



LED CONTROL UNITS - GENERATION 2

Failure control LED tail lights

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 stoplight 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 functions can be reached.

Variants and functions



| 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.

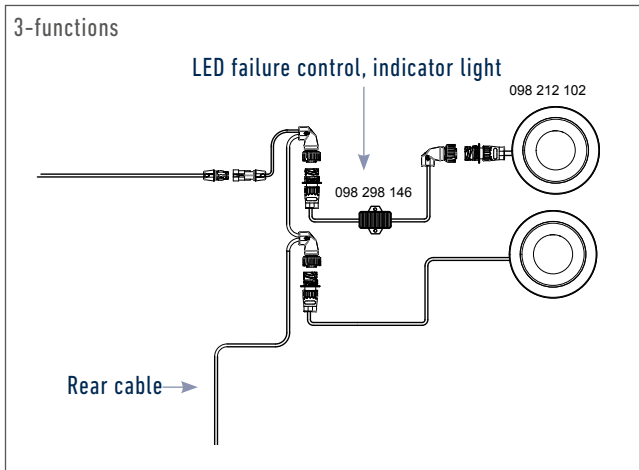


TECHNICAL SPECIFICATIONS

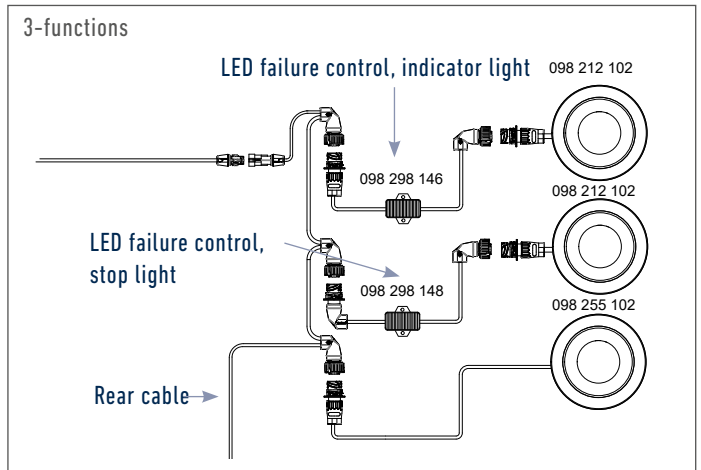
LED Control Unit 24V Generation 2.0 - Failure control LED tail lights

Examples of applications

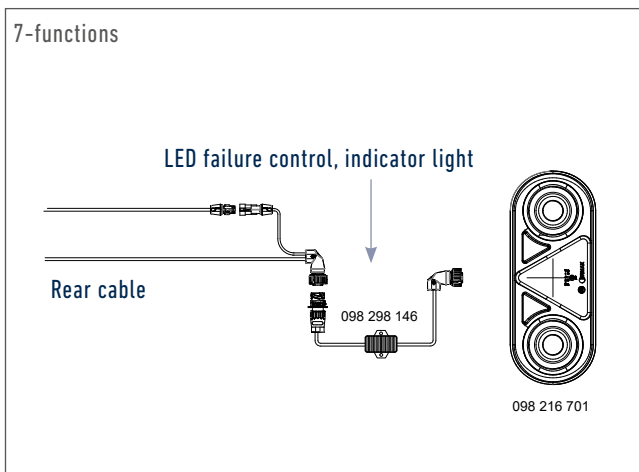
Ex: Configuration with failure control of indicator light



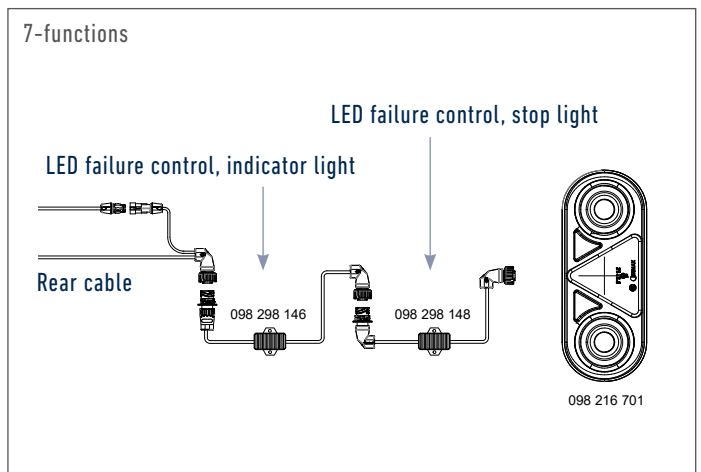
Ex: Configuration with failure control of indicator- & stop light



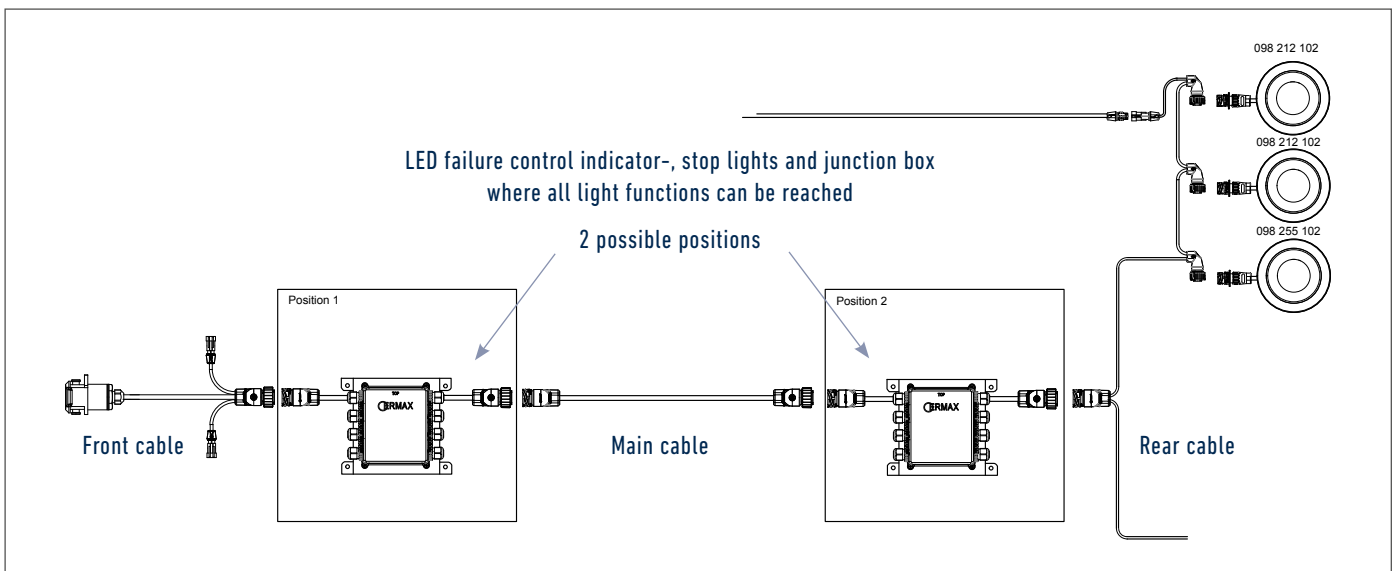
7-functions



7-functions



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

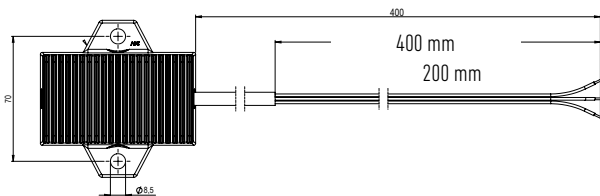


TECHNICAL SPECIFICATIONS

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Drawings / Dimensions

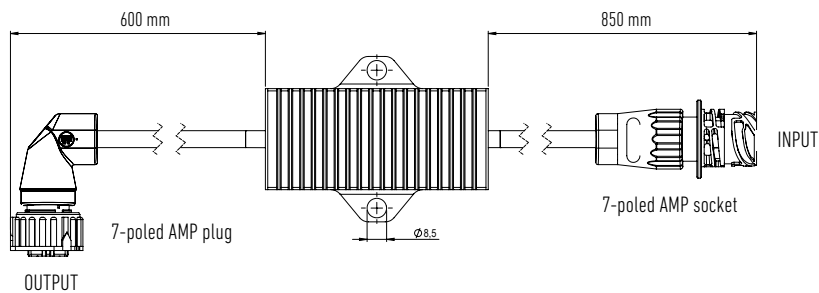
098 298 144



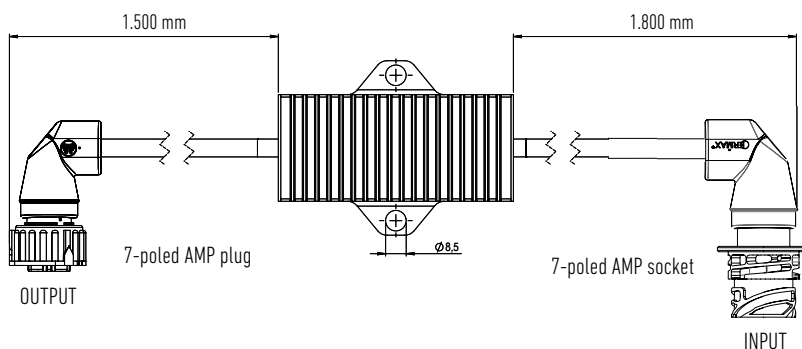
Contact assignment

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

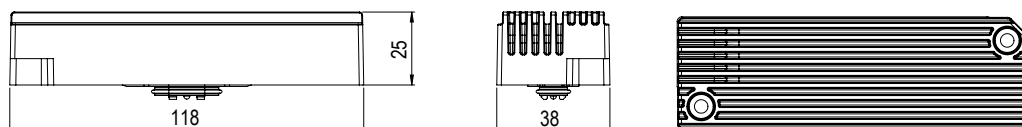
098 298 146



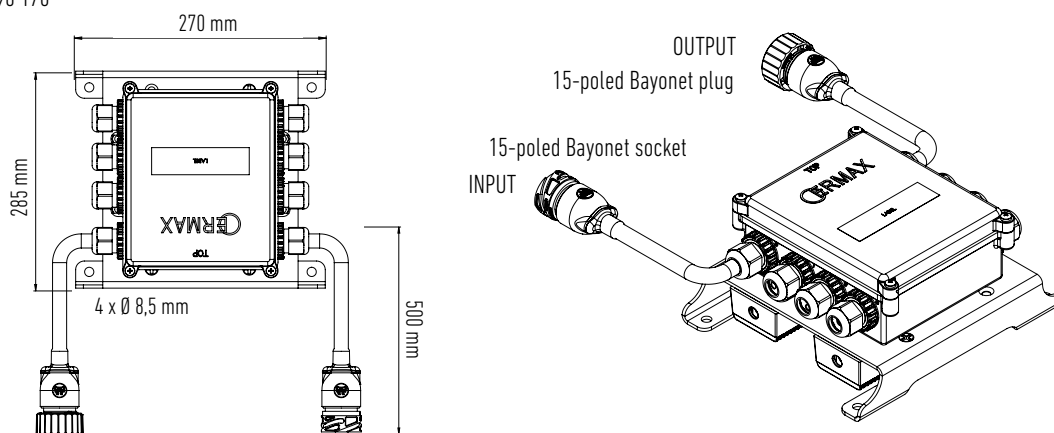
098 298 148



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

Brands of the BPW Group:



ERMAX®

HBN-Teknik A/S

HESTAL®

idem
telematics

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ERMAX®

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