



Universal AC / DC transmitter

4179

- Measures AC current and voltage signals
- Outputs passive or active current signals
- Programming, process monitoring and diagnostics via 45xx
- Response time < 0.75 s and excellent accuracy better than 0.3%
- Universally powered by 21.6...253 VAC / 19.2...300 VDC











Application

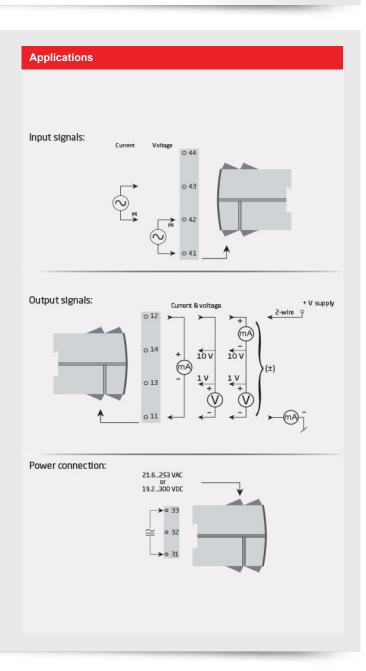
- The 0...5 AAC RMS range makes it possible to accurately measure a typical current transformer.
- The 0...300 VAC RMS range allows accurate supply voltage monitoring.
- · The 4179 measures standard input ranges, and can be freely configured to customer-defined input range.
- · Converts narrow AC current / voltage inputs to wide bipolar or unipolar outputs, e.g. 0...1 VAMS input = ±10 volt or 4...20 mA output with a minimum span of 0.5 AAC RMS or 0.5 VAC RMS.
- The detachable 45xx displays provide enhanced diagnostics.
- · Configurable input limits control the output value for increased
- · The 4179 has been designed according to strict safety requirements and is therefore suitable for application in SIL 2 installations
- · Suitable for the use in systems up to Performance Level "d" according to ISO-13849.

Technical characteristic

- · The latest analog and digital techniques are used to obtain maximum accuracy and immunity to interference.
- · Possibility of output safety feedback by selecting S4...20 mA output.
- The current output can drive up to 800 Ohms, with an adjustable response time of 0.0...60.0 seconds.
- Exceptional mA output load stability of <0.001% of span / 100 Ohm
- Meets the NAMUR NE21 recommendations, ensuring high accuracy in harsh EMC environments.
- · Meets the NAMUR NE43 recommendations, allowing the control system to easily detect an input error.
- Tested to a high 2.3 kVAC, 3-port galvanic isolation level.
- · Excellent signal to noise ratio of > 60 dB.

Mounting / installation / programming

- · Very low power consumption means units can be mounted side by side without an air gap – even at 60°C ambient temperature.
- · Configuration, monitoring, 2-point process calibration and more are accomplished using PR's 45xx detachable displays.



Type 4179

Environmental Conditions		Custom configurable signal	
		range	0300 VAC / 40400 Hz
Operating temperature		Min. measurement range (span)	
Storage temperature		Input resistance	Nom. 3 MΩ 100 pF
Calibration temperature			
Relative humidity		Output specifications	
Protection degree		•	
Installation in	Pollution degree 2 & meas. / overvoltage cat. II	Active unipolar and bipolar mA output	
	overvoitage cat. II	Programmable ranges	
Mechanical specifications		Programmable ranges	
		Programmable ranges	
Dimensions (HxWxD)		Load (@ current output)	≤ 800 Ω
Dimensions (HxWxD) w/ 4501/451x		V-curve function, active signals,	
Weight approx		100-0-100%	20-0-20 mA
Weight incl. 4501 / 451x (approx.)		Passive 2-wire mA output	
DIN rail type	DIN EN 60715/35 mm	Programmable ranges	0 20 and 4 20 mA
Wire size	0.132.08 mm ² AWG 2614	Programmable ranges	
One to select the second	stranded wire	V-curve function, 100-0-100%	
Screw terminal torque		External loop supply	
Vibration		External loop supply	3.330 V
213.2 Hz		Current output	
13.2100 Hz	±0./ g	Signal range	023 mA (unipolar)
0		Signal range	
Common specifications		Current limit	
Supply		Current limit	
Supply voltage, universal	21.6253 VAC, 5060 Hz or	Load stability	
	19.2300 VDC	Response time, programmable	
Max. required power			
Internal power dissipation	≤ 2.5 W	Voltage output	
la alatian coltana		Programmable signal ranges	0/0.21; 0/15 ; 0/210;
Isolation voltage	0.014/40	Programmable signal ranges	10.2/0; 51/0; 102/0 V
Test voltage			
Working voltage	VAC (basic)	Programmable signal ranges	
	VAC (basic)	V-curve function, 100-0-100%	
Response time		Load (@ voltage output)	
Response time (090%, 10010%)	< 0.75 s	Response time, programmable	0.060.0 \$
	DD 4500		
Programming	PR 4500 communication interfaces	Observed authority requireme	ents
Cianal dynamica innut			
Signal dynamics, input		EMC	
Signal dynamics, output		LVD	
Signal / noise ratio	> 60 dB	RoHS	
Output referred common mode rejection ratio	0.02 ppm / VHz	EAC	TR-CU 020/2011
Accuracy	Retter than 0.3% of selected	Annroyala	
Accuracy	range*	Approvals	
EMC immunity influence		c UL us, UL 508	
Extended EMC immunity: NAMUR	<u>2010</u> / 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	SIL	
NE21, A criterion, burst	< ±1% of span*		SIL applications
of span		NB	
•	ŭ	NB	
Input specifications		* / **	For custom configurable
Current input			signal ranges, general
Signal range	0 5 440 / 400 47		accuracy and EMC specifications are 0.3% of full
Maximum input limit			specifications are 0.3% of full scale
Programmable measurement ranges			Jouic
Frogrammable measurement ranges	00.5; 01; 02.5 & 05 AAC		
Custom configurable signal			
range	05 AAC /40400 Hz		
Min. measurement range (span)			
Input resistance			