

Technical data sheet

Interface Technology · LCIS temperature/analog converter

Input: PT100, 2-wire/3-wire

Output: 0–10 V / 0–20 mA / 4–20 mA

Insulation: 2.5 kV, 2-way isolation



Identification

Type	LCIS-WPT3LA-1819-62-PI
Part No.	751819.0000

Product version

Hardware revision	1.1
Software version	1.1
Datasheet version	03

Input

Input variable	Temperature sensor PT100
Galvanic isolation I/O	2-way isolation
Measuring procedure	2-wire or 3-wire, constant current
Temperature range	-50 °C–50 °C / -50 °C–100 °C / -50 °C–150 °C / 0 °C–100 °C / 0 °C–150 °C / 0 °C–200 °C / 0 °C–300 °C / 0 °C–400 °C
Parameterisation	DIP switch S1
Zero /Span	Production comparison
Input resistance	>1 MΩ @ 2-wire, >500 kΩ @ 3-wire
Sensor current	0.5 mA
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

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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	0.3 % FSR @ 23 °C
Linearity error	0.1 % FSR
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
Error coefficient of measuring line	2-conductor: 2.7 K/Ω, 3-conductor: 0.1 K + 0.1 %/Ω

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 mm ² – 2.5 mm ² / AWG 24–14 Fine stranded wire with ferrule 0.25 mm ² – 1.5 mm ² / 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
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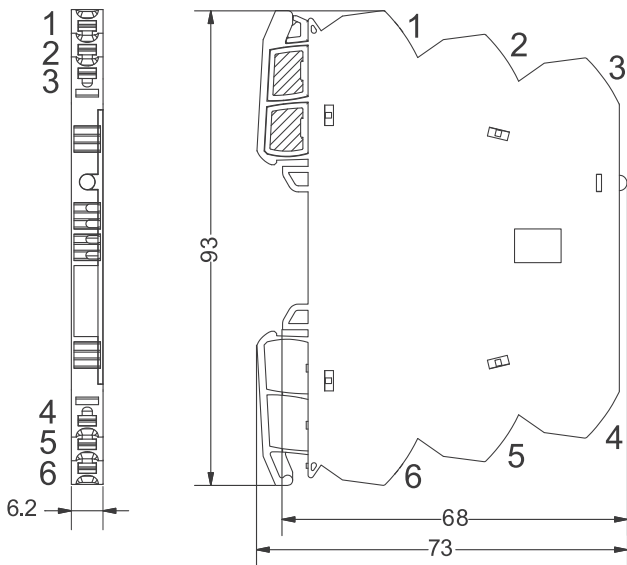
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Failure rate at +45 °C	578 fit
Failure rate at +45 °C	1729323 h
	1 fit equals one failure per 10 ⁹ component hours
	The indicated temperature is the mean component ambient temperature.
Comments	The results are valid under following conditions: Automotive environment or industrial areas without extreme dust levels and harmful substances. Continuous operation 8760 h per year.

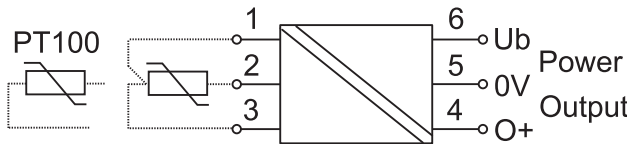
Certifications/Standards

Conformity	CE UKCA
Certifications	cULus (E135145) DNV (TAA000024Y)
Standards	EN 60947-1 EN 60947-5-1 EN 61000-6-2 EN 61000-6-4 UL 508 DNV-CG-0339

Dimensions



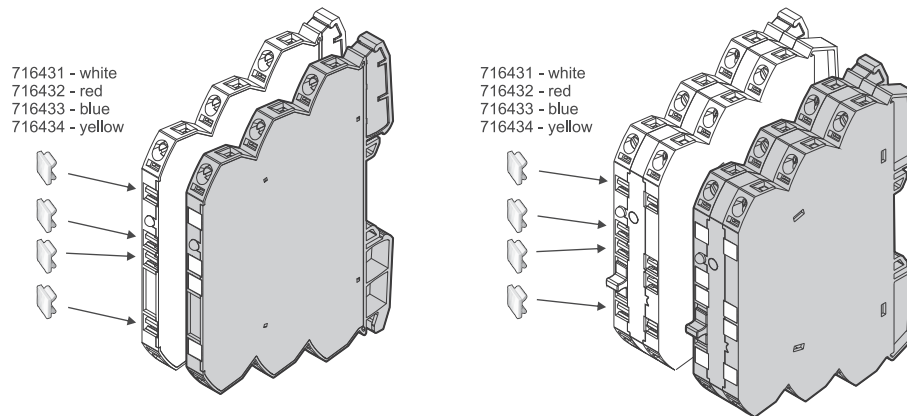
PIN assignment



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Use

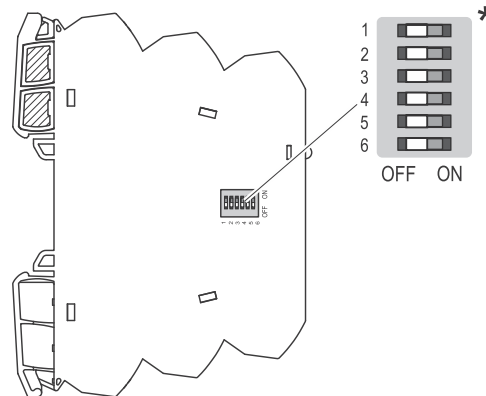


Use

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
PT100, 3-wire	
PT100, 2-wire	●
-50 – 50°C	
-50 – 100°C	●
-50 – 150°C	●
0 – 100°C	●●
0 – 150°C	●●
0 – 200°C	●●
0 – 300°C	●●
0 – 400°C	●●●