

Analog signal converters

CC-U/STD, CC-U/RTD, CC-U/TC

Technical data

Input circuits J-G-H	CC-U/STD			CC-U/RTD	CC-U/TC
	Current	Voltage	Potential-meter	Temperature sensors	Thermocouples (IEC 584-1 and 2)
Input signal	0-20 mA 4-20 mA 10-50 mA 0-1 mA	0-100 mV 0-1 V 0-5 V 1-5 V 0-10 V 2-10 V ± 10 V	470 Ω - 1 MΩ	PT10, PT100, PT1000 (IEL 751 and JICC 1604)	TC.K TC.J TC.T TC.S TC.E TC.N TC.R TC.B
Limitation of input signals	± 55 mA	± 11 V	10 kΩ	-	-
Temperature range	-	-	-	Max. Temperature adjustable: 6-60 °C for PT1000 50-500 °C for PT100 500-850 °C for PT10	refer to temperature specs. of individual thermocouples
Influence of line resistance	-	-	-	0.015 °C/Ω	< 0.01 % / 100 Ω
Gain adjustment range (universal devices)	0.9- 110 mA	45 mV - 22 V	-	-	-
Offset adjustment range (universal devices)	-137.5 % ... +62.5 %			± 5 %	± 10 %
Input impedance	for different ranges			-	-
without detection of input signal interruption	51 Ω	6 MΩ	3 GΩ	-	-
with detection of input signal interruption	51 Ω	3.5 MΩ	9.5 GΩ	-	-
Suppression at 50 Hz	-	-	-	-	> 40 dB
Common-mode rejection	-	-	-	120 dB	105 dB
Output circuits D-F A-C					
	Current			Voltage	
Output signal	0-20 mA, 4-20 mA			0-5 V, 1-5 V, 0-10 V, 2-10 V, ± 10 V	
Output burden	≤ 600 Ω			≥ 4.7 KΩ	
Accuracy ¹⁾	±0.1 % of full-scale			±0.2 % of full-scale	±0.1 % of full-scale
Temperature coefficient	±150 ppm/°C			±250 ppm/°C	±200 ppm/°C at min offset ±400 ppm/°C at max. offset
Residual ripple	-	-	-	< 0.15 %	-
Response time	200 μs			10 ms	200 ms
Transmission frequency	1 kHz			80 Hz	2 Hz (to -3 dB)
Supply circuits K - M					
Supply voltage	24-48 V DC / 24 V AC			110-240 V AC / 100-300 V DC	
Supply voltage tolerance	DC: -15 % ... + 15 %			AC: -15 % ... + 10 %	
Power consumption	2 W at 24 V DC			4.5 VA at 230 V AC	
Indication of operational states					
Supply voltage	U: green LED				
Isolation data (between all isolated circuits)					
Isolation test	1.5 kV				
Test voltage	1.5 kV / 50 Hz				
General data					
Temperature range	operation	-20...+60 °C			
	storage	-40...+80 °C			
Mounting position	any				
Mounting on DIN rail	snap-on mounting / screw mounting with adapter				
Wire size	solid wire	plug-connector with screw terminals 1.5 mm² (16 AWG)			
	stranded wire	plug-connector with screw terminals 2.5 mm² (14 AWG)			
Electromagnetic compatibility					
Interference immunity	acc. to EN 61000-6-2				
electrostatic discharge (ESD)	acc. to IEC/EN 61000-4-2				
electromagnetic field	acc. to IEC/EN 61000-4-3				
fast transients (Burst)	acc. to IEC/EN 61000-4-4				
powerful impulses (Surge)	acc. to IEC/EN 61000-4-5				
HF line emission	acc. to IEC/EN 61000-4-6				
Interference emission	acc. to EN 61000-6-4				

¹⁾ includes: non-linearity, factory setting, drift of temperature, supply voltage and output load