Intrinsically safe isolator

Profibus-DP segment coupler

856-IS-DP

- *typically up to 13 MTL8000 1/1 IS nodes/interface*
- *IS barrier between RS485 AND RS485-IS*
- *automatic baud-rate detection*

859-PL-DP

MODULE SPECIFICATION

See also System Specification

PHYSICAL NETWORK

Transmission rate ..... 9.6kbps - 1.5Mbps
(Automatic detection or manual setting with rotary switch)

ISOLATION - to EN 50020

Between RS485-IS and RS485 ..... 375V
Between RS485-IS and input voltage 375V
Between RS485-IS segments 30V

PROFIBUS CONNECTORS

Non-IS area ..... 9-pin Sub-D
IS area ..... Special approved Sub-D e.g. **859-PL-DP**

FIELDBUS TERMINATORS

RS485 ..... Use external resistor in input connector
RS485-IS ..... Integrated 510Ω pull-up/pull-down resistors
..... Use terminating resistor in IS-Profibus connector

OUTPUT

Number of channels 2
Modules per segment ..... 13 (max.)

DC POWER INPUTS

Input voltage ..... 18 - 32V dc
Current consumption ..... < 200mA
Connection type ..... two-part, pluggable screw terminal
Conductor size range ..... 0.14 to 2.5mm²

SAFETY

Location of module ..... Safe area
Location of field wiring ..... Zone 0, IIC hazardous area
Field wiring protection ..... intrinsically safe
Certification Code ..... II [2] GD [EEx ib] IIC
RS485-IS fieldbus connections
No-load voltage (Uo) ..... 3.71 V (max.)
Short-circuit current (Io) ..... 129 mA (max.)
Power (Po) ..... 120 mW (max.)
Characteristic curve ..... linear
Internal inductance/capacitances Li/Ci ..... negligible
External RS485 fieldbus (SYST EEx ib IIC)
Ui ..... 4.2V (max.)
Ii ..... 4.8A (max.)

MECHANICAL

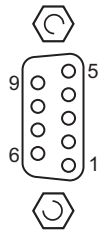
Mounting ..... DIN rail
Module dimensions ..... 142(w) x 105.5(d) x 31(h)
Weight ..... 200 g

ENVIRONMENTAL

Ambient temp
Operating, optimum orientation* ..... –20°C to + 70°C
Ingress Protection ..... IP20 to BS EN60529
(Additional protection by means of enclosure)

PIN CONFIGURATION

RS485
1 = n.c.
2 = n.c.
3 = RxD/TxD–P
4 = n.c.
5 = DGND
6 = DP
7 = n.c..
8 = RxD/TxD–N
9 = n.c.



RS485–IS
1 = Shield
2 = n.c.
3 = RxD/TxD–P
4 = n.c.
5 = ISGND
6 = ISP
7 = n.c..
8 = RxD/TxD–N
9 = n.c.

LED INDICATIONS

Operation of PS1 and PS2 - 2 x green
- green ..... input voltage o.k.
- off ..... input voltage too low

Status PROFIBUS segments - 3 x red/yellow (dual colour LED)
- red ..... wrong start delimiter received
- yellow ..... receipt of valid data
- off ..... no data exchange

Automatic baud rate detection - 1 x yellow
- permanent yellow ..... baud rate detected
- yellow flashing ..... baud rate detection active
- off ..... baud rate setting via rotary switch

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