

Technical data sheet

Interface Technology · Microcompact temp./analog converter

Input: PT, thermocouple, potentiometer – adjustable temperature converter

Output: 0–20 mA / 4–20 mA / 0–10 V / -10–10 V / 2–10 V / 0–5 V / 1–5 V

Insulation: 2.5 kV, 3-way isolation



Identification

Type	LCON TA DFDT 806210
Part No.	750340

Product version

Hardware revision	1.2
Software version	1.8
Datasheet version	03

Input

Input variable	PT100 2/3/4 conductor PT1000 Resistor 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	3-way isolation
Step response (10–90%)	TE: 10 ms–550 ms, PT: 5–550 ms (adjustable by means of filter stage 1–5, default: filter stage 4 = 100 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 DIP switch
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	0–10 V, -10–10 V, 0–20 mA, 4–20 mA adjustable via switch and software FDT/DTM, connection via USB service cable
Max. load impedance at I-output	700 Ω @ 0–20 mA, 4–20 mA
Max. load impedance at U-output	>2 kΩ @ 0–10 V, -10–10 V
Limitation for exceeding measurement range	10.25 V @ 0–10 V, -10–10 V 20.5 mA @ 0–20 mA, 4–20 mA
Max. modulation range/output signal/output current	10.5 V @ 0–10 V, -10–10 V 21 mA @ 0–20 mA, 4–20 mA
Parameterisation	Software FDT/DTM DIP switch

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. 18 mA
Status indication	LED green, red (error)
Input/output protection	Overvoltage DC 30 V, short circuit-proof output
Temperature error	<100 ppm/K FSR
Data storage	Flash
Insulation voltage input / output	2.5 kV _{eff}
Resolution	16-bit
Temperature compensation internally	Thermal elements: type ±1 K, max. ±2 K
Configuration	Switch and 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 mm ² – 1.5 mm ²
Dimensions (w × h × d)	6.2 mm × 90.0 mm × 115.5 mm

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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	678 fit
Failure rate at +45 °C	1474689 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
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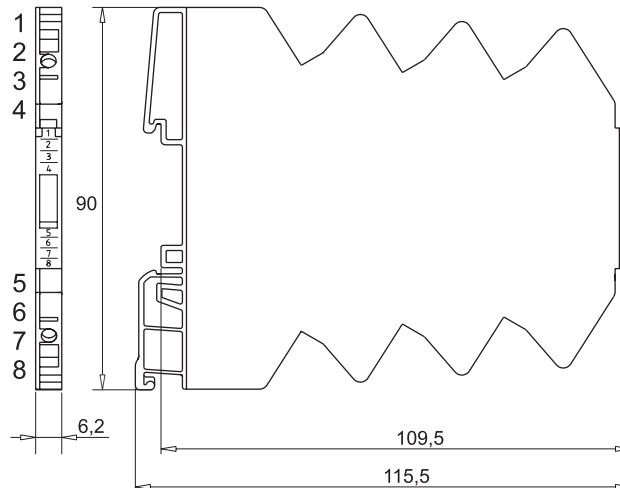
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Notes and Comments

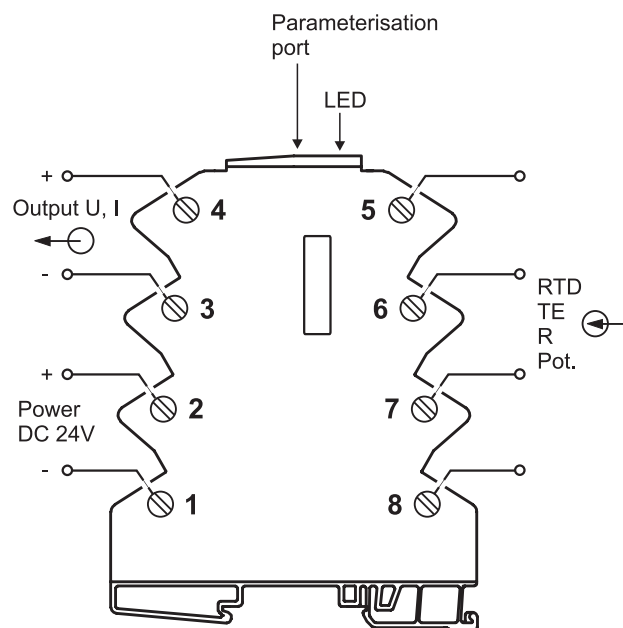
Note

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.

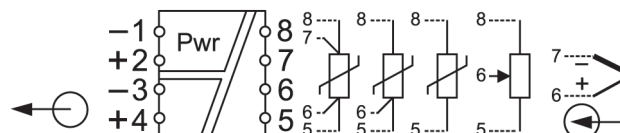
Dimensions



PIN assignment



PIN assignment



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Range adjustment

Range*		S1				S2							
Start		7	8	1	2	End	3	4	5	6	7	8	
-200°C	●					0°C	●						
-150°C	●	●				50°C		●	●				
-100°C	●		●			100°C	●	●		●			
-50°C			●	●		150°C	●		●	●			
0°C	●	●	●	●		200°C	●	●	●	●			
						250°C	●					●	
						300°C	●	●				●	
Pt100		●				350°C	●		●		●		
Pt1000			●			400°C	●	●	●		●		
TE J	●	●				450°C	●			●	●		
TE K				●		500°C	●	●		●	●		
Pot. %	●	●	●			550°C	●		●	●	●		
						600°C	●	●	●	●	●		
						650°C	●					●	
0 – 20mA	●					700°C	●	●				●	
4 – 20mA			●			750°C	●		●			●	
0 – 10V	●	●				800°C	●	●	●			●	
±10V				●		850°C	●			●		●	
						900°C	●	●		●		●	
						950°C	●		●	●		●	
						1000°C	●	●	●	●		●	
						1050°C	●				●	●	
						1100°C	●	●			●	●	
						1150°C	●		●		●	●	
						1200°C	●	●	●		●	●	
						1250°C	●			●	●	●	
						1300°C	●	●		●	●	●	
						1350°C	●		●	●	●	●	
						1400°C	●	●	●	●	●	●	
● → Switch On													

S1-S2 1-8 off:
FDT/DTM

*See instruction
leaflet