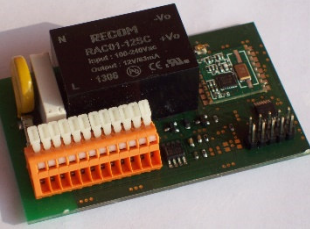
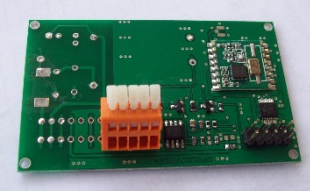

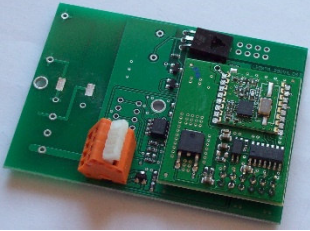





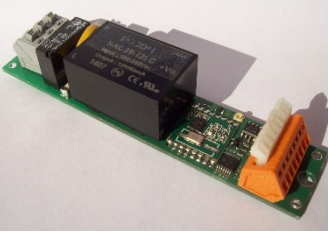
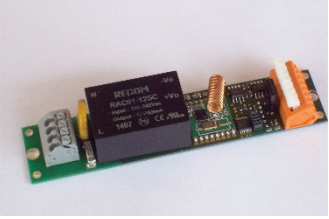

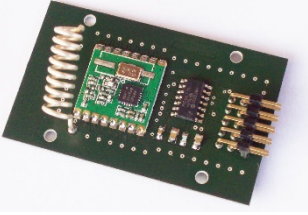



Products	Description
<p>PWM supply voltage 100-240Volt ac</p>  <p>order number: TRM-PWM 01.1</p>	<p>TRM – TRILL RADIO MODULE For installation in LED luminaires</p> <p>Radio transceiver with radio mesh-net. Own radio frequency. Secured transmission, can not be manipulated,, redundant transmission. Full function even when partial failures. Separate channels for control and feedback. Hardware and proprietary protocol. 32-bit SUB-IP addressing. Not affected by several concurrent installations. EU-wide approval.</p> <p><u>Outputs:</u> PWM, Pulse-Width Modulation, level 0V/10V Relay 5A/250Vac (nur bei PWM und Netzteil on board)</p> <p><u>Feedback to TCU:</u> Temperature power supply, temperature LED board, operating status, LED current, motion sensor</p> <p><u>Antenna:</u> On board helical, 1/4 lambda or special antenna. Size: 74mm x 45mm x 23mm, other sizes possible</p>
<p>PWM supply voltage 12Vdc</p>  <p>order number: TRM-PWM 02.1</p>	<p>Like TRM PWM 01.1, but different:</p> <p>supply voltage 12Vdc, 30mA no relay, no 230V supply Size: 74mm x 45mm x 23mm other sizes are possible</p>
<p>DALI supply voltage 100-240Volt ac</p>  <p>order number: TRM-DALI 01.1</p>	<p>Like TRM-PWM 01.1, but different:</p> <p>DALI: DALI-broad-cast, DALI LED-current monitoring</p> <p>supply voltage 100-240Volt ac Size: 73mm x 54mm 23 mm other sizes are possible</p>
<p>DALI supply voltage 12Vdc</p>  <p>order number: TRM-DALI 02.1</p>	<p>Like TRM- DALI 01.1, but different:</p> <p>DALI: DALI broad-cast, DALI LED-current monitoring</p> <p>Supply voltage: 12Vdc, 50mA Size: 73mm x 54mm x 15 mm other sizes possible</p>

<p>TCU-USB 300</p>  <p>order number: TCU-USB 01.1</p>	<p>TCU – TRILL CONTROL UNIT 300 With parameter-buffer for 300 LED-luminaires</p> <p>Controls the brightness scenarios of any number of LED lights. Storage of feedback data of LED lights. Is connected via USB cable to the computer and with the WINDOWS software TRILLStarter. Internal memory and time module. Stand-alone operation without computer powered by a USB power adapter. Antenna; internal. Fixing with screws or cable ties. Size, weight: 100mm x 68mm x 35mm, 90g</p>
<p>PWM supply voltage 100-240Volt ac</p>  <p>order number: TRM-PWM 12.1</p>	<p>TRM – TRILL RADIO MODULE Like TRM-PWM 01.1 but different:</p> <p>Housing: Plastic Antenna: External wired or plugged Size: 110mm x 29mm x 23mm Weight: 90g</p>
<p>DALI supply voltage 100-240Volt ac</p>  <p>order number: TRM-DALI 22.1</p>	<p>TRM – TRILL RADIO MODULE Like TRM-DALI 01.1 but different:</p> <p>Housing: Plastic Antenna: External wired or plugged Size: 110mm x 29mm x 23mm Weight: 90g</p>
<p>PWM supply voltage 100-240Volt ac</p>  <p>order number: TRM-PWM 32.1</p>	<p>TRM – TRILL RADIO MODULE Like TRM-PWM 01.1 but different:</p> <p>Output: PWM, Pulse-Width Modulation, level 0V/10V Relay to switch off LED-driver at 0% brightness</p> <p>Housing: ABS Plastic Antenna: External wired or on board helical Size: 130mm x 40mm x 25mm Weight: 80g</p>
<p>DALI supply voltage 100-240Volt ac</p>  <p>order number: TRM-DALI 42.1</p>	<p>TRM – TRILL RADIO MODULE Like TRM-DALI 01.1 but different:</p> <p>Output: DALI</p> <p>Housing: ABS Plastic Antenna: External wired or on board helical Size: 130mm x 40mm x 25mm Weight: 80g</p>

<p>PWM supply voltage 100-240Volt ac</p>  <p>order number: TRM-PWM 11.2</p>	<p>TRM – TRILL RADIO MODULE Like TRM-PWM 01.1 but different:</p> <p>Housing: no Antenna: External wired or plugged Size: 110mm x 29mm x 23mm Weight: 50g</p>
<p>DALI supply voltage 100-240Volt ac</p>  <p>order number: TRM-DALI 21.3</p>	<p>TRM – TRILL RADIO MODULE Like TRM-DALI 01.1 but different:</p> <p>Housing: no Antenna: External wired or plugged Size: 110mm x 29mm x 23mm Weight: 50g</p>
<p>TRM sealed</p> 	<p>TRM – TRILL RADIO MODULE</p> <p>Sealed or potted up to IP68</p>
<p>TRILL special</p> 	<p>TRM TRILL RADIO MODULE, special boards</p> <ul style="list-style-type: none"> - Software adapted to customer hardware - PCB-board equipped with custom specific interfaces
<p>TRILL BRIGHTNESS sensor</p>  <p>Order number: TRILL SENS 01.3</p>	<p>TRILL – BRIGHTNESS day/night-sensor and BRIGHTNESS control sensor</p> <p>day/night-sensor:</p> <p>Turns on all LED-luminaires at sunset Turns off all LED-luminaires at sunrise Switching threshold 100 LUX Sending on/off signal direct to each LED-luminaire TCU is not used</p> <p>or – selectable: <u>brightness control via TCU</u></p>
<p>TRILL RADAR Radar sensor</p>	<p>TRILL – RADAR</p> <p>RADAR-Motion sensor sending a switch on/off signal direct to each LED-Luminaire or sending to the the TCU</p>



RADAR sensor inside

Order number:
TRILL RADAR 01.2

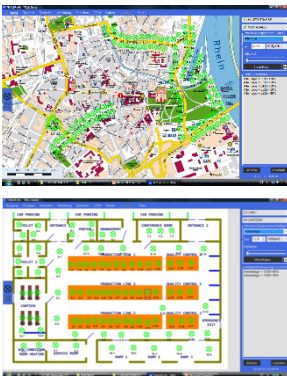
**TRILL PIR
PIR sensor**



TRILL – PIR

PIR-Motion sensor sending a switch on/off signal direct to each LED-Luminaire or sending to the the TCU

Order number:
TRILL PIR 01.2



TRILL Starter

Computer software to generate brightness scenarios for street luminaires and architectural lighting inside and outside. The LED lights are separated into groups. The brightness scenarios from each group generated and transmitted to the TCU.

Thereafter stand-alone operation with TCU and without a computer

With special functions and GSM/Long Range Radio

order number:
TRM-Starter

4-key-remote type II



4-key remote control unit type II

Battery CR2032 replaceable. Operation period 5 years

- 0 = off
- 1 = last brightness
- = minus 10% brightness
- + = plus 10% brightness

Addresses selectable by key-board.

Order number:
4-KEY 01.2

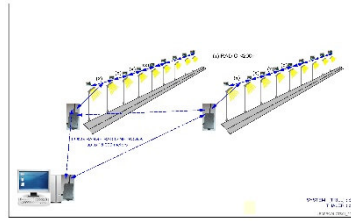
Size: 85mm x 54mm x 10mm (credit card size)
Weight: 35g

Long Range Radio 20km
Order number
T868ULR500mW



Order number:
LONG RANGE 20-SER
LONG RANGE 20-USB

Radio Link TCU<>COMPUTER. No operating costs!
To connect computer and one or more TCU.



Approval:
EN300-220V2010
Size:
135mm x 75mm x 35mm
Wight:
155g
Operating temperature:
-30..+70 GradC

Long Range Radio 20km

GSM-MODEM



Order number
GSM-MODEM 1

GSM-MODEM for SIM-card, TCU serial is included
incl. server connection software
incl. TCU serial
incl. power supplies
incl. GSM-antenna

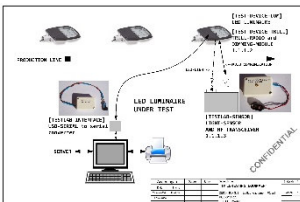
W-LAN module

W-LAN-module as standard hot-spot using
LED- switching on/off by TRILL
W-LAN hot spot for general purpose
As a module for all kind of LED-luminaires



License for TRILL © for own production

The controller chip with programmed TRILL © Wireless Mesh Net software will be supplied. Lay-out and circuits are also supplied.



Automatic testing station for the production of
LED lights with integrated TRILL © modules.

Fully automatic test with log backup for up to 500 LED lights
per 8 hours. User's Manual on request.
Testing of brightness, power, radio transmitter -receiver,
brightness control, LED Power Supply

Other quantities and versions on request.

TRILL and DALI are registered trademarks of the owners

Note: The technical data and prices are approximate information and may change at any time.

The delivery and payment are to be requested.

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www.thaler-ag.com