

YTED/YTTN ATEX Ex ia System

Main characteristics

- Safety module ATEX for hazardous areas
- Intrinsic Safety
- LCIE 03 ATEX 6078X



I/II (M1) (1)G/D [Ex ia] I/IIC – [Ex iaD]



Applications

- | | |
|---|--|
| <ul style="list-style-type: none"> ■ Process technic ■ Hydraulic ■ Pneumatic <input type="checkbox"/> Refrigeration <input type="checkbox"/> Water treatment <input type="checkbox"/> Car industry <input type="checkbox"/> Test benches ■ Safety <input type="checkbox"/> Aerospace <input type="checkbox"/> Railways <input type="checkbox"/> Shipbuilding <input type="checkbox"/> Heavy vehicle | <ul style="list-style-type: none"> <input type="checkbox"/> Health care <input type="checkbox"/> Biotechnology <input type="checkbox"/> Food <input type="checkbox"/> Beverage <input type="checkbox"/> Pharmaceutical <input type="checkbox"/> Petro-chemical <input type="checkbox"/> Chemical <input type="checkbox"/> HVAC <input type="checkbox"/> Energy <input type="checkbox"/> Medical gas <input type="checkbox"/> Agriculture vehicles <input type="checkbox"/> Pumps and compressors |
|---|--|

Module with 2 threshold outputs, active or passive 4 ... 20 mA output, power supply PROFSI3

The PROFSI3-B25091-ALG-YT module, with intrinsic safety analogue interface makes it possible to connect a series YT thermostat or pressure switch in input, while ensuring safety between the danger zone (at risk of explosion) and the safe area through galvanic isolation.

The module provides excitation for the YT pressure switch/thermostat; the galvanically isolated input signal recopy is active or passive depending on the connection chosen. The 2 thresholds defined on the YT pressure switch/thermostat are available on relays.

Banana jacks on front panel can be used for the 4-20 mA recopy loop test.

Power supply to the module can be AC or DC on a wide range.

Special conditions for safe use:

The PROFSI3-B25091-ALG-YT module is an apparatus complying with ATEX Directive 94/9/EC No. LCIE 03 ATEX 6078X.

General marking I/II (M1) (1)G/D [Ex ia] I/IIC – [Ex iaD]

Ambient temperature : - 20°C ≤ Ta ≤ + 60°C

Category (M1) or (1)D or (1)G

This apparatus is an intrinsically safe associated material; it must not be installed in an explosive area. It can be connected to equipment installed in areas 0, 1, 2 - gas (G), or areas 20, 21, 22 - dust (D).

Model / PROFSI3 type module

Technical data

Supply voltage	DC from 22VDC to 120VDC 50 or 60Hz AC from 90 to 253VAC	Threshold states	LED display on front panel for each threshold
Consumption	3 VA	Power supply	Front panel LED
4 ... 20 mA signal recopy	Optoelectronically isolated Accuracy of the isolated recopy 0.1% Maximum load 600 Ω Transfer time < 5ms Thermal drift zero: 50ppm/°C Thermal drift gain: 50ppm/°C Residual ripple ± 50mV	Max. ambient temperature	- 20 ... + 60°C
		Recommended ambient T°	- 20 ... + 50°C
		Storage temperature	- 40 ... + 80°C
		Dimensions	Depth : 120 mm Height : 90 mm Width : 29 mm
Relay outputs	1 work contact per threshold 1 common to the 2 thresholds Breaking capacity for cosφ =1 - 4A at 250VAC - 4A at 30VDC Breaking capacity for cosφ =0.4 - 1.5A at 250VAC - 1.5A at 30VDC Breaking capacity max 500VAC Contact resistance max. 100mΩ for 100,000 operations min. for 20,000,000 operations min.	Mounting	Symmetric hat profile rail mounting
		Connection by pull-out terminals	
		Module power distribution by plug-in flat cable unit	

Ordering Information - PROFSI3 Module

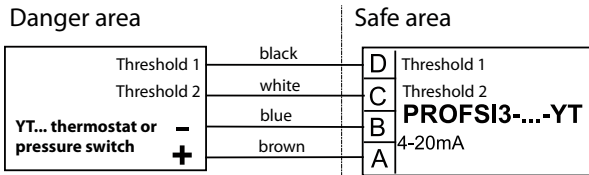
Item number : PROFSI3-B25091-ALG-YT

Order code : 0602

Installation diagram

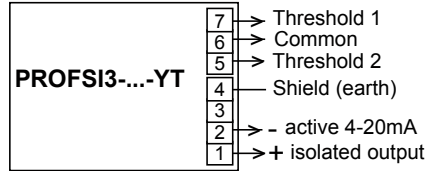
Connections of input - CN1

Connection to YT... pressure switch or thermostat

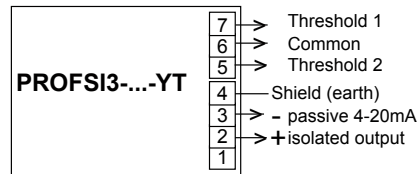


Connections of input - CN2

Active 4 ... 20 mA recopy



Passive 4 ... 20 mA recopy

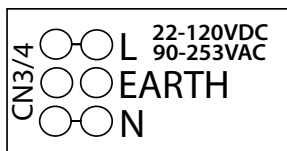


The passive 4 ... 20 mA output may be connected to a 6-28 VDC circuit. Voltage drop at 22mA 6V.

To ensure proper operation, it is imperative to connect the recopy to a load. If recopy is not necessary, make a short circuit between 1 and 2.

Power supply connections - CN3/CN4

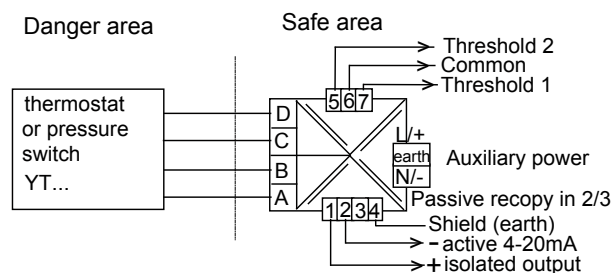
A flat-cable unit is used to distribute power supply from one PROFSI3 module to the next. All terminals are removable.



Caution

All modules are equipped with 2 pull-out 3-point connectors (L N) for power supply wiring: one for input and one output terminal for bridging to another module using the 3-point flat cable supplied. To prevent electric shocks, it is imperative that these terminals are always connected. If only one of these connectors is used (no bridging to another module), the other one must be closed by the blind 3-point plastic cap supplied with the product.

Mimic diagram of connections



Front access to check 4 ... 20 mA loop

2mm banana jacks on front panel for 4 ... 20 mA recopy loop test without 10mV/mA opening.



Connecting cable

The cable is suitable for use in a hazardous ATEX Ex ia area. It allows the connection from the YTED/YTTN to the PROFSI3-B25091-ALG-YT module.

Characteristics

M12 5-pin removable metal connector + 4-wire shielded cable

Code de commande

Code	0623	0624	0625
Length (m)	20	50	100

Junction box

The system can be equipped with an approved junction box or in compliance with the requirements of the standards EN60079-1 and EN60079-11.

Dimensions 127 x 81 x 57 mm
Order code 0603

