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

Datasheet version	02

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)
Temperature range	PT: -220 … 850 °C depending on type Thermal elements: -210 … 2310 °C depending on type

United Kingdom: LÜTZE Ltd.
Unit 3, Sandy Hill Park
Sandy Way, Amington • GB-Tamworth, Staffs B77 4DU
Tel. +44 (0)1827 31333-0 • Fax +44 (0)1827 31333-2
www.lutze.com • sales.gb@lutze.co.uk

Germany: Friedrich Lütze GmbH
Postfach 12 24 (PLZ 71366) • Bruckwiesenstraße 17-19 • D-71384 Weinstadt
Tel. +49 (0)7151 6053-0 • Fax +49 (0)7151 6053-277(-288)
www.luetze.de • info@luetze.de

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 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	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

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

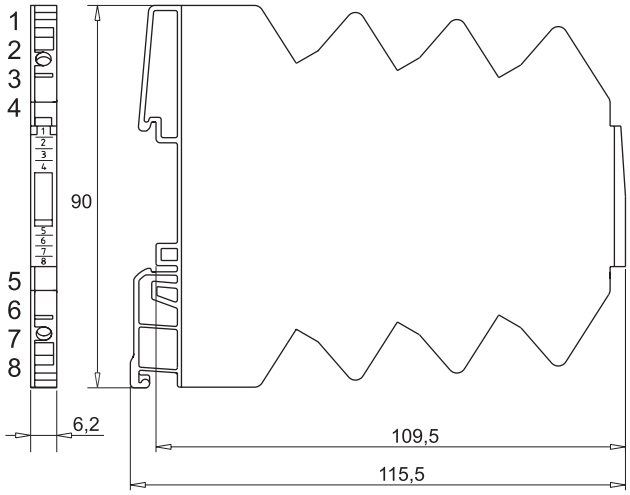
Equipment/Spare parts

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

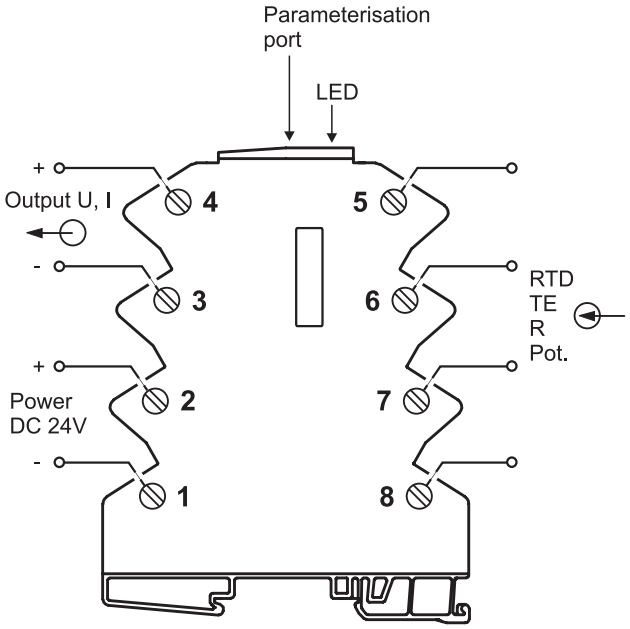
Notes and Comments

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.

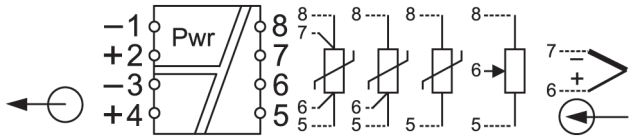
Dimensions



PIN assignment



PIN assignment



Range adjustment

Range* Start	S1 7	S1 8	S1 1	S1 2	S2 End	S2 3	S2 4	S2 5	S2 6	S2 7	S2 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	●	●			●	
					350°C	●		●		●	
					400°C	●	●	●		●	
					450°C	●			●	●	
					500°C	●	●		●	●	
					550°C	●		●	●	●	
					600°C	●	●	●	●	●	
					650°C	●					●
					700°C	●	●				●
					750°C	●		●			●
					800°C	●	●	●			●
					850°C	●			●		●
					900°C	●	●		●		●
					950°C	●		●	●		●
					1000°C	●	●	●	●		●
					1050°C	●				●	●
					1100°C	●	●			●	●
					1150°C	●		●		●	●
					1200°C	●	●	●		●	●
					1250°C	●			●	●	●
					1300°C	●	●		●	●	●
					1350°C	●		●	●	●	●
					1400°C	●	●	●	●	●	●

Sensor*	S1 1	S1 2	S1 3
Pt100	●		
Pt1000		●	
TE J	●	●	
TE K			●
Pot. %	●	●	●

Output*	S1 4	S1 5	S1 6
0 – 20mA	●		
4 – 20mA		●	
0 – 10V	●	●	
±10V			●

● ⟶ Switch On

S1-S2 1-8 off:
FDT/DTM

*See instruction leaflet