

Datasheet Smart signaling light



► Introduction

The famous red signaling light for remote sewer control stations is getting smart. Inter Act introduces LoRa functionality.

Along with the traditional visual red signaling light, a digital alarm message is sent directly to TeleControlNet.

This direct replacement product for the conventional red signaling light is called the smart signaling light.



► Main functions

The smart signaling light monitors digital control signals from the pump, high water level switch and the pump thermal protection. It transmits changes on any of these signals immediately to TeleControlNet using the LoRa radio. Messages are also sent in the event of power supply loss and on a regular idle interval. Each message also contains information about pump cycles and runtime. The smart signaling light maintains the traditional red light function on thermal fault condition.

This smart signaling light device is also suitable as a generic real time LoRa 12 VDC or 24 VAC control signal "spy" with three digital inputs, one digital output and power supply monitoring and alarming.

► Main features

- Wide operating voltage, suitable for 12VDC and 24VAC applications.
- Three external digital inputs, one connected to the red signaling light.
- Traditional red signaling light on e.g. thermal fault.
- Real time information on pump, high level switch, thermal protection and power status.
- Real time information on cumulative pump cycles and runtime.
- Combined alarm: thermal fault + high level level
- Red signaling light function can remotely be overruled (input inverted or permanently on/off).
- One external digital relay output (e.g. for remotely resetting a thermal fault).
- One internal power supply monitoring input.
- The external inputs and output function can be inverted.

► Specifications

Electrical

- Operating power & I/O voltage: 10 to 40 VDC or 20 to 28 VAC
- Power consumption idle: ~0.1 W
- Power consumption maximum*: 2.3 W (24VAC), 0.7W (12VDC)
- Relay current continuous: 250m A
- Relay current peak: 1.5 A

* all inputs/outputs active, red light on and radio transmitting

Physical

- Height: 55 mm
- Diameter: 90 mm
- Weight (including cable): 186 g
- Cable length: approx. 150 cm
- Matte transparent red polycarbonate cap (thickness: 8 mm), black ABS base plate (3 mm)
- Four M4 bolt holes, 78 mm diameter

Operating temperature

- -40 °C to +85°C

Electrical connections

Wire Color	Function (pressure sewage application)
black	Power supply common
red	Power supply +12VDC/24VAC
green	Digital input (pump control status)
white	Digital input (high level switch status)
orange	Digital input (thermal protection status)
blue	Digital output (thermal fault reset)

Communication

- LoRaWAN certified radio, compatible with commercial, private and public LoRaWAN networks (868MHz default, 915 MHz optional). Contact us for options in your area.
- Real world range: up to 20 km depending on location and network coverage (tested with KPN 868MHz network in a challenging setting).
- A message is sent on every change of the internal/external inputs or every approximately three hours idle time.

Note: Please keep in mind that the LoRaWAN protocol does not guarantee that every message is received, as a result reception of status changes can be delayed up to a few hours.

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