Technical data sheet

Interface Technology · Microcompact temp./limit value switch

Input: PT, thermocouple, potentiometer – adjustable temperature converter
Output: Semiconductor NO contact
Insulation: 2.5 kV, 2-way isolation

Identification

Type	LCON TLS FDT 806210
Part No.	750370

Product version

Hardware revision	1.2
Software version	1.8
Datasheet version	04

Input

Input variable	PT100 PT1000 Potentiometer Type B Type C Type E Type J Type K Type N Type R Type S Type T
Measurement input	PT100, PT1000, resistencia, potenciómetro Thermal elements: Type B, C, E, J, K, N, R, S, T Customer-specific via support points, polynomial
Galvanic isolation I/O	2-way isolation
Delay ON/OFF	TE: 6 ms–350 ms, PT: 5–350 ms (adjustable by means of filter stage 1–5, default: filter stage 4 = 80 ms)

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Temperature range	PT: -220 … 850 °C depending on type Thermal elements: -210 … 2310 °C depending on type
Parameterisation	Software FDT/DTM
Input resistance	Thermocouples: 1 MΩ
Sensor current	PT, potentiometer, resistance: 0.002–0.6 mA depending on type
Circuit	PT - 2, 3, 4-wire, for 2-wire with offset correction, no external bridges necessary, autom. detection

Output

Output signal	Adjustable via software FDT / DTM, connection via USB service cable
Contact type	K1,K2: Semi-conductor, N/O contact
Max. switching voltage	DC 30 V
Max. switching current	DC 100 mA, not short circuit protected
Status display output	LED yellow K1 and LED yellow K2
Operating mode	Limit value, window, alarm output / additionally adjustable: Hysteresis, input / output delay
Parameterisation	Software FDT/DTM

Operating data

Accuracy	PT: 10 K, divided by the set measurement range (K) + 0.2 % FSR Thermocouples: 10 K, divided by the set measurement range (K) + 0.4 % FSR
Linearity error	±0.1 % FSR

General

Rated voltage U_N	DC 24 V
Rated current	Approx. 12 mA
Status indication	LED green, yellow (K1, K2), red (error)
Input/output protection	Overvoltage DC 30 V
Temperature error	<100 ppm/K FSR
Data storage	Flash
Insulation voltage input / output	AC 2.5 kV_{eff}
Resolution	16-bit
Temperature compensation internally	Thermal elements: type ±1 K , max. ±2 K
Configuration	Software: FDT / DTM
Housing material	PA 6.6 (UL 94 V-0)
Color of the housing	Light grey
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Installation position	Any
Connection type	Screw terminal 0.14 mm² – 1.5 mm²
Dimensions (w × h × d)	6.2 mm × 90.0 mm × 115.5 mm
Weight/unit	0.05 kg
PU (units)	1

General ambient conditions

Operation temperature range	-40 °C … +70 °C
Storage temperature range	-40 °C … +85 °C
Relative air humidity	10 % – 95 %, without condensation
Vibration resistance	4 g acc. to EN 60068-2-6
Shock resistance	15 g acc. EN 60068-2-27

Failure Rate Prediction (MTBF)

Standards	Electronic components – Reliability – Reference conditions for failure rates and stress models for conversion: EN/IEC 61709 Failure Rates of Components – Expected values: SN 29500
Failure rate at +45 °C	480 fit
Failure rate at +45 °C	2081733 h
	1 fit equals one failure per 10^9 component hours
	The indicated temperature is the mean component ambient temperature.
Comments	The results are valid under following conditions: Automotive environment or industrial areas without extreme dust levels and harmful substances. Continuous operation 8760 h per year.

Certifications/Standards

Conformity	CE UKCA
Certifications	cULus (E135145) cULus (E319134) use in Class I, Div. 2, Hazardous Locations
Standards	EN 60947-1 EN 60947-5-1 UL 508 UL 121201 DNVGL-CG-0339 Temperature Class D – not certified Humidity Class B – not certified Vibration Class B – not certified EMC Class A – not certified Enclosure Class A – not certified

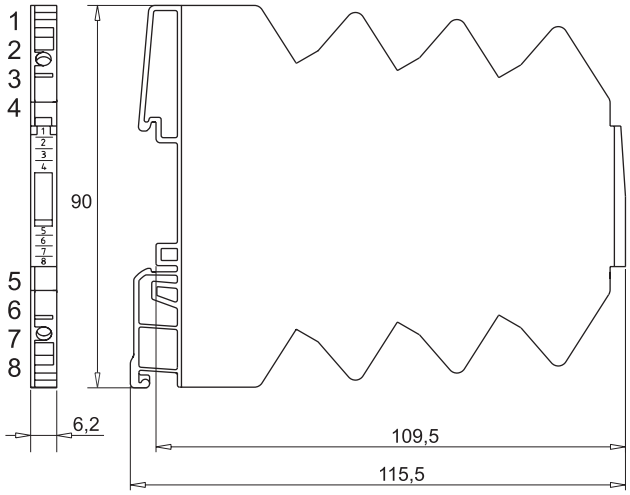
Equipment/Spare parts

Accessories	Jumper comb 6 A (VE 10) 2-pin: 762802 (red), 762803 (white), 762804 (**blue**) 3-pin: 762805 (red), 762806 (white), 762807 (**blue**) 4-pin: 762812 (red), 762813 (white), 762814 (**blue**) 8-pin: 762822 (red), 762823 (white), 762824 (**blue**) 16-pin: 762832 (red), 762833 (white), 762834 (**blue**) **Marker holder** 4×11 mm white, Part-No. 681313, PU: 100 units **Laser label** 4.23×11 mm (sheet with 1056 labels), Part-No. 681034, PU: 1 unit

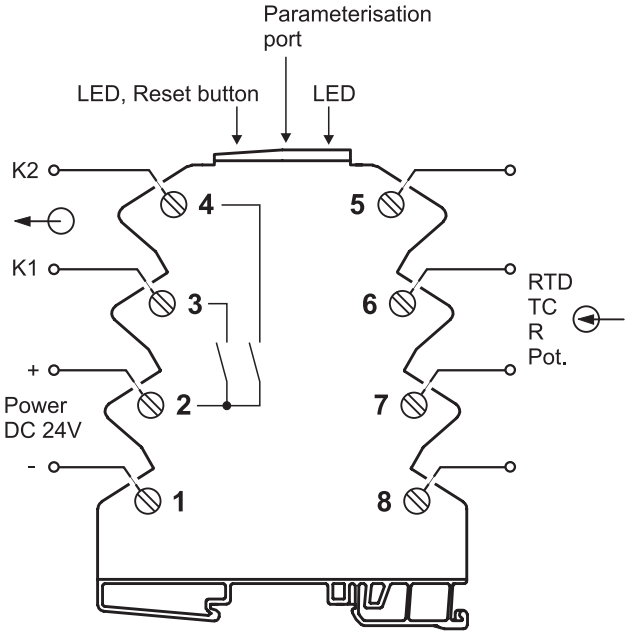
Notes and Comments

Note	For the parameterization you need the USB service cable, LCON ZB USB, part number 750894 and the software Lütze HART-DTM and PACTware. The current versions can be found in the download area of the respective product page on the LÜTZE website.

Dimensions



PIN assignment



PIN assignment