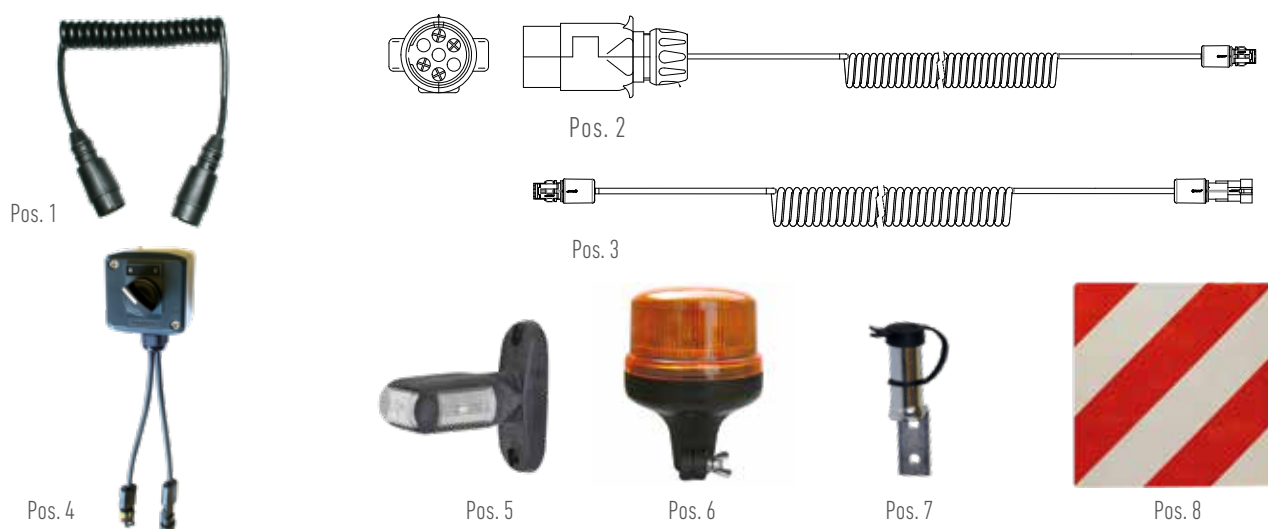


- Wide load marker sign mounted with
- Warning sign board 423 x 423 mm
 - 3 pcs outer end marker lights
 - Connection with Super Seal socket

Placement	Dimension (L x B)	Material	Connection	Article No.
Rear - left	1.200 x 530 mm	Electro galvanized	Super Seal socket	098 269 830 92.0000.7613
Rear - right	1.200 x 530 mm	Electro galvanized	Super Seal socket	098 269 835 92.0000.7614
Front - left	1.200 x 530 mm	Electro galvanized	Super Seal socket	098 269 840 92.0000.7615
Front - right	1.200 x 530 mm	Electro galvanized	Super Seal socket	098 269 845 92.0000.7616

Complete kit of 4 Wide load marker signs consisting of 098 269 830 + 835 + 840 + 845	098 269 850 92.0000.7617
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Wide load marker signs - Spare parts (S) & Accessories (A)

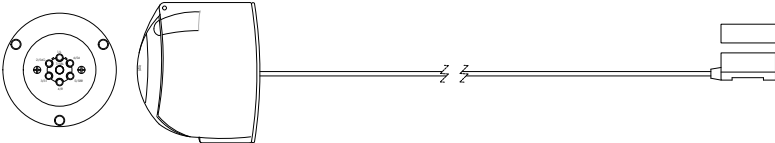
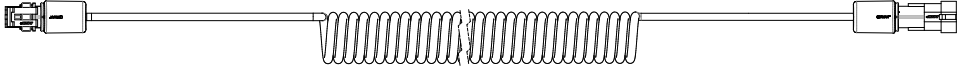


Proff Series	S / A	Pos.	
Coil cable 2x7 poled 1.500 mm - with ISO 1724 plug > ISO 1724 plug	A	1	090 180 165 92.0000.7731
Coil cable 3 poled 1.500 mm - with ISO 1724 plug > Super Seal plug	A	2	994 015 335 92.0000.7528
Coil cable 3 poled 3.000 mm - with ISO 1724 plug > Super Seal plug	A	2	994 030 335 92.0000.7469
On/off switch with 2x200 mm connection cable with Super Seal socket > plug	A	4	992 942 150 92.0000.5368
LED outer end marker - with 300 mm connection cable with Super Seal plug	S	5	098 241 218 92.0000.7490
Warning light LED 12-24V with for mounting bushes (see section with warning lights)	S	6	098 287 942 92.0000.6453
Mounting bracket, angled (no ADR approval)	S	7	098 295 562 92.0000.1674
Warning sign board - DIN 30710 one-sided aluminum, dimension: 423 x 423 (Left / Right)	S	8	098 269 123 92.0000.7952

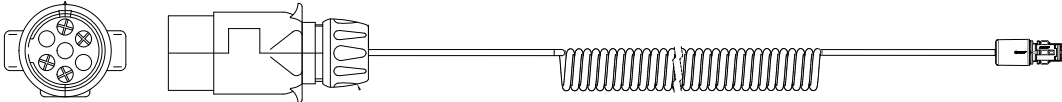
Spare parts for ISO 1724 plug - see the section with plugs & sockets

ADR Series	S / A	Pos.	
Coil cable 3.000 mm - with Super Seal plug > Super Seal socket	A	3	994 030 300 92.0000.1782
On / off switch with 2x200 mm connection cable with Super Seal socket > plug	A	4	992 942 150 92.0000.5368
LED outer end marker - with 300 mm connection cable with Super Seal plug	S	5	098 241 218 92.0000.7490
Warning light LED 12-24V with for mounting bushes (see section with warning lights)	A	6	098 287 942 92.0000.6453
Mounting bracket, angled (no ADR approval)	A	7	098 295 562 92.0000.1674
Warning sign board - DIN 30710 one-sided aluminum, dimension: 423 x 423 (Left / Right)	S	8	098 269 123 92.0000.7952

Wide load marker signs - Accessories

Application/ Description	Article No.
Connection cable Socket 7 core ISO 1724 > Click-In adapter, 2 core Conductor cross-section: 2x1mm² Cable type: FLRYY / PVC Outlets on 7 core plug: Ground (pin L/1), R. Pos.(pin 58R/5), L. Pos. (pin 58L/7) 1.500 mm 2 core Connection cable Socket 7 core ISO 1724 > Click-In adapter, 2 core Conductor cross-section: 2x1mm² Cable type: FLRYY / PVC Outlets on 7 core plug: Ground (Pin 31/3), R. Pos (Pin 58R/5), L. Pos. (Pin 58L/7) 1.500 mm 2 core 	994 015 270 92.0000.1781 994 015 275 92.0000.7903
Coil cable Super Seal plug, 2 core > Super Seal socket, 2 core Conductor cross-section: 3x1mm² Pin 2(+) connected to 2 coil cables Number of coils: 64 1.500 mm 2 core 3.000 mm 2 core 	 994 015 300 92.0000.7627 994 030 300 92.0000.1782

Wide load marker signs - Accessories

Application/ Description		Article No.
Coil cable 3 core Plug 7 core ISO 1724 > Super Seal plug, 2 core Conductor cross-section: 3x1mm² Number of coils: 64 3.000 mm Outlets on 7 core plug: Ground (pin L/1), R. pos. (pin 58R/5), L. pos. (pin 58L/7) 1.500 mm Outlets on 7 core plug: Ground (pin 31/3), R. Pos. (pin 58R/5), L. Pos. (pin 58L/7) 3.000 mm Outlets on 7 core plug: Ground (pin 31/3), R. Pos. (pin 58R/5), L. Pos. (pin 58L/7).		994 030 330 92.0000.1783 994 015 335 92.0000.7528 994 030 335 92.0000.7469
		
	Coil cable 2x7 poled, 12V Made of PUR with plastic plugs ISO 1724 Outer diameter: Ø 40 mm Conductor cross section: 6x1,0 + 1x1,5 mm² 1.500 mm Outlets on 7 core plugw	090 180 165 92.0000.7627
	On / off switch 2 x 200 mm connection cable With Super Seal socket > plug.	992 942 150 92.0000.5368



ACCESSORIES



Cable rolls



Pos. 1



Pos. 2

Cable material	Core	Spool	Cable type	Approval	Conductor cross-section	Pos.	Article No.
Plastic	2 core	50 M	FLRYY / PVC	ADR	2 x 0,5 mm ²	1	099 897 220 92.0000.7606
Plastic	2 core	50 M	FLRYY / PVC	ADR	2 x 1,0 mm ²	1	099 897 226 92.0000.6663
Plastic Side cable, flat for Click-in	2 core	100 m	FLYYF / PVC	ADR	2 x 1,5 mm ²	1	099 897 611 92.0000.1694
Plastic	3 core	50 M	FLRYY / PVC	ADR	3 x 1,5 mm ²	2	099 897 032 92.0000.6655
Plastic	4 core	50 m	FLRYY / PVC	ADR	4 x 1,0 mm ²	2	099 897 045 92.0000.6656
Plastic	4 core	50 M	FLRYY / PVC	ADR	4 x 1,5 mm ²	2	099 897 049 92.0000.6657
Plastic	5 core	50 m	FLRYY / PVC	ADR	5 x 1,0 mm ²	2	099 897 055 92.0000.6658
Plastic	7 core	100 m	FLRYY / PVC	ADR	7 x 1,0 mm ²	2	099 897 076 92.0000.6659
Plastic	7 core	50 M	FLRYY / PVC	ADR	7 x 1,5 mm ²	2	099 897 079 92.0000.6660
Plastic	7 core	50 m	FLRYY / PVC	ADR	6 x 1,0 + 1 x 2,5 mm ²	2	099 897 081 92.0000.6661
Plastic	13 core	25 M	FLRYY / PVC	ADR	10 x 1,5 + 3 x 2,5 mm ²	2	099 897 134 92.0000.6662
Plastic	15 core	50 m	FLRYY / PVC	ADR	12 x 1,0 + 3 x 2,5 mm ²	2	099 897 299 92.0000.1693
Plastic	15 core	50 m	FLRYY / PVC	ADR	12 x 1,5 + 3 x 2,5 mm ²	2	099 897 296 92.0000.6664

Accessories



	Application/ Description	Article No.
	Plate grip for Click-In System For cable with Click-in system Flexible and uncomplicated assembly	099 859 970 92.0000.1011
	Click-In cable 1,5 mm² with Open end 0,5 Meter 1,5 Meter 3,5 Meter	794 005 280 92.0000.1757 794 015 280 92.0000.1051 794 035 280 92.0000.1772
	Cap for Click-In cable 1,5 mm² 10 pcs bag	098 291 950 92.0000.5793
	Adapter - Dual Click-in For connecting two flat cables Fit for 1,5 mm² flat cable Must be mounted With 2 pcs 098 291 950 clamps Dimension: 68x15 x 22,1 x 15,4 mm	099 110 032 92.0000.7116
	End plug for flat cable for Click-in Fit for 1,5 mm² flat cable Dimension: Ø15 x 35 mm	099 110 031 92.0000.5490

JUNCTION BOX



Junction Boxes

Standardized solutions for optimal configuration

The 3 standard series are well-suited for the following applications:

Universal Junction Box

The universal junction box is without pre-configured connections and cable exits and thus universal for various applications.

The cable entries are prepared for different cable dimensions and can – if needed – be replaced with other cabling sizes, Super Seal sockets or 7 poled AMP sockets.



Pass-through Junction Box

The pass-through junction box has 15 poled plug and socket and is placed between the main cable and the rear cable. All functions are available in the junction box and can by means of the cable entries be safely connected.

According to need the cable entries can be replaced with Super Seal sockets or 7poled sockets.

Rear connection Junction Box

This junction box is connected at the end of the main cable and has connections or cable for the tail lights. Further there is connection to all functions through pre-configured sockets or cable entries.

Your advantages with the Ermax solutions:

- Unique flexibility due to fast and easy replacement of cable entries and sockets (Super Seal and 7 poled AMP sockets)
- Time-saving and easy built-in of the junction box due to pre-cabling
- Various free cable entries for universal use
- 2 sizes are available. The flat version can easily be re-built into double size
- 15-poled sockets can be integrated



UNIVERSAL JUNCTION BOX



PASS-THROUGH JUNCTION BOX



REAR CONNECTION BOX

Junction box Standard program - overview



Ø13-11 mm



Ø10-7 mm



Ø6-4 mm



Ø5,5 mm x 2



Box type	Cover	Inlet	Outlet	Connection - Cable gland	Integrated SIMAC control	Article No.
Universal Box	Low	PG Ø13-11 mm	--	4 x Ø5,5 mm x 2 2 x Ø6-4 mm 1 x Ø10-7 mm		099 866 700 92.0000.5826
	High	PG Ø13-11 mm	--	1 x Ø5,5 mm x 2 8 x Ø6-4 mm 4 x Ø10-7 mm		099 866 750 92.0000.5833
Pass-through Box	Low	15 poled Ermax bayonet socket with 500 mm cable	15 poled Ermax bayonet plug with 500 mm cable	2 x Super Seal (Position R, Position L) 2 x Ø6-4 mm 2 x Ø5,5 mm x 2		099 866 740 92.0000.5830
	Low	15 poled Ermax bayonet socket with 500 mm cable	15 poled Ermax bayonet plug with 500 mm cable	4 x Ø5,5 mm x 2 2 x Ø6-4 mm		099 866 745 92.0000.7632
Rear connection box	Low	15 poled Ermax bayonet socket	--	2 x 7 poled AMP socket 2 x Super Seal (Position R, Position L) 2 x Super Seal (reverse light, rear fog light) 1 x Ø5,5 mm x 2		099 866 710 92.0000.5827
	High	15 poled Ermax bayonet socket	--	2 x 7 poled AMP socket 2 x Super Seal (Position R, Position L) 4 x Super Seal (Stop light, reverse light, rear fog light, AUX 3) 1 x Ø5,5 mm x 2 2 x Ø10-7 mm 2 x Ø6-4 mm		099 866 760 92.0000.5834
	Low	15 poled cable	2x1 7 poled AMP	2 x Ø5,5 mm x 2 2 x Ø6-4 mm 1 x Ø7-10 mm		099 866 713 92.0000.7604
	High	15 poled cable	--	8 x Ø5,5 mm x 2 3 x Ø6-4 mm 2 x Ø10-7 mm		099 866 751 92.0000.7675
	High	15 poled cable	2x3 7 poled AMP	2 x Super Seal (Position R, Position L) 4 x Super Seal (Stop light, reverse light, rear fog light, AUX 3) 5 x Ø6-4 mm		099 866 781 92.0000.5836
	High	15 poled cable	--	2 x Super Seal (SIMAC R, SIMAC L) 7 x Ø5,5 mm x 2 2 x Ø6-4 mm 2 x Ø10-7 mm	SIMAC	099 869 751 92.0000.7605
	High	15 poled cable	--	2 x Super Seal (SIMAC R, SIMAC L) 2 x Super Seal (Position L, Position R) 3 x Super Seal (Stop light, reverse light, rear fog light) 4 x Ø5,5 mm x 2 2 x Ø6-4 mm	SIMAC	099 869 756 92.0000.7141

Universal Junction box



Application/ Description

Article No.

Junction box
Housing of black plastic
IP Rating: IP 67

Low cover - Connections:

Inlet: Cable gland Ø13-11 mm
Cable glands: 4 x Ø5,5 mm x 2
2 x Ø6-4 mm
1 x Ø10-7 mm

High cover - Connections:

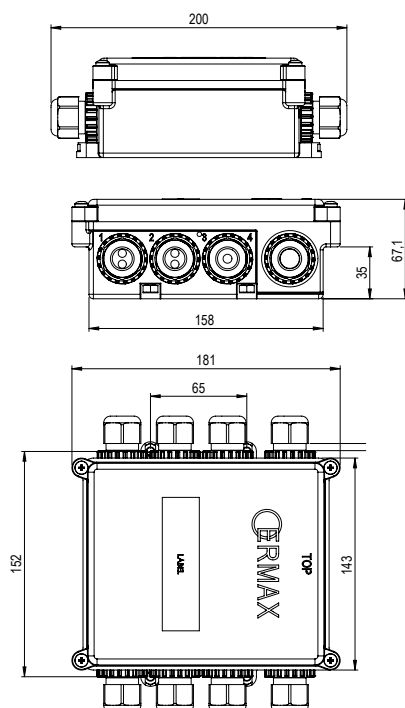
Inlet: Cable gland Ø13-11 mm
Cable glands: 1 x Ø5,5 mm x 2
8 x Ø6-4 mm
4 x Ø10-7 mm

099 866 700

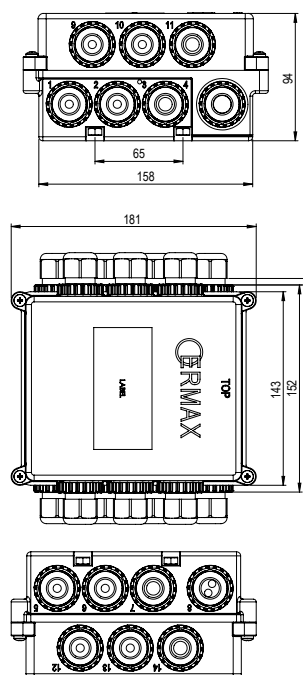
92.0000.5826

099 866 750

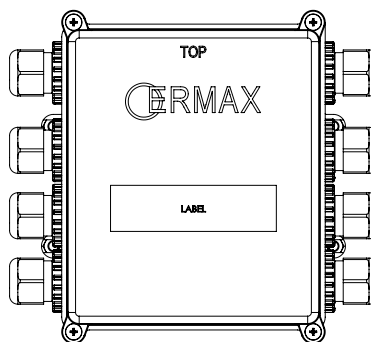
92.0000.5833



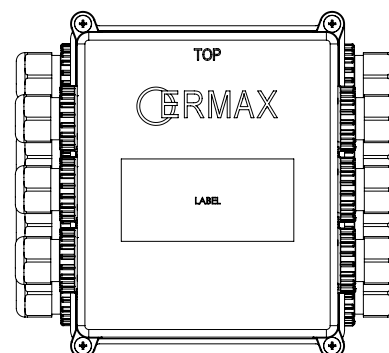
Lower cover



Higher cover



Lower cover



Higher cover

Pass-through Junction box



Application/ Description

Article No.

Junction box with cable
Housing of black plastic
IP Rating: IP 67

Lower cover

Connection:

Inlet: 1 x 15 poled Ermax bayonet socket with
500 mm cable

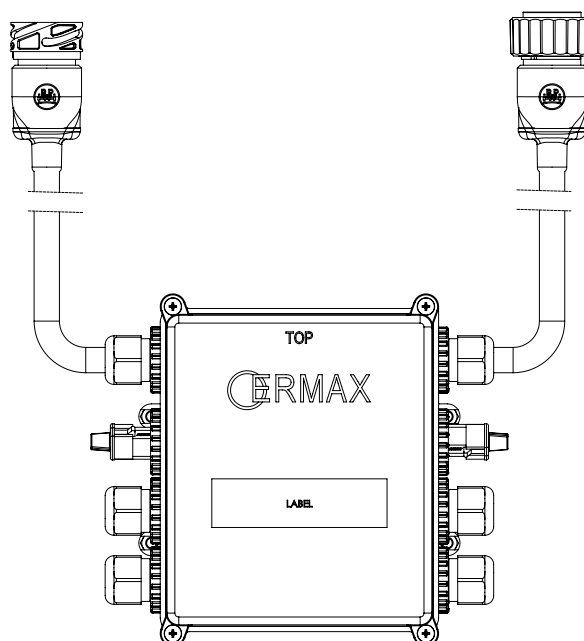
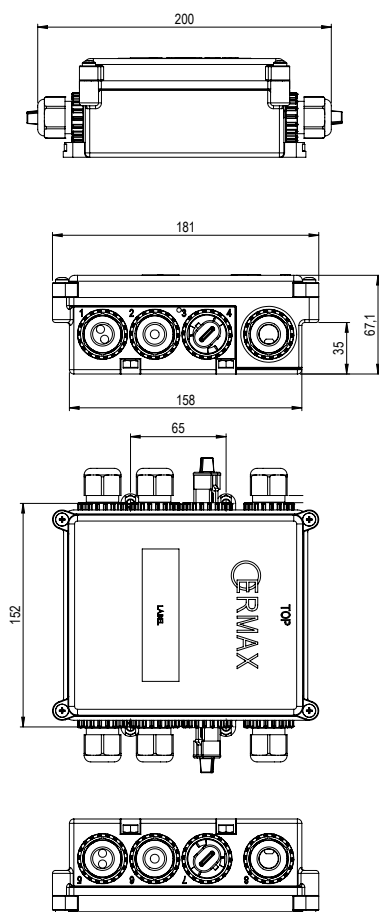
Outlet: 1 x 15 poled Ermax bayonet plug with
500 mm cable for right and left tail light

2x2 poled Super Seal socket with R+L position

Cable gland: 2 x Ø6-4 mm
2 x Ø5,5 mm x 2

099 866 740

92.0000.5830



Pass-through Junction box



Application/ Description

Article No.

Junction box with cable (Dolly)

Housing of black plastic

IP Rating: IP 67

Lower cover

Connection:

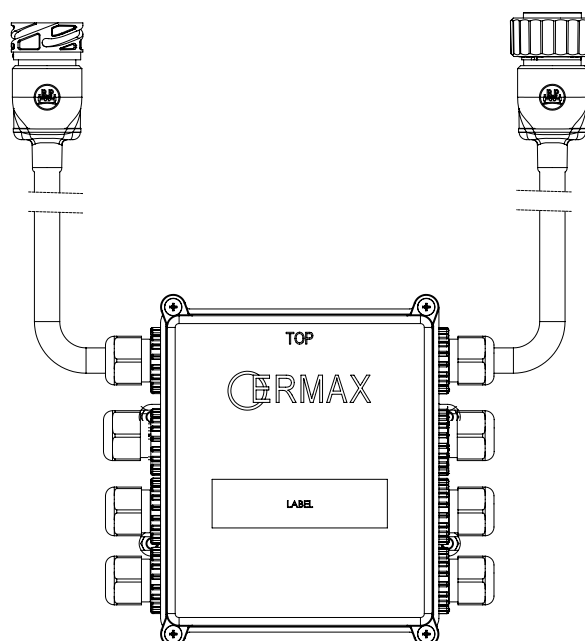
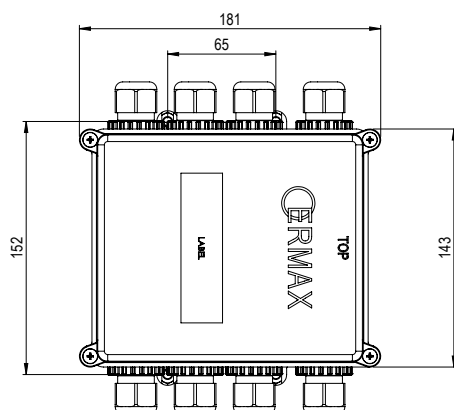
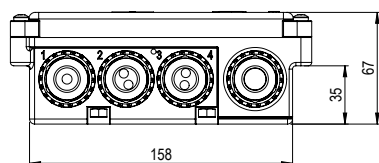
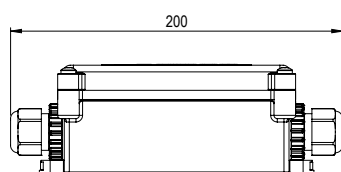
Inlet: 1 x 15 poled Ermax bayonet socket with
500 mm cable

Outlet: 1 x 15 poled Ermax bayonet plug with
500 mm cable

Cable gland: 4 x Ø5,5 mm x 2
2 x Ø6-4 mm

099 866 745

92.0000.7632



Rear connection Junction box



Application/ Description

Article No.

Junction box
Housing of black plastic
IP Rating: IP 67

Low cover - connection:

Inlet: 1 x 15 poled Ermax bayonet socket
2x7 core AMP 1.5 socket for R+L tail light
2x2 core Super Seal socket with R+L position
1x2 core Super Seal socket with reverse light
1x2 core Super Seal socket with rear fog light

Cable gland: 1x Ø5,5 mm x 2

High cover - connection:

Inlet: 1 x 15 poled Ermax bayonet socket
2x7 core AMP 1.5 socket for R and L tail light
2 x 2 poled Super Seal socket with R+L position
1 x 2 poled Super Seal socket with stop light
1 x 2 poled Super Seal socket with reverse light
1 x 2 poled Super Seal socket with rear fog light
1 x 2 poled Super Seal socket with Aux 3

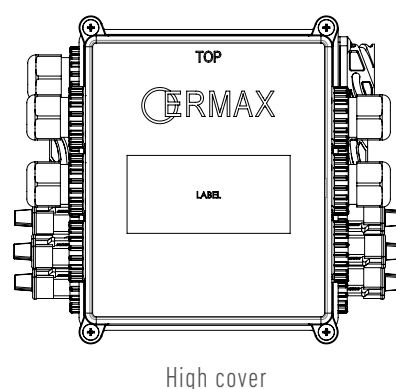
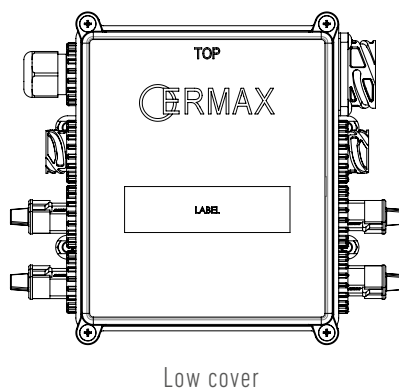
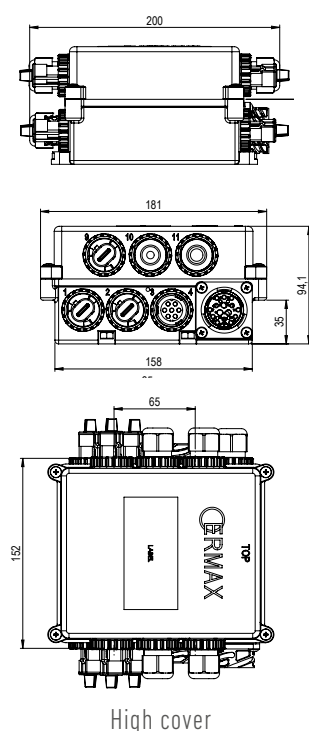
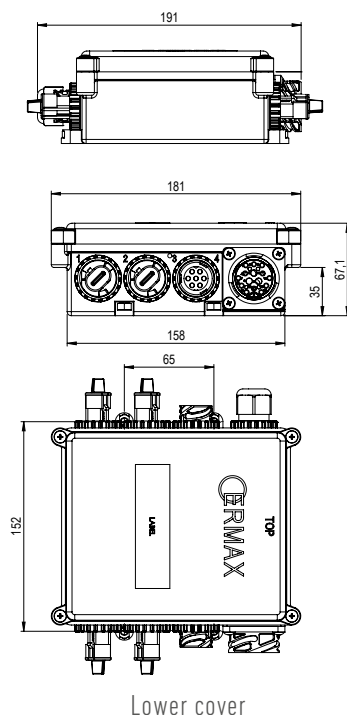
Cable gland: 1x Ø5,5 mm x 2
2 x Ø10-7 mm
2 x Ø6-4 mm

099 866 710

92.0000.5827

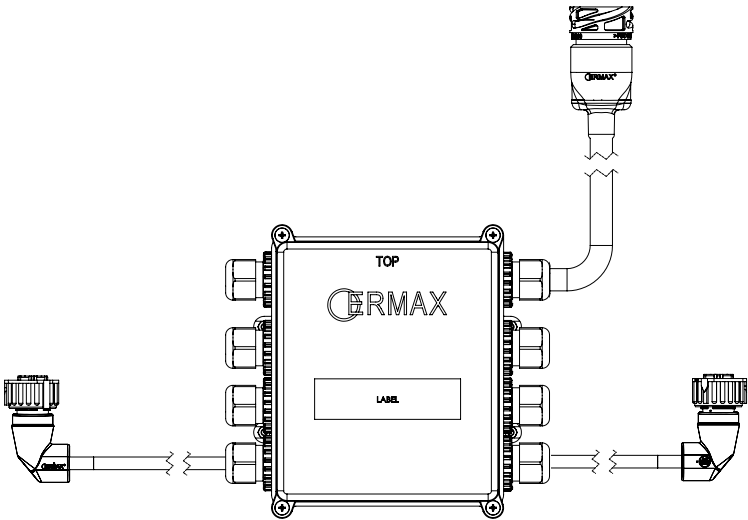
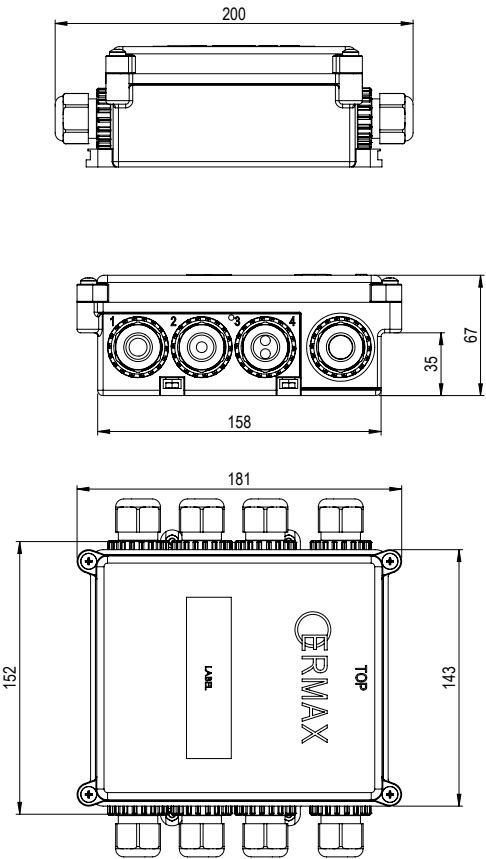
099 866 760

92.0000.5834



Rear connection Junction box

Application/ Description	Article No.
Junction box with cable Housing of black plastic IP Rating: IP 67 Low cover Connection: Inlet: 1 x 15 poled Ermax bayonet socket with 1500 mm cable Outlet: 2 x 7 poled AMP 1.5 plug with 1300 mm cable for R+L tail light Cable gland: 2 x Ø5,5 mm 2 x Ø6-4 mm 1 x Ø7-10 mm	099 866 713 92.0000.7604



Rear connection Junction box



Application/ Description

Article No.

Junction box with cable
Housing of black plastic
IP Rating: IP 67

High cover

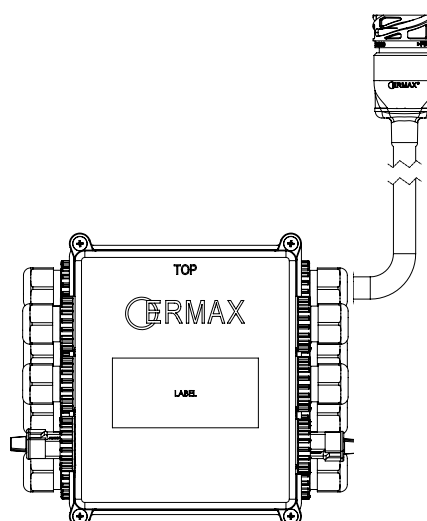
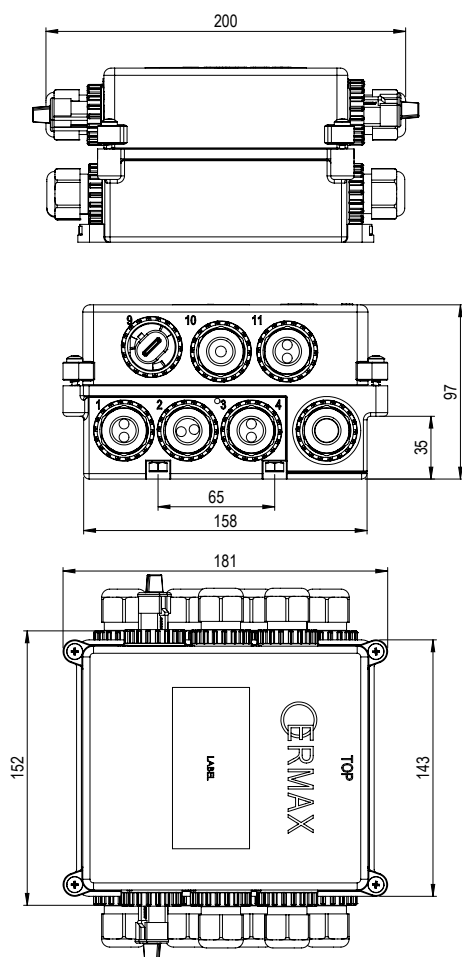
Connection:

Inlet: 1 x 15 poled Ermax Bayonet socket with
500 mm cable

Cable gland: 8 x Ø5,5 mm x 2
3 x Ø6-4 mm
2 x Ø10-7 mm

099 866 751

92.0000.7675



Rear connection Junction box



Application/ Description

Article No.

Junction box with cable
Housing of black plastic
IP Rating: IP 67

Hohe Cover

Connection:

Inlet: 1 x 15 poled Ermax bayonet socket with 1500 mm cable

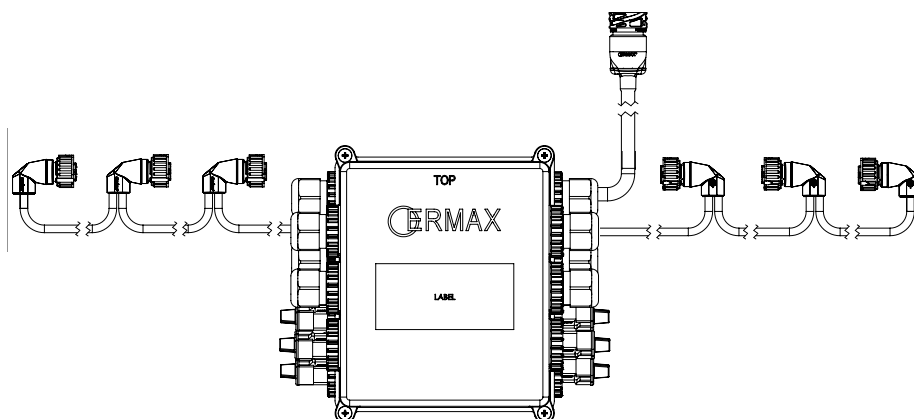
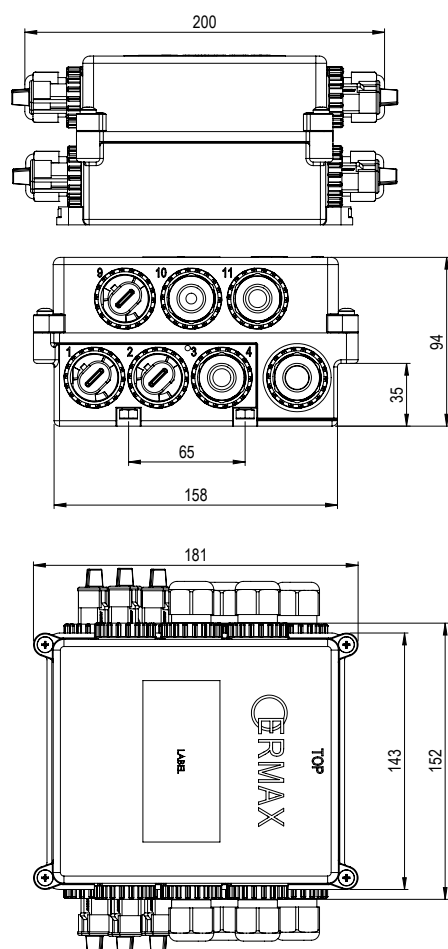
Outlet: 2 x 3 7 poled AMP 1.5 plug angled, with 2100 mm cable for L+R tail light.

2 x 2 poled Super Seal socket with L+R position
1 x 2 poled Super Seal socket with stop light
1 x 2 poled Super Seal socket with reverse light
1 x 2 poled Super Seal socket with rear fog light
1 x 2 poled Super Seal socket with Aux 3

Cable gland: 5x Ø6-4 mm

099 866 781

92.0000.5836



Rear connection Junction box - with SIMAC built-in



Application/ Description

Article No.

Junction box with cable With SIMAC

Housing of black plastic

IP Rating: IP 67

High cover

Connection:

Inlet: 1x15 core Ermax bayonet socket with 500 mm cable

1 x 2 poled Super Seal socket for position / SIMAC, left

1 x 2 poled Super Seal socket for position / SIMAC, right

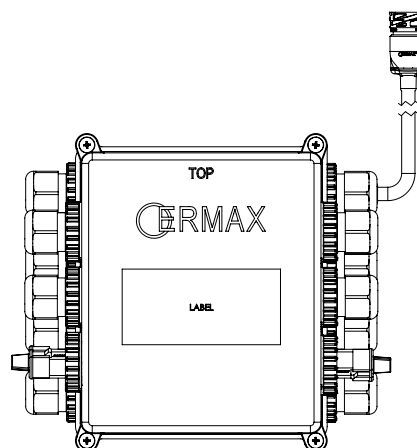
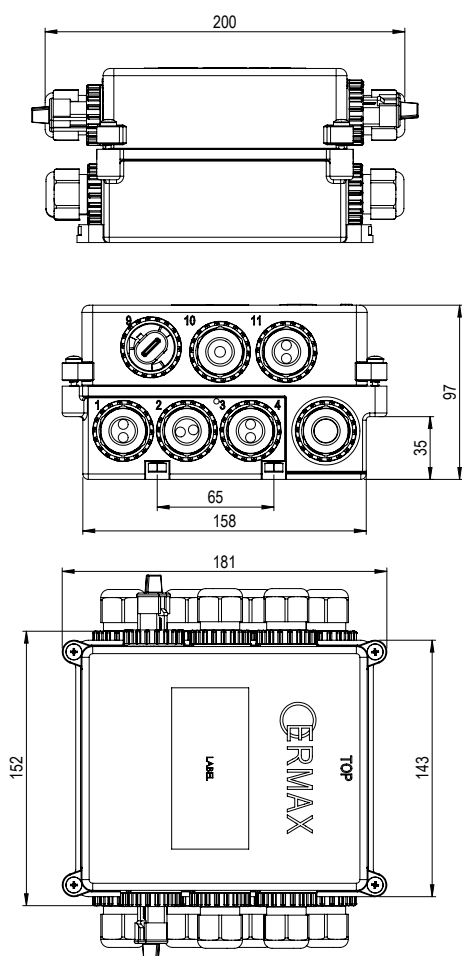
Cable gland: 7 x Ø5,5 mm x 2

2 x Ø6-4 mm

2 x Ø10-7 mm

099 869 751

92.0000.7605



Rear connection Junction box - with SIMAC built-in



Application/ Description

Article No.

Junction box with cable With SIMAC

Housing of black plastic

IP Rating: IP 67

Higher cover

Connection:

Inlet: 1x15 core Ermax bayonet socket with 1500 mm cable

1 x 2 poled Super Seal socket with L position

1 x 2 poled Super Seal socket with R position

1 x 2 poled Super Seal socket with stop light

1 x 2 poled Super Seal socket with reverse light

1 x 2 poled Super Seal socket with rear fog light

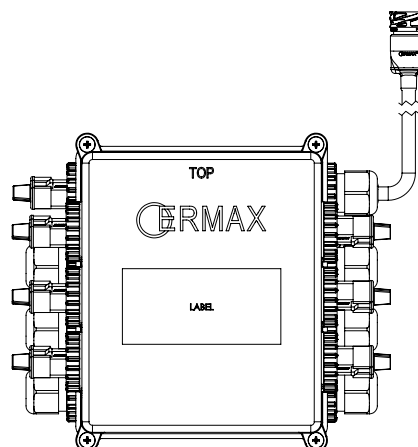
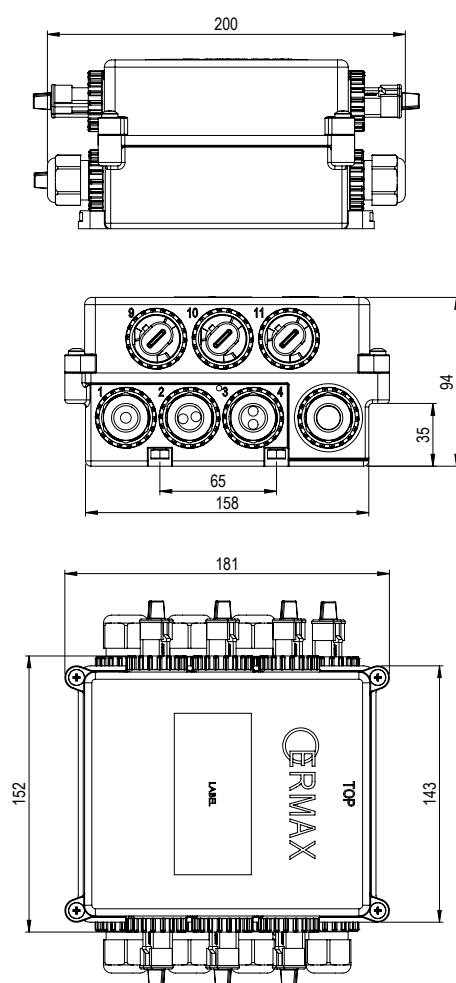
1 x 2 poled Super Seal socket for position / SIMAC, left

1 x 2 poled Super Seal socket for position / SIMAC, right

Cable gland: 4 x Ø5,5 mm x 2
2 x Ø6-4 mm

099 869 756

92.0000.7141

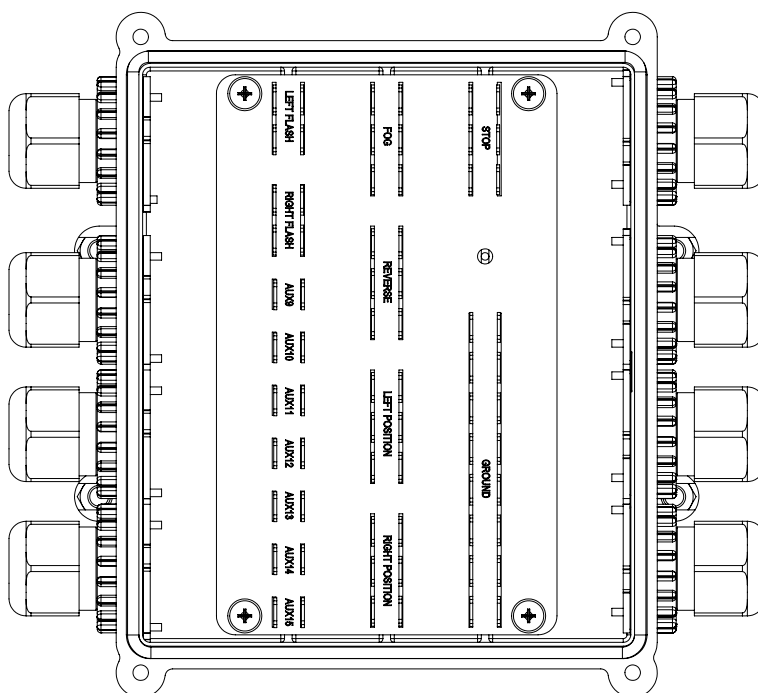


Spare parts Junction box



Junction box without cover and connection, 8 x connection possibilities, 158 x 143 mm	1	099 110 200 92.0000.6562
Cover for junction box, low version, 158 x 143 x 18 mm	2	099 110 201 92.0000.6563
Cover for junction box, high version, 158 x 143 x 45 mm	3	099 110 202 92.0000.6564
Seal for inlet-/outlet in junction box, Ø34 x Ø23 x 3 mm	4	099 110 203 92.0000.6565
Bayonet-ring for inlet / outlet	5	099 110 204 92.0000.6566
Cable gland M22/2,0	6	099 110 205 92.0000.6567
Nut for cable gland	7	099 110 206 92.0000.6568
Rubber blind for cable gland Ø13-11 mm	8	099 110 207 92.0000.6569
Rubber blind for cable gland, Ø11-7 mm	9	099 110 208 92.0000.6570
Rubber blind, for inlet / outlet - for cable Ø6-4 mm	10	099 110 209 92.0000.6571
Rubber blind for cable gland, Ø5,5 mm x 2	11	099 110 210 92.0000.6572
Super Seal socket with black and white (-) cable	12	099 110 211 92.0000.6573
7 poled AMP 1.5 socket	13	099 110 212 92.0000.6574
Heating cable (resistor) 24V with cable shoe - 5W. Length: 545 mm	14	093 865 125 92.0000.1466

Connection ISO 12098 Pin connection / Number of flat plugs 6,3 x 0,8 mm

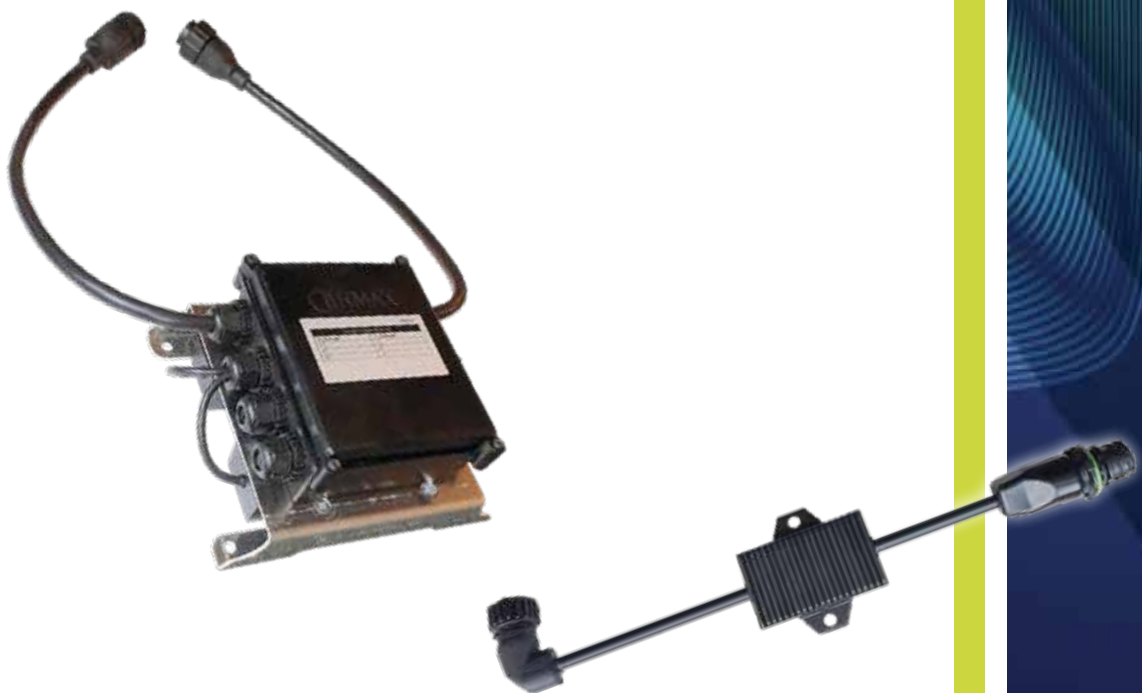


Description

Pcs

	1	Left direction indicator light	4 pcs
	2	Right direction indicator light	4 pcs
	3	Rear fog light	6 pcs
	4	Ground	16 pcs
	5	Left position	6 pcs
	6	Right position	6 pcs
	7	Stop light	6 pcs
	8	Reverse light	6 pcs
	9	Power supply, permanent positive	2 pcs
	10	Aux 1, brake-wear sensor	2 pcs
	11	Aux 2, stop control for trailers	2 pcs
	12	Aux 3, lift axle	2 pcs
	13	Ground for Pin 9-15 (ISO12098)	2 pcs
	14	CANH - Data communication	2 pcs
	15	CANL - Data communication	2 pcs

ELECTRONIC CONTROL INITS



Electronic control boxes - applications

Light failure control



Failure at an indicator must for vehicles with a permission for driving in public traffic be shown optically or acoustically. This regulation is valid for all EU countries (EU Regulation 48 Art. 6.55.8).

If there is a surveillance of the brake light at the pulling vehicle there must also be a failure indicator for the brake lights.

As a LED light has a very low consumption there might be problems with the failure control at certain trucks. The low consumption is estimated as failure of the light control and shown as a failure.

Using the ERMAX LED control box the LED tail lights are tested and a resistance for indicator and stop function is mounted.

Should the consumption of the LED fall to below 10 mA (LED light or connections are defect) the resistance is disconnected, and the failure will be shown at the dashbord in the driver's cab according to the regulation.

Disclaimers:

A failure control device must not have any influence on the vehicle mileage log book of the trucks, and therefore Ermax cannot grant an overall guarantee that the application will work perfectly at all trucks.

Intelligent LED Control Units for monitoring and failure control of LED tail lights

No worries – suitable for all types of vehicles regardless of the truck

ERMAX LED Control units Generation 2.0 – Compatible with all truck brands*

The new ERMAX LED control units are compatible with the older monitoring technologies as well as with the new ISO13207 standard for failure control. This means, that all known vehicles and trucks regardless of production year* can communicate with the new ERMAX LED failure control units – generation 2.0 – no matter which truck a trailer is combined with.



LED Control unit 24V, universal
- suitable for all tail lights functions



LED Control unit 24V,
for both directions indicator - and stop light functions



LED Control unit 24V,
for both directions indicator- and stop light functions
- are integrated in the tail lights TM11 and TM12



LED Control box 24V,
for direction indicator- and stop light functions as well as
junction box (also version with integrated SIMAC®)

Highlights

* Valid for all known brands within EU as of 12/2020

- ERMAX LED Control units are compatible with all brands and building-year of trucks produced in EU*, meaning, that a trailer with ERMAX LED failure control can be combined with all towing vehicles, old as new
- Use a technology which is NOT limited to ISO13207 and therefore suitable for all vehicles*
- Easy and flexible built-in of the small compact variants due to the long cables, meaning that they can either be mounted directly behind the tail lights or mounted further ahead at the front under the vehicle
- The combined control unit for main cable installation combines both monitoring of the light functions, SIMAC® and at the same time function as a junction box
- The new Generation 2.0 LED failure control technology is already used as an integrated part of the ERMAX tail lights TM10, TM11 og TM12
- Approvals: ADR, EMC-R10



TM10 LED tail light



TM11 LED tail light

TECHNICAL SPECIFICATIONS

LED Control Unit 24V Generation 2.0 - Failure control LED tail lights

ERMAX LED Control Units Generation 2.0 - Applications

Ermax LED control units Generation 2.0 technology is already used today in several variants in order to solve the known problems concerning light monitoring.

Generation 2.0 LED control units monitor the direction indicator light function and / or the stop light function, and ensure full failure control, when LED tail lights are used at the trailer. In case of light failure, the light monitoring system at the truck is activated according to the regulation ECE 48.

The small compact LED control unit with AMP plug connections is easily mounted in front of the tail light in the right or left side. One variant monitors the direction indicator light function (098 298 146) and can be combined with the variant which monitors the stop light function (098 298 148).

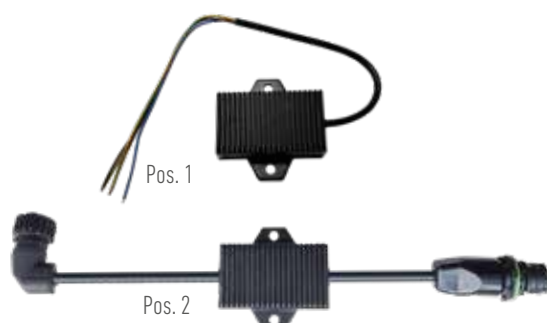
If no AMP plugs are used, a universal variant with Open-end can be used for all tail light functions (one unit per function – 098 298 144).

By a complete ERMAX lighting installation the easiest variant to use, is the combined control box, which monitors both direction indicator- and stop-light functions (098 298 160). This is also available in a variant with SIMAC® (control of flashing side marker lights) (098 298 170) and both variants function also as a junction box, where all tail light function can be reached.



Failure control function	Inlet	Outlet	Dimension (Control unit)	Distance mounting holes	Pos.	Article No.
Universal - for all tail light functions (one unit per function)	--	400 mm cable with Open-end	120 x 52 x 30 mm	70 mm / Ø8,5 mm	1	098 298 144
Indicator light	850 mm cable with 7-poled AMP socket	600 mm cable with 7-poled AMP plug	120 x 52 x 30 mm	70 mm / Ø8,5 mm	2	098 298 146
Stop light	1.800 mm cable with 7-poled AMP socket	1.500 mm cable with 7-poled AMP plug	120 x 52 x 30 mm	70 mm / Ø8,5 mm	2	098 298 148
Indicator- and stop light (one unit per function)	Mounting at the back of the housing of TM11 og TM12 Connection with 3 spring-loaded contact pins		118 x 38 x 25 mm	-	3	098 298 149
Indicator- and stop light and also junction box*	500 mm cable with 15-poled Ermax bayonet socket	500 mm cable with 15-poled Ermax bayonet plug	285 x 270 x 170 mm	250 x 240 mm / 4 x Ø8,5mm	4	098 298 160
Indicator- and stoplight, SIMAC and junction box*	500 mm cable with 15-poled Ermax bayonet socket	500 mm cable with 15-poled Ermax bayonet plug	285 x 270 x 170 mm	250 x 240 mm / 4 x Ø8,5mm	4	098 298 170

* The LED Control box 098 298 160 and 098 298 170 functions as junction box and give the possibility to reach outlets of all ISO12098 light connections.

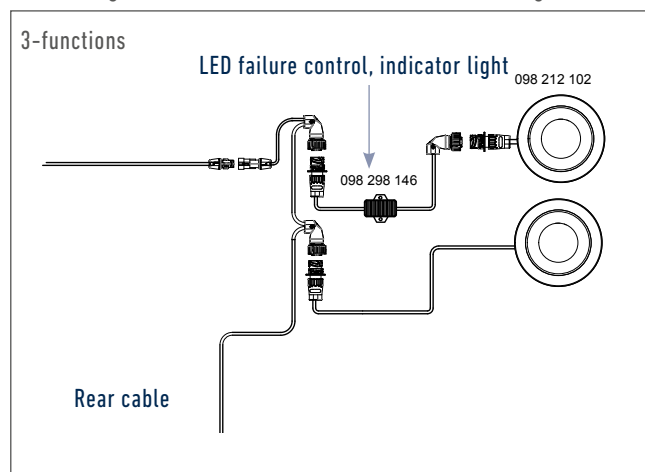


TECHNICAL SPECIFICATIONS

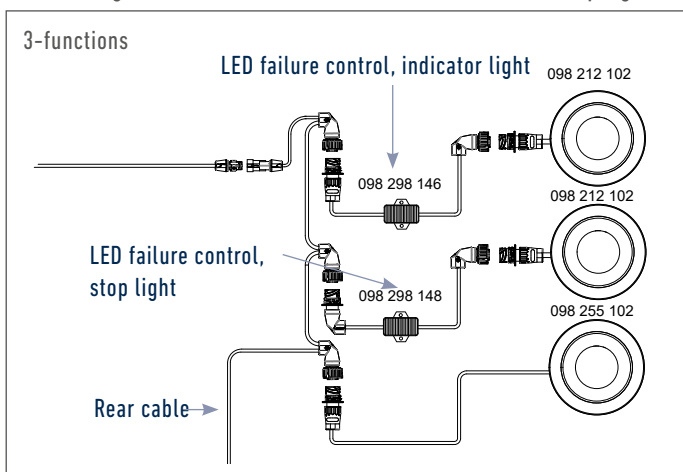
LED Control Unit 24V Generation 2.0 - Failure control LED tail lights

Examples of applications

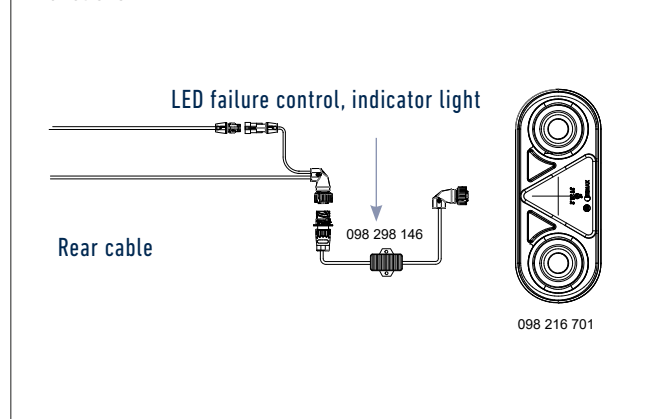
Ex: Configuration with failure control of indicator light



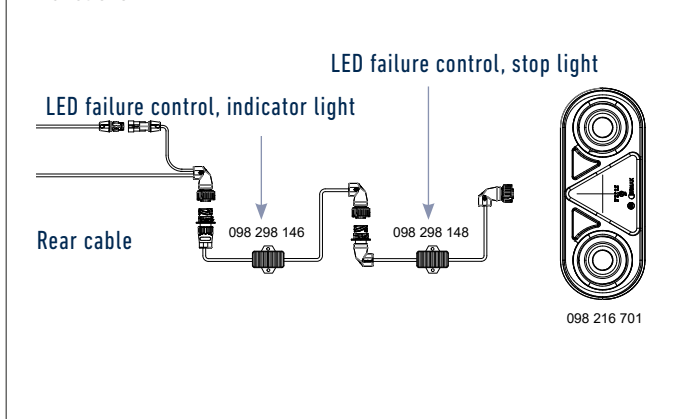
Ex: Configuration with failure control of indicator- & stop light



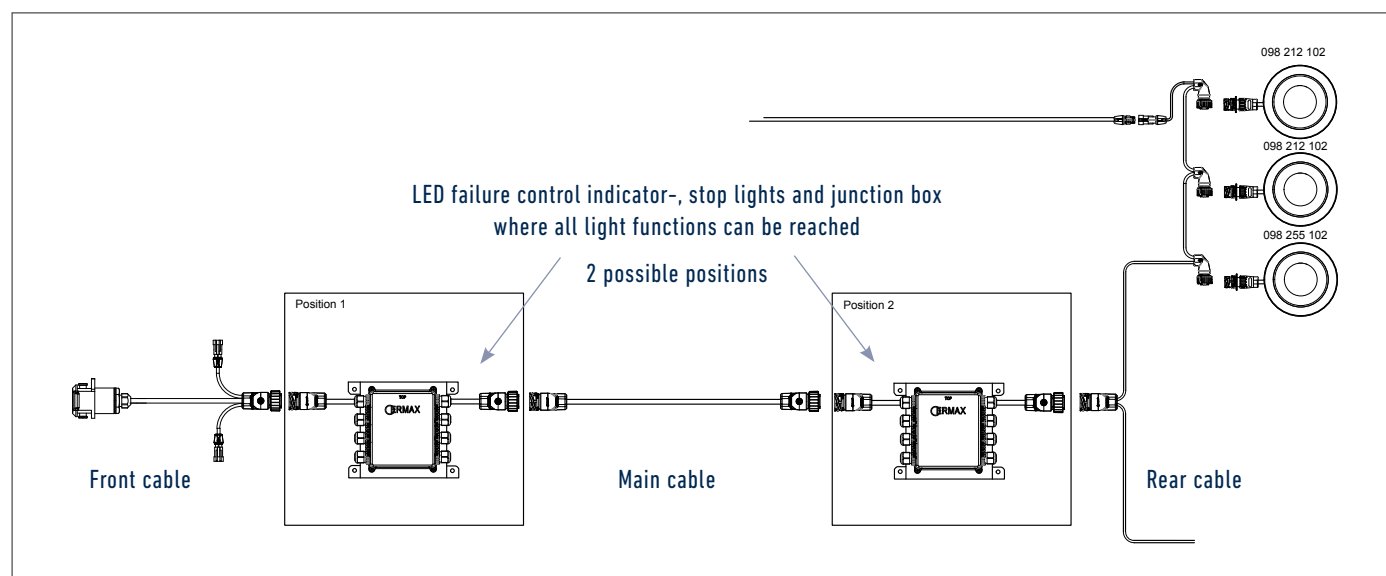
7-functions



7-functions



Ex: Configuration with failure control of indicator- & stop light - and junction box function

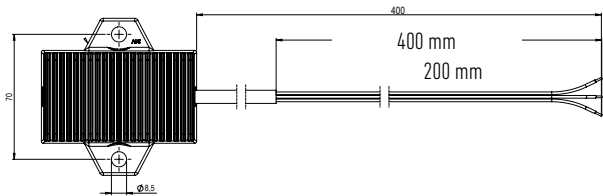


TECHNICAL SPECIFICATIONS

LED Control Unit 24V Generation 2.0 - Failure control LED tail lights

Drawings / Dimensions

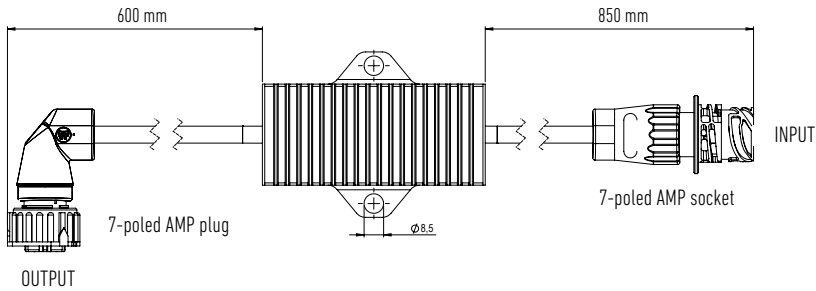
098 298 144



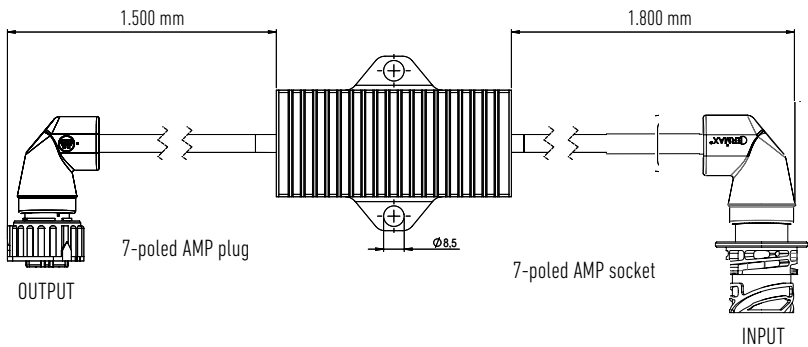
Contact assignment

Position	Colour	Function	Description
1	Brown	Ground	Minus
2	Blue	Input	Switch / Relay
3	Yellow - Green	Output	Tail light / light functions

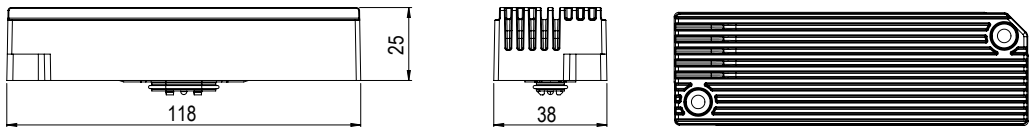
098 298 146



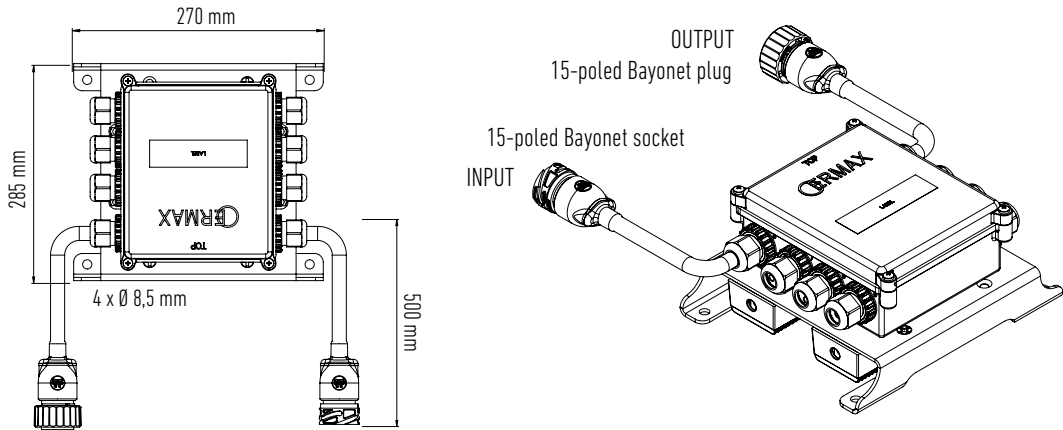
098 298 148



098 298 149



098 298 160 / 098 298 170



Application overview - Vehicle brands and models

Vehicle-information				Variant of ERMAX LED control unit, which is usable*	
Vehicle brand	Type	Model	ISO13207	LED Control unit Gen. 1.0	LED Control unit Gen. 2.0
DAF	All	-		✓	✓
Iveco	All	-		✓	✓
MAN	F2000	-2000		✓	✓
	L2000	-2000		✓	✓
	M2000	-2000		✓	✓
	TG-A	2000-2007		✓	✓
	TG-L	2005-2017		✓	✓
	TG-L	2017-	✓		✓
	TG-M	2005-2016		✓	✓
	TG-M	2016-	✓		✓
	TG-S	2007-2016		✓	✓
	TG-S	2016-	✓		✓
	TG-X	2007-2016		✓	✓
	TG-X	2016-	✓		✓
Mercedes	Actros	1995-2015		✓	✓
	Actros	2015-	✓		✓
	Antos	2012-2016		✓	✓
	Antos	2016-	✓		✓
	Atego	1998-2017		✓	✓
	Atego	2017-	✓		✓
	Arocs	2013-2016		✓	✓
	Arocs	2016-	✓		✓
	Axor	2002-2017		✓	✓
	Axor	2017	✓		✓
	SK	1989-1998		✓	✓
Renault	All	—		✓	✓
Scania	92, 112, 142			✓	✓
	93, 113, 123, 143			✓	✓
	94, 114, 124, 144, 164	1995-2005		✓	✓
	P, R, T Series	2004-2017		LED Control unit not necessary	
	P, R, T Series	2018-	✓		✓
	G-Series	2007-		LED Control unit not necessary	
Volvo	FH I	1993-2012		✓	✓
	FH II	2012-		LED Control unit not necessary	
	FL I	1986-1999		✓	✓
	FL II	1999-2013		✓	✓
	FL II	2013-		LED Control unit not necessary	
	FM I	1998-2001		✓	✓
	FM II	2001-2010		✓	✓
	FM II	2010-		LED Control unit not necessary	

*Documented in connection with Ermax tail lights

PLUGS & SOCKETS



Loose plugs



Plug type	Yellow Rubber grommet	Pol	Cable shoe	Red end Position-Rubber grommet	Pos.	Article No.
Super Seal plug	Ø 1,8 - 2,4 mm	2	Plug grommet 0,5 - 1,0 mm ²		1	099 110 019 92.0000.1686
Super Seal socket	Ø 1,8 - 2,4 mm	2	Plug 0,5 - 1,0 mm ²		2	099 110 018 92.0000.1685
Super Seal plug with blind seals	Ø 1,8 - 2,4 mm	2	10 pcs. pr. plastic bag		3	099 110 024 92.0000.9057
Super Seal plug incl. blanking plug	Ø 1,8 - 2,4 mm	3	Plug grommet 0,5 - 1,0 mm ²	✓	4	099 111 102 92.0000.1690
Super Seal socket incl. blanking plug	Ø 1,8 - 2,4 mm	3	Plug grommet 0,5 - 1,0 mm ²	✓	5	099 111 103 92.0000.1691
Super Seal plug	Ø 1,8 - 2,4 mm	4	Plug grommet 0,5 - 1,0 mm ²	✓	6	099 111 032 92.0000.7567
Super Seal socket	Ø 1,8 - 2,4 mm	4	Plug grommet 0,5 - 1,0 mm ²	✓	7	099 111 026 92.0000.7566

Accessories

Rubber grommet for 2 poled Super Seal plug	8	099 110 712 92.0000.1687
Rubber grommet for 3 poled Super Seal plug	9	099 110 713 92.0000.1688
	10	099 110 714 92.0000.1689
T-coupling for 2 poled Super seal plug (3 sockets)	11	099 111 415 92.0000.1692
Blanking plugs for 2 poled Super Seal socket - black plastic	12	099 110 028 92.0000.0004
Blanking plugs for 2 poled Super Seal plug - black plastic	13	099 110 029 92.0000.0023
Blanking plugs for 3 poled Super Seal plug - black plastic	14	099 110 039 92.0000.7987
Blanking plugs for 15 poled Bajonet socket		099 110 025 92.0000.8191

Loose plugs & blanking plugs



7 poled AMP 1.5 plug for cable with Ø 5,0-12 mm

Plug type	Pol	Rund Plug grommet	Blue* Rubber grommet	White Rubber grommet	Clear Position- Rubber grommet	Pos.	Article No.
AMP 1.5 socket Straight	4	1,0-2,5mm ²	Ø1,2-2,1 mm (Yellow)			1	099 110 468 92.0000.7746
AMP 1.5 socket Angled	4	0,5-1,0 mm ²	Ø1,2-2,1 mm (Grey)		✓	2	099 110 469 92.0000.7747
AMP 1.5 plug Straight	7	0,5 - 1,0 mm ² 1,0 - 2,5 mm ²	Ø 1,2 - 2,1 mm	Ø 2,2 - 3,0 mm	✓	3	099 111 481 92.0000.1791
AMP 1.5 plug angled	7	0,5 - 1,0 mm ² 1,0 - 2,5 mm ²	Ø 1,2 - 2,1 mm	Ø 2,2 - 3,0 mm	✓	4	099 111 485 92.0000.1792
AMP 1.5 socket Straight	7	0,5 - 1,0 mm ² 1,0 - 2,5 mm ²	Ø 1,2 - 2,1 mm	Ø 2,2 - 3,0 mm	✓	5	099 111 541 92.0000.6456

Accessories

Rubber grommet for 7- and 4-poled AMP plug/socket - with cable inlet Ø5,8 mm	6	099 110 715 92.0000.7691
Rubber grommet for 7- and 4-poled AMP plug/socket - With 2 x cable inlets Ø5,8 mm	7	099 110 716 92.0000.7692
Rubber grommet for 7- and 4-poled AMP plug/socket - With 2 x cable inlets - 1 x Ø5,8 mm / 1 x 5,5x3,3 mm for side cable	8	099 110 717 92.0000.7693
Blanking plugs for 7 poled AMP-socket Black plastic	9	099 110 027 92.0000.0003
Blanking plugs for 7 poled AMP plug with bayonet gland Black plastic	10	099 110 026 92.0000.6201
Blanking plugs for 15 pole bayonet socket	11	099 110 025 92.0000.8191

7 poled plugs & sockets ISO 1185 N



Pos. 1



Pos. 2



Pos. 3



Pos. 4



Pos. 5

ISO Norm	Plug type	Pol	Material	Flat plug connection	Cable outlet	Pos.	Article No.
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1185	Socket	7	Plastic-housing with Alu-cover	6,3 x 0,8 mm	Rubber seal for cable Ø: 1 x 5,6-9,8 mm, End open 1 x 5,6-9,8 mm, End closed 1 x 5,6 mm, End closed	1	090 257 127 92.0000.6174
1185	Socket	7	Plastic-housing with Alu-cover	Dual Flat plug 6,3 x 0,8 mm	Rubber seal for cable Ø: 1 x 5,6-9,8 mm, End open 1 x 5,6-9,8 mm, End closed 1 x 5,6 mm, End closed	1	090 257 130 92.0000.7869
1185	Socket	7	Aluminum	6,3 x 0,8 mm	Rubber seal for cable Ø 9,5-12,5	2	090 257 134 92.0000.6175
1185	Plug	7	Plastic	6,3 x 0,8 mm	Rubber grommet for cable Ø 7 mm	3	090 257 721 92.0000.6178
1185	Plug	7	Aluminum	6,3 x 0,8 mm	Gland and rubber blind	4	090 257 716 92.0000.6176
1185	Plug	7	Aluminum	Schraub Connection	Gland and rubber blind	5	090 257 715 92.0000.7321

7 poled plugs & sockets ISO 3731 S



ISO Norm	Plug type	Pol	Material	Flat plug connection	Cable outlet	Pos.	Article No.
3731	Socket	7	Plastic-housing with Alu-cover	6,3 x 0,8 mm	Rubber seal for cable Ø: 1 x 5,6-9,8 mm, End open 1 x 5,6-9,8 mm, End closed 1 x 5,6 mm, End closed	1	090 257 123 92.0000.6173
3731	Socket	7	Plastic-housing with Alu-cover	Dual Flat plug 6,3 x 0,8 mm	Rubber seal for cable Ø: 1 x 5,6-9,8 mm, End open 1 x 5,6-9,8 mm, End closed 1 x 5,6 mm, End closed	1	090 257 131 92.0000.7870
3731	Socket	7	Aluminum	6,3 x 0,8 mm	Rubber seal for cable Ø 9,5-12,5	2	090 257 118 92.0000.7322
3731	Plug	7	Plastic	6,3 x 0,8 mm	Rubber grommet for cable Ø7 mm	3	090 257 725 92.0000.6179
3731	Plug	7	Aluminum	6,3 x 0,8 mm	Gland and rubber blind	4	090 257 719 92.0000.6177
3731	Plug	7	Aluminum	Schraub Connection	Gland and rubber blind	5	090 257 718 92.0000.7322

7 poled plugs & sockets ISO 1724



ISO Norm	Plug type	Pol	Material	Connection	Operation voltage	Consumption	Rubber cover	Pos	Article No.
1724	socket	7	Plastic	Screw	12V	20A		1	090 147 328 <i>92.0000.7176</i>
1724	socket	7	Plastic	Flat plug	12V	20A		2	090 147 329 <i>92.0000.7800</i>
1724	Plug	7	Plastic	Screw	12V	20A	✓	4	090 147 727 <i>92.0000.7802</i>
1724	Plug	7	Plastic	Screw	12V	20A		5	090 147 716* <i>92.0000.7814</i>
1724	Plug	7	Plastic	Screw	12V	20A	✓	6	090 147 717 <i>92.0000.7801</i>

Spare parts

Flat flange gasket for socket 090 147 328/329	090 147 912
Socket holder	090 147 939
Holder for plug, suitable for 090 147 727	090 147 935
* 090 147 716 – with cable gland + rubber grommet for one or two cables	

15 poled plugs & sockets ISO 12098



Pos. 1



Pos. 2



Pos. 3



Pos. 4



Pos. 5



Pos. 6



Pos. 7



ISO Norm	Plug type	Pol	Material	Cable gland	Crimp Contact	Pos.	Article No.
12098	socket	15	Plastic	For cable Ø 12,0-18,0 mm	3 x 2,5 mm ² 12 x 1,0 - 1,5 mm ²	1	090 265 404 92.0000.6180
12098	socket	15	Plastic	For cable Ø 12,0-18,0 mm	3 x 2,5 mm ² 12 x 1,0 - 1,5 mm ²	2	090 265 405 92.0000.6181
12098	Plug	15	Plastic	For cable Ø 12,0-18,0 mm	3 x 2,5 mm ² 12 x 1,0 - 1,5 mm ²	3	090 265 606 92.0000.6182
12098	socket	15	Plastic	For cable Ø 7,0-12,0 mm	Screw-connection	1	090 265 407 92.0000.7371
12098	Plug	15	Plastic	For cable Ø 12,0-18,0 + 7,0-12,0 mm	Screw-connection	3	090 265 608 92.0000.7372

Accessories / Spare parts

PG cable gland with 3 outputs - for plug and socket ISO12098 and ISO7638 with rubber grommet for 3 cable: 1 x Ø7,8mm - 1 x Ø10,0mm - 1 x Ø12,7mm	4	090 265 000
Contact (Male) for socket , crimping. 1,0 mm ² - 1,5 mm ² - ISO 4091 / 7638/ 12098	5	090 190 181 92.0000.9192
Contact (Male) for socket, crimping 2,5 mm ² - ISO 4091 / 7638/ 12098	5	090 190 182 92.0000.9193
Contact (Male) for socket, crimping 4,0 mm ² - ISO 4091 / 7638/ 12098	5	090 190 184 92.0000.9194
Contact (Male) for socket, crimping 6,0 mm ² - ISO 4091 / 7638/ 12098		090 190 186 92.0000.9195
Contact for plug (female), crimping. 1,0 mm ² - 1,5 mm ² - ISO 4091 / 7638/ 12098	6	090 190 191 92.0000.9196
Contact for plug (female), crimping. 2,5 mm ² - ISO 4091 / 7638/ 12098	6	090 190 192 92.0000.9197
Contact for plug (female), crimping. 4,0 mm ² - ISO 4091 / 7638/ 12098	6	090 190 194 92.0000.9198
Contact for plug (female), crimping. 6,0 mm ² - ISO 4091 / 7638/ 12098		090 190 196 92.0000.9199
Mounting angle for ABS socket		090 198 918 92.0000.8153

14 poled plugs & sockets VBG



Pos. 1



Pos. 2



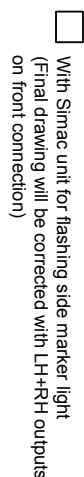
Pos. 3

SAL	Plug type	Pol	Material	Cable gland	Crimp Contact	Pos.	Article No.
--	Socket	14	Plastic	For cable Ø 10,5-15,0 mm	Pin 1 & 2 - 9,5 mm 2 5A Einzelpin - 6,5 mm 15 A Doppelpin - 6,5 mm 15 A	1	090 166 290 92.0000.6180
--	Plug	14	Plastic	For cable Ø 10,5-15,0 mm	Pin 1 & 2 - 9,5 mm 2 5A Einzelpin - 6,5 mm 15 A Doppelpin - 6,5 mm 15 A	2	090 166 360 92.0000.6653
SAL	Plug	14	Plastic	For cable Ø 10,5-15,0 mm	Pin 1 & 2 - 9,5 mm 2 5A Einzelpin - 6,5 mm 15 A Doppelpin - 6,5 mm 15 A	3	090 166 361 92.0000.6654

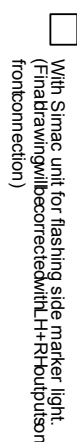
CONFIGURATION

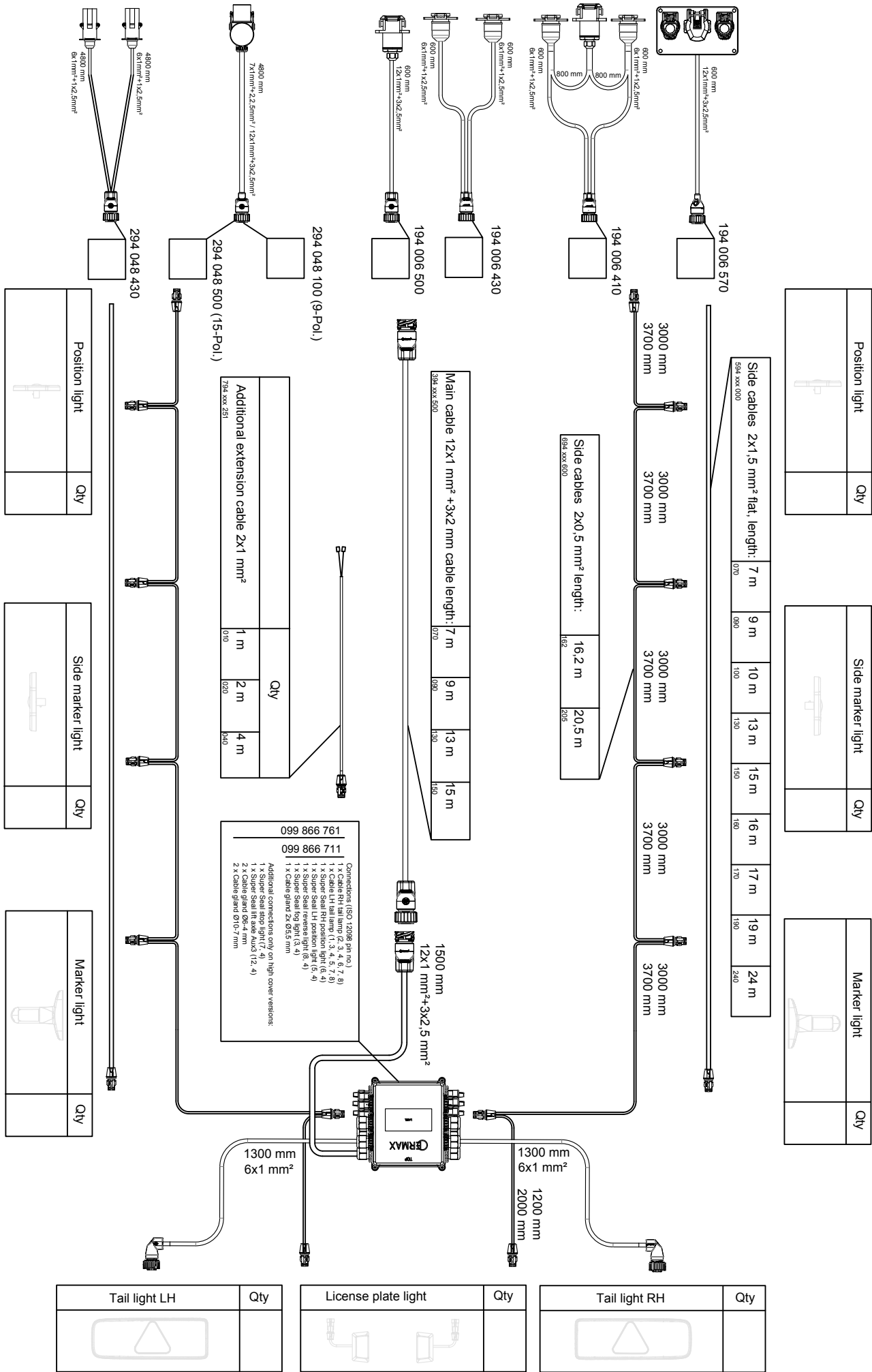
Complete lighting systems

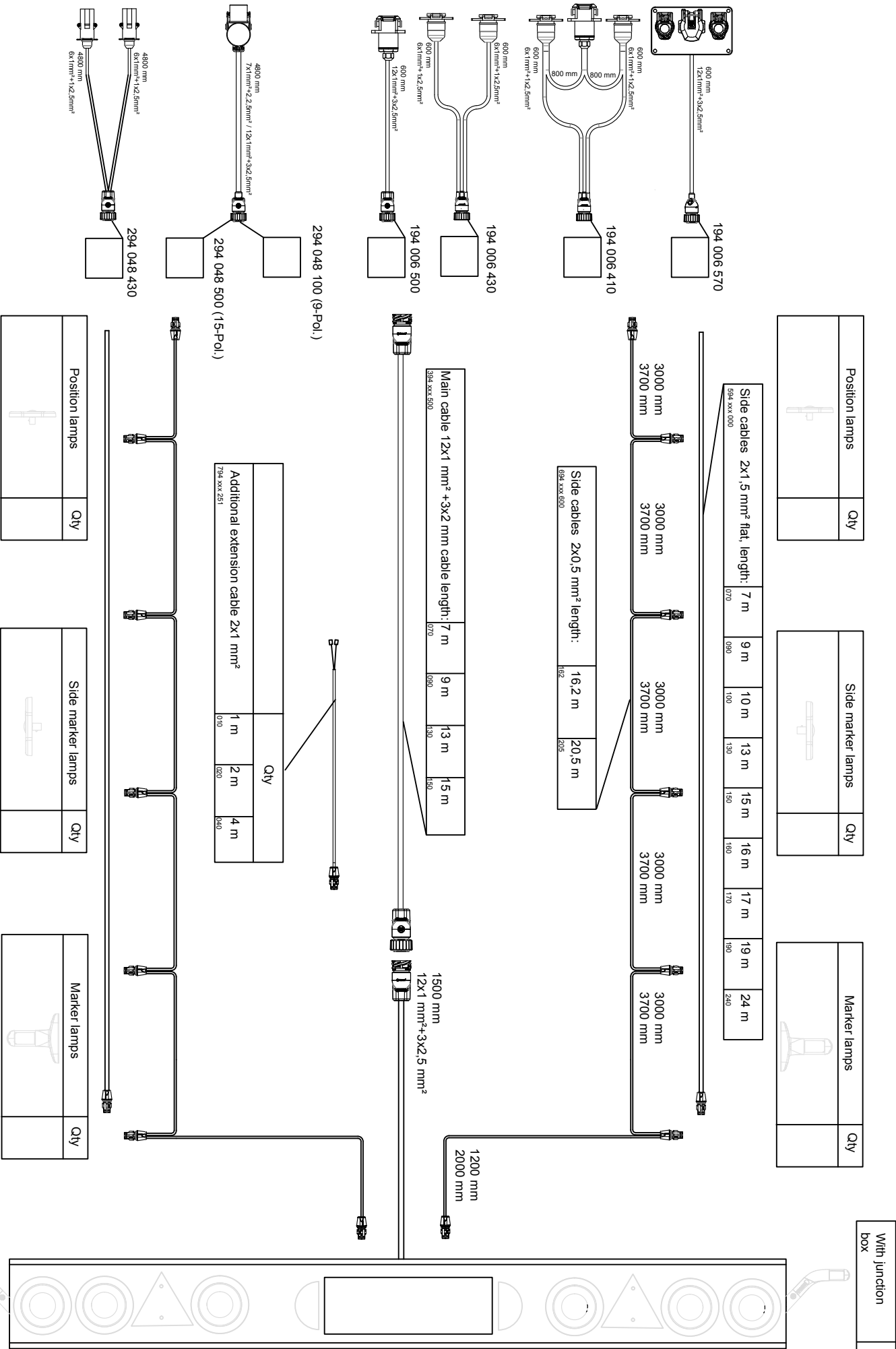




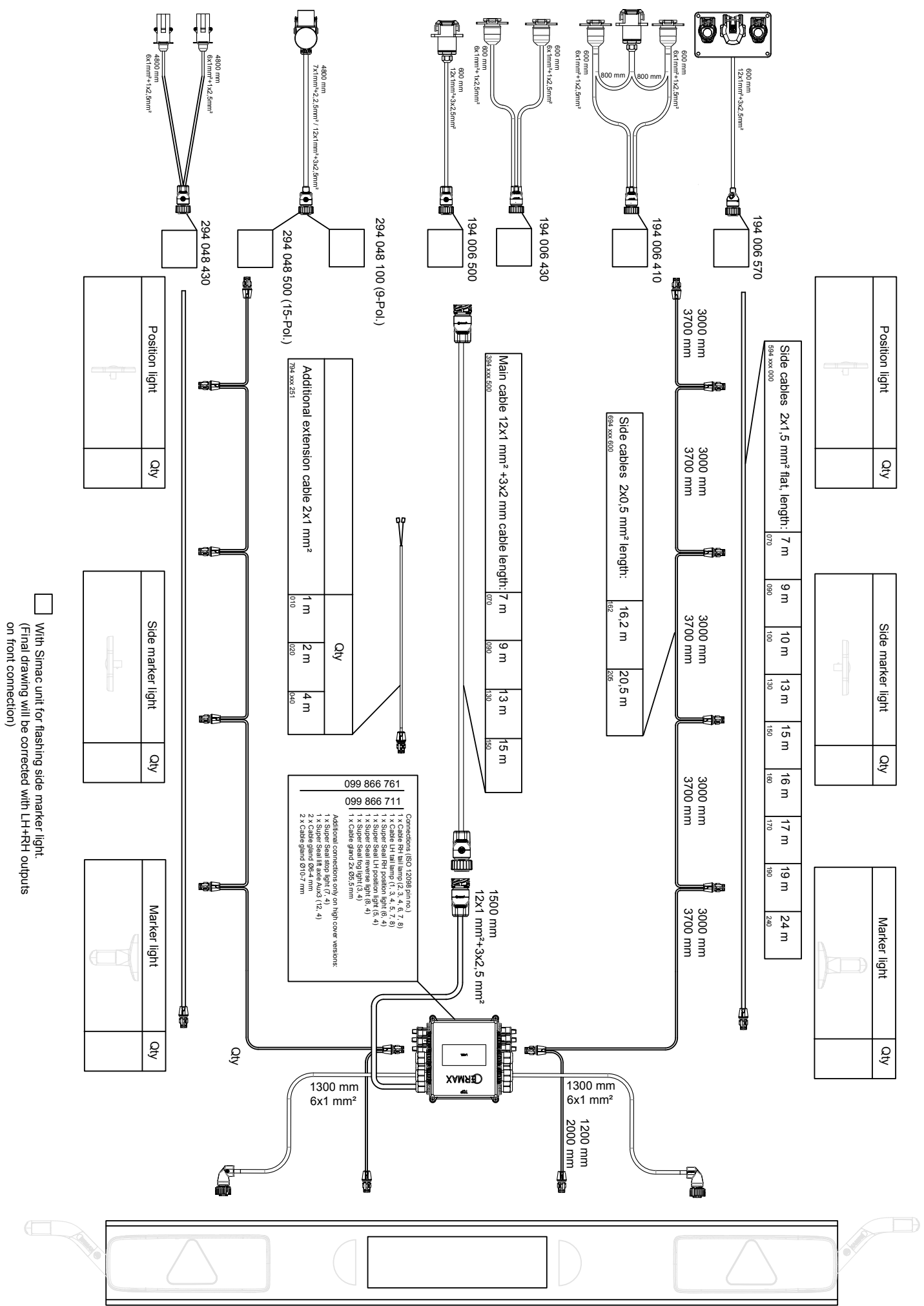








☐ With Simac unit for flashing side marker lamps.
(Final drawing will be corrected with LH+RH outputs on front connection)



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