

Transducer LKM 282, for Thermocouples, galvanically isolated, 0..10V

Functional Description

The device type LKM 282 is a digital programmable galvanically isolated measuring transducer intended for mounting on standard rails. It is particularly designed for being used in cars. Furthermore, it is characterized by a high interference immunity and a wide range of supply voltages. Even in the case of a supply voltage of 8V, a linear output signal of 10V is obtained. The shock resistance has been optimized, too. The slim design (6mm) requires only little space on the standard rail. The measuring transducer can be programmed for different thermocouples according to DIN EN 60584-3. The thermoelectric emfs of the sensors are converted temperature-linearly into the output signal ranging from 0 to 10V. Here, temperature compensation takes place in the measuring transducer itself which, in turn, is configured via a micro-USB-port.



Technical Data

Input:	Thermocouples K, J, L, T, U, E, N, S, B, R, C configurable with in the respective range of definition
Zero:	entire measuring range depending on thermocouple
Span:	>50K
Linearity error:	< 0.3K
Measurement error:	< 0.2%
Error of reference junction:	< +/- 0.5°C
Supply voltage:	8..35VDC, 8..26VAC polarity-safe
Max. current consumption:	<15mA at 24VDC
Galvanic isolation:	>2.5kV
Output:	0..10V / 10..0V current-limited (1mA)
Sensor break:	>10V typically 11V
Short circuit:	voltage value for room temperature
Responsetime:	<0.5s
TC:	<100ppm/K
Operating temp. range:	-40...85°C
Humidity:	<95%
Mounting:	35mm DIN-rail
Material:	polyester
Dimensions:	100x6x93mm (HxWxD)
Type of terminals:	screw terminals spring-cage terminals are possible
Clamping range:	0.2...2.5mm ²
Weight:	approx.54g
Vibration:	147..500Hz / 300 m/s ² 500Hz..2K / 200 m/s ²
EMC	
Emission and Noise immunity:	EN 61326-1:2006 EN 61326-2-3:2006

Schematic Diagram

