Technical data sheet

Interface Technology · LCIS temperature/analog converter

Input: Thermal elements J, K
Output: 0–10 V / 0–20 mA / 4–20 mA
Insulation: 2.5 kV, 3-way isolation

Identification

Type	LCIS-WTCA-1839-62-PI
Part No.	751839.0000

Product version

Hardware revision	1.0
Software version	1.0
Datasheet version	01

Input

Input variable	Thermo voltage, element J or K (DIN/IEC 584-1)
Galvanic isolation I/O	3-way isolation
Measuring procedure	Voltage measurement
Temperature range	-50 °C–200 °C / -50 °C–350 °C / 0 °C–200 °C / 0 °C–400 °C / 0 °C–600 °C / 0 °C–800 °C / 0 °C–1000 °C / 0 °C–1200 °C
Parameterisation	DIP switch S1
Zero /Span	Production comparison
Input resistance	>1 MΩ
Cold junction compensation	throughout the entire temperature range
Protection device Input	Overvoltage protection

Output

Output signal	0–10 V, 0–20 mA, 4–20 mA
Max. load impedance at I-output	500 Ω
Min. load impedance at U-output	2 kΩ
Load deviation	at U-output max. 5 mV @ 2 kΩ

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

Output voltage	<16 V @ 0–20 mA, 4–20 mA
Output current	max. 5 mA @ 10 V
Residual ripple	<20 mV_{eff}
Parameterisation	DIP switch S1
Protection device	short circuit protection

Operating data

Accuracy	0.5 % + 2K FSR @ 23 °C
Linearity error	0.1 % FSR, temperature linear
Rise time (10-90%)	approx. 30 ms @ 23 °C
Build-up time (Accuracy 1%)	approx. 60 ms @ 23 °C
Temperature coefficient	150 ppm / K FSR
Critical frequency	10 Hz @ 3 dB / 23 °C

General

Rated voltage U_N	AC/DC 24 V
Rated current	approx. 22 mA @ AC 24 V / approx. 13 mA @ DC 24 V
Status indication	LED green
Insulation voltage input / output	2.5 kV_{eff}
Housing material	PA 6.6 (UL 94 V-0, NFF I2, F2)
Color of the housing	RAL 7012 basalt grey
Mounting	DIN rail mountable TS35 (EN 60715)
Degree of protection	IP20
Installation position	Any
Connection type	Push-In single wire 0.25 mm² – 2.5 mm² / AWG 24–14 fine stranded wire with ferrule 0.25 mm² – 1.5 mm² / AWG 24–16
Dimensions (w × h × d)	6.2 mm × 93.0 mm × 73.0 mm
Weight/unit	0.03 kg
PU (units)	1

General ambient conditions

Operation temperature range	-25 °C … +60 °C
Storage temperature range	-40 °C … +85 °C
Relative air humidity	20 – 90 % RH, not condensing
Vibration resistance	0.7 g acc. to EN 60068-2-6

Failure Rate Prediction (MTBF)

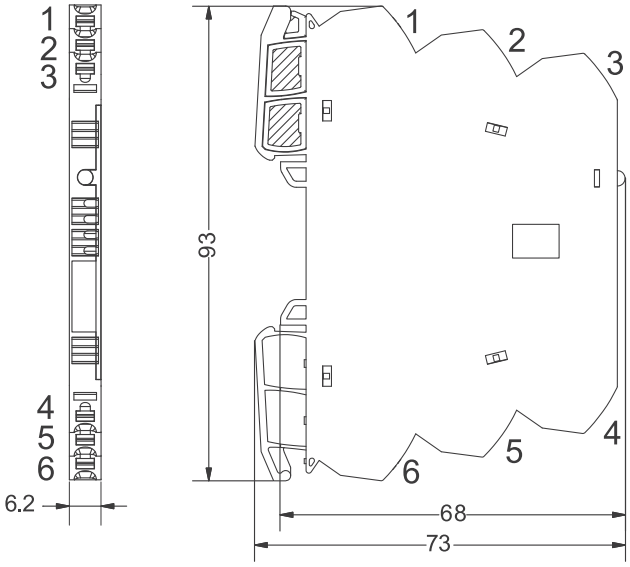
Standards	Electronic components – Reliability – Reference conditions for failure rates and stress models for conversion: EN/IEC 61709 Failure Rates of Components – Expected values: SN 29500
Failure rate at +45 °C	566 fit

Failure rate at +45 °C	1765795 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

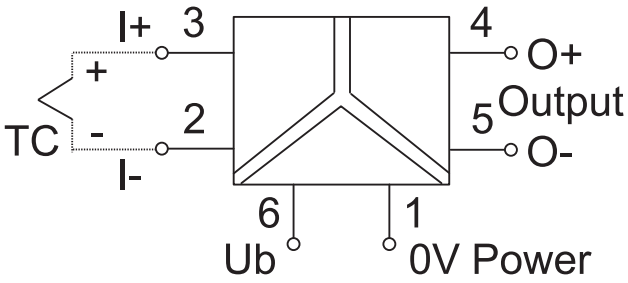
Certifications/Standards

Conformity	CE UKCA
Certifications	cULus (E135145) DNV (TAA000024Y)
Standards	EN 60947-1 EN 60947-5-1 UL 508 DNV-CG-0339

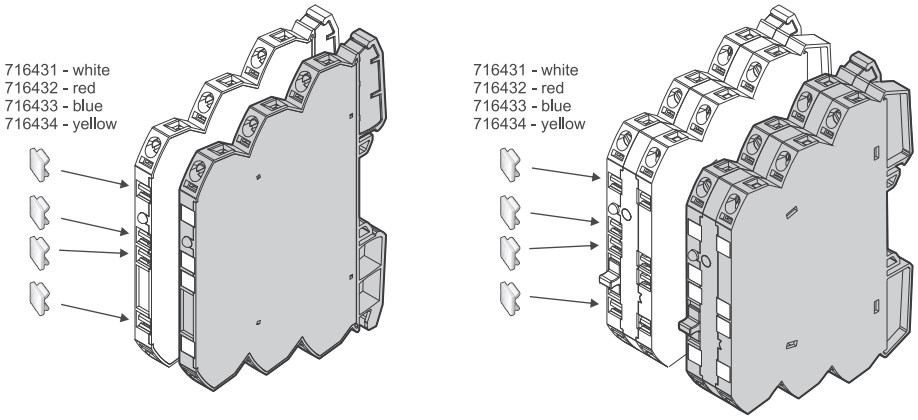
Dimensions



PIN assignment

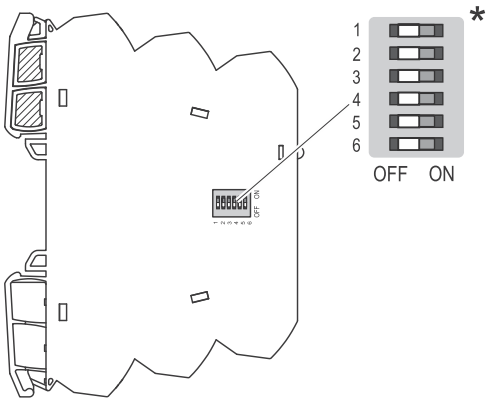


Use



Use

DE ***HINWEIS:*** Die Schalter dürfen während des Betriebs nicht umgeschaltet werden. Der Wandler benötigt einen Neustart.
EN ***NOTICE:*** *The switches must not be switched during operation. The converter requires a restart.*
FR ***AVIS:*** *Les interrupteurs ne doivent pas être actionnés pendant le fonctionnement. Le convertisseur nécessite un redémarrage.*



* **DE:** Auslieferungszustand (Werkseinstellung): 0-Einstellung/ alle Schalter sind auf OFF gestellt.

* **EN:** *Delivery state (factory setting): 0 setting/ all switches are set to OFF.*

* **FR:** *État à la livraison (réglage d'usine) : réglage 0/ tous les interrupteurs sont sur OFF.*

Range adjustment

S1	Output	
●⟶ Switch On	5	6
0–10V	●	
0–20mA		●
4–20mA	●	●

S1	Input			
●⟶ Switch On	1	2	3	4
TC J (Fe-CuNi)				
TC K (Ni-CrNi)	●			
-50 – 200°C				
-50 – 350°C		●		
0 – 200°C			●	
0 – 400°C		●	●	
0 – 600°C				●
0 – 800°C		●		●
0 – 1000°C			●	●
0 – 1200°C		●	●	●