Model 90100
Universal Temperature Converter for Pt100, Thermocouple

Product features

- Online programmable via PC
- Installation on DIN rail acc. to EN 50022-35
- Custom linearization
- EEx ia/ib approved
- EMC to EN 61326 and NE21
- Galvanic isolation between input, output power supply

Technical data:

Input RDT (Pt100, Pt500, Pt1000)	-200 °C ... +850 °C, smalles span 10 K
Input Ni 100, Ni500, Ni1000	-60 °C ... +250 °C
Input thermocouples	L, J, U, T, K, E, N: smallest span 50 K accuracy typical 0.5 K, with N: typical 1 K S, R, B: smallest span 500 K accuracy: typical 2 K
Cold junction compensation	Pt100 internal or external CJC
CJC Accuracy	+/– 1 K
Probe short circuit	not possible for thermocouples
Probe and lead break	< 3.6 mA or > 21 mA (configurable)
Output	4 ... 20 mA or 20 ... 4 mA (configurable)
Load (Rb)	Rb = (Ub - 8 V) / 22 mA
Characteristic line	Linear with temperature / custom linearization
Input filter	Digital filter 1st order; filter constant configurable 0 ... 125 s
Step response 0 ... 100%	< 2 s (with filter constant 0)
Temperature drift	Pt100: ± (15 ppm/K · max. range + 50 ppm/K · preset range) · Δδ TC: ± (50 ppm/K · max. meas. range + 50 ppm/K · preset measure range) · Δδ
Operating temperature	-40 °C ... +85 °C
Climatic conditions	rel. humidity < 95 %, with condensation

Explosion protection:

Category	II 2(1) G EEx ia IIC T4, T5, T6
EC-Type Examination	PTB 03 ATEX 2232
Safety values	Output: Vi < 30 V, Ii < 100 mA Input: Voc < 4.4 V, Isc < 9.6 mA

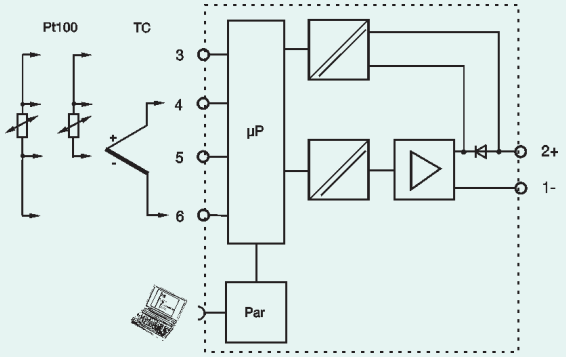
Ordering details

Type	Parameters	Ex-protection	Order No.
90100	**standard**	**–**	**GHG 131 0000 D 0006**
90100	**customized**	**–**	**GHG 131 0000 D 0106**
90100	**standard***	**ia/ib**	**GHG 131 0100 D 0006**
90100	**customized**	**ia/ib**	**GHG 131 0100 D 0106**

* RTD, 4-wire, range 0 ... 100°C

Accessories

Type	Order No.
Programming cable with TTL/RS232-interface + adapter	**GHG 131 0031 C 0000**



Block diagram

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