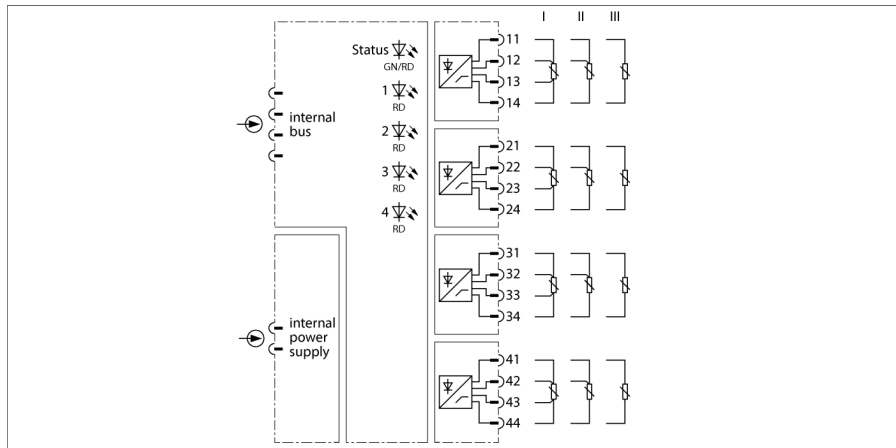


excom I/O System

Input Module, Temperature, 4-channel

TI41EX



The input module TI41Ex is designed for the connection of the 2, 3 and 4-wire temperature probes Pt100, Ni100, Cu50 and Cu100.

The module features protection class Ex ib IIC and can be mounted in zone 1 in combination with excom. The ignition protection type of the inputs is Ex ia IIC.

Line compensation of 2-wire temperature resistors is done by means of parametrized resistance values. These values have to be determined first through measurements.

The analog resistance value is digitized to 16-bit. The temperature is given in Kelvin, the resolution in 0.1 K steps. For conversion to °C, please observe an offset of 273.2.

Parameters such as line monitoring, substitute values etc. can be adjusted for each channel separately and are initialized solely by the master.

- Input module for the connection of RTDs (resistance thermo detectors)
- Complete galvanic isolation



Dimensions

Type	TI41EX
ID	6884190
Supply voltage	Via module rack, central power supply module
Power consumption	≤ 1 W
Galvanic isolation	Complete galvanic isolation acc. to EN 60079-11
Number of channels	4

Input circuits	Intrinsically safe acc. to EN 60079-11
	Cu50
	Cu100
	Ni100
	Pt100

Reference temperature	25 °C
Resolution — temperature	0.1 K
Measuring accuracy RTD input (including linearity, hysteresis and repeatability)	± 60 mΩ
Linearity deviation	≤ 0.01 % measuring range
Temperature drift	≤ 0.002 % of full scale/K
Rise time/fall time	≤ 50 ms (10...90 %)
Max. measurement tolerance under EMC influence	≤ 0.1 % with shielded signal cable ≤ 0.5 % with unshielded signal cable

Ex approval acc. to conformity certificate	PTB 13 ATEX 2014
Device designation	Ex II 2 (1) G Ex ib [ia] IIC T4
Device marking	Ex II (1) D [Ex ia] IIIC

Displays/Operating elements	
Operational readiness	1 × green/red
State/ Fault	4 × red

Housing material	Plastic
Connection mode	module, plugged on rack
Protection class	IP20
Ambient temperature	-20...+70 °C
Relative humidity	≤ 93 % at 40 °C acc. to IEC 60068-2-78
Vibration test	Acc. to IEC 60068-2-6
Shock test	Acc. to IEC 60068-2-27
EMC	Acc. to EN 61326-1 Acc. to Namur NE21
MTTF	80 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18 x 118 x 106 mm

Approvals	ATEX
	cFMus
	cFM
	IECEEx
	CCC
	KOSHA
	EAC Ex
	DNV GL
	BV
	LR
	KR
	CMI
	KCC
	UKCA
	CE

