Switch Selectable Input-Output Galvanic Isolator

Product features

- Selectable input/output ranges with front panel switches:
  0-20 mA / 4-20 mA / 0-10 V / 2-10 V input
  0-20 mA / 4-20 mA / 0-10 V / 2-10 V output
- 3 way isolation
- 20 V transmitter supply on the input for two wire transmitters
- Non-linearity: <0,01%
- Temperature-coefficient: 25 ppm / °C typ.
- 20-50 VDC / 19-35 VAC,
  90-250 V AC/DC power supply
- TS-35 rail mounting, 12,5 mm width



Type designation

DT1102	19-50 VDC / 19-35 VAC power supply
DT1102 PS	90-250 V AC/DC power supply

DT1102 (PS) Switch Selectable Input-Output Galvanic Isolator provide signal transmission and conversion between DC current or DC voltage signal source and signal processing units.
The instruments feature complete 3-way isolation: the input, the output and the power supply are isolated from each other.
Continuous isolation voltage is 250 VAC eff, between the input, the output and the power supply.
The instrument provides 20 VDC / 24 mA on the input for supplying passive two wire transmitters
The DT1102 is particularly advantageous in industrial plants where different signal levels are in use.

The input/output ranges are selectable with front panel switches:		0-20 mA / 4-20 mA / 0-10 V / 2-10 V input 0-20 mA / 4-20 mA / 0-10 V / 2-10 V output
The instruments has two inputs:	current:	0 (4) mA - 20 mA*
	voltage:	0 (2) V - 10 V*
The instruments has two outputs:	current:	0 (4) mA - 20 mA*
	voltage:	0 (2) V - 10 V*.
	* it may be use only one input and one output at a time.	
There are two power supply version:	DT1102:	20-50 VDC / 19-35 VAC
	DT1102 PS:	90-250 V AC/DC

The transmission parameters are outstandingly good: the nonlinearity is < 0,01 %, and the temperature coefficient is < 25 ppm / °C typical.
Front panel LED's indicate the power on state and the error states (input / output overrange, internal errors, ...).

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Technical specification

Safety data:		
The connection terminals of the supply voltages are isolated from each other, the isolation is in compliance with the standard EN 61010-1, taking into consideration the following:		
Pollution level:	2	
Measurement category:	II	
Input parameters:		
Input signall:	DC current or DC voltage	
Ranges:	0-20 mA, 4-20 mA, 0-10 V, 2-10V	
Overload:	400 mA (current input)	
	100 V (voltage input)	
Input resistancia (current input) :	10 ohm	
Input resistancia (voltage input):	102 kohm	
Transmitter power supply:		
Voltage:	>20 V (20 mA load)	
Overcurrent protection:	25 mA	
Output parameters:		
Output signal:	DC current or DC voltage	
Ranges:	0-20 mA, 4-20 mA (current output)	
	0-10 V, 2-10 V (voltage output)	
Overdriving ability:	22,5 mA (current output)	
	11 V (voltage output)	
Load resistance:	≤650 ohm (current output)	
	≥500 ohm (voltage output)	
Output resistance:	>5 Mohm (current output)	
	<0.5 ohm (voltage output)	
Error of output @ 25 ºC ±2 ºC:	±0,05%	
Nonlinearity:	0,01 % (max.)	
Temperature coefficient:	tip.: 25 ppm / ºC; max.: 50 ppm / ºC	
Supply-voltage effect:	practically zero	
Settling time:	250 ms (90 %) / 300 ms (99 %)	
Galvanic isolation:		
Working Voltage:	250 Veff (between the input, the output and the power supply terminals)	
Test voltage:	2500 VDC (1 min.)	
Power supply:		
Supply voltage:	DT1102:	20-50 VDC / 19-35 VAC
	DT1102 PS:	90-250 V AC/DC
Power consumption:	DT1102:	≤ 1,6 W / 2,2 VA
	DT1102 PS:	≤ 1,8 W / 2.4 VA
Ambient conditions:		
Operating temperature range:	0-50°C	
Storage temperature range:	-20 - +70 °C	
Relative humidity:	90 % (max., non-condensing)	
Place of installation:	cabinet	
Mounting position:	vertical (horizontal rail position)	
Electromagnetic compatibility (EMC)		
Accordance with the standard EN 61326-1:2007		
Emission:	MSZ EN 55011:2000-A- class	
Immunity:		
ESD:	4 kV/8 kV surface / air	
BURST:	2 kV/1 kV power / signal	
SURGE:	1 kV	
Conducted RF immunity:	3 Veff	
Power failure bypass:	20 ms @ 190-250 VAC	
General data:		
Housing:	TS-35 rail mounting housing material: polyamide PA6.6	
Fireproof class:	V2-V0 / UL94	
Connection:	Pluggable screw-terminal	
Connecting cable:	1,5 mm^2	
Dimensions:	12,5 x 108 x 114 mm (width x height x depth)	
Mass:	0,15 kg	
Ingress Protection (EN 60529):	IP 20 (MSZ EN 60529)	

Detailed information see in operating instuctions. The Manufacturer maintans the right to change the technical data!

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