



The input module TI41Ex is used for the connection of the 2, 3 and 4-wire temperature probes Pt100, Ni100 and CU100.

The module features protection class Ex ib IIC and can be mounted in zone 1 in combination with *excom®*. The explosion protection category 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**

**Input Module, Temperature, 4-channel  
TI41EX**

<b>Type designation</b>	TI41EX
Ident-No.	6884190
<b>Supply voltage</b>	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-channel
<b>Input circuits</b>	Intrinsically safe acc. to EN 60079-11
	Cu100
	Ni 100
	Pt100
<b>Resolution</b>	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
<b>Ex approval acc. to conformity certificate</b>	PTB 13 ATEX 2014
Device designation	Ⓢ II 2 (1) G Ex ib [ia] IIC T4
Device marking	Ⓢ II (1) D [Ex ia] IIIC
<b>Indication</b>	
Operational readiness	1 x green / red
State/ Fault	4 x red
<b>Housing material</b>	Plastic
Connection mode	module, plugged on rack
<b>Protection class</b>	IP20
Ambient temperature	-20...+70 °C
Relative humidity	≤ 93 % at 40 °C acc. to EN 60068-2-78: test cab
Vibration test	acc. to IEC 60068-2-6
Shock test	acc. to IEC 60068-2-27
EMC	acc. EN 61326-1 (2013) acc. to Namur NE21 (2012)
MTTF	80 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	18 x 118 x 106 mm
<b>Approvals</b>	ATEX GL DNV BV LR

**Dimensions**

