Energy Management
Compact Transducer for AC Measurements
Type CVT-DIN AV1/AV4/AV5

CARLO GAVAZZI

- For AC current/voltage measurement
- Field adjustment capability
- For DIN-rail mounting
- Degree of protection: IP 50

Product Description

Compact transducer for AC current/voltage measurements with field adjustment capability. The housing is for DIN-rail mounting and ensures a degree of protection of IP 50.

Ordering Key

CVT-DIN AV5AD01X

- Model
- Range code
- Measurement
- Power supply
- Setpoints
- Rated output
- Calibration

Type Selection

Range code

AV1:	100 VAC - 1 AAC (max. 120 VAC - 1.2 A)
AV4:	100 VAC - 5 AAC (max. 120 VAC - 6 A)
AV5:	500 VAC - 5 AAC (max. 600 VAC - 6 A)

Power supply

A:	24 VAC, -15% +10%, 50/60 Hz [1]
B:	48 VAC, -15% +10%, 50/60 Hz [1]
C:	115 VAC, -15% +10%, 50/60 Hz [1]
D:	230 VAC, -15% +10%, 50/60 Hz (standard)

Rated output

1:	Analogue output 0 to 20 mA (standard)
2:	Analogue output 4 to 20 mADC [1]
3:	Analogue output 0 to 10 VDC [1]
4:	Analogue output 0 to ±1 VDC [1]

Calibration

X:	Standard calibration
Y:	Special calibration, use "Y" followed by requested value

[1] On request

Input Specifications

Accuracy (@ 25°C ± 5°C, R.H. ≤ 60%)	± 0.5% f.s., (0.1 In/Un to 1 In/Un)
Additional errors:	The given accuracy already includes: frequency, power supply, output load influences
Humidity	< 0.3%, 60% to 90% R.H.
Input frequency	< 0.4%, 62 to 400 Hz
Magnetic field	< 0.5%, @ 400 A/m
Ripple	≤ 1% according to IEC 60688-1 and EN 60688-1
Rated input	
AV1:	1 A (1 V internal shunt/1 Ω imp)/ 100 VAC (200 kΩ impedance)
AV4:	5 A (250 mV internal shunt/ 0,05 Ω impedance) / 100 VAC (200 kΩ imp.)
AV5:	5 A (250 mV internal shunt/ 0,05 Ω impedance) / 500 VAC (1 MΩ imp.)

AC frequency range	48 to 62 Hz
Overload protection	
Cont.: Current:	1.2 x rated input
Voltage:	1.2 x rated input
For 1 s: Current:	20 x rated input
Voltage:	2 x rated input

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General Specifications

Warm-up time	15 minutes
Operating temperature	0 to 50°C (32 to 122°F) (R.H. < 90% non-condensing)
Storage temperature	-10 to 60°C (14 to 140°F) (R.H. < 90% non-condensing)
Insulation reference voltage	300 V_{rms} to ground
Insulation	2000 V_{rms} between output and measuring input, output and supply input. 4000 V_{rms} between input/output and ground
Dielectric strength	4000 V_{rms} for 1 minute
Noise rejection	
CMRR	≥ 80 dB, 48 to 62 Hz
EMC	EN 50081-1, EN 50082-1

Safety standards	
Safety requirements	IEC 601010-1, EN 61010-1
Product requirements	IEC 60688-1, EN 60688-1
Connector	Screw-type, max. 2.5 mm² wires
Housing	
Dimensions	4-DIN modules, 58.5 x 89 x 71.5 mm
Material	ABS, self-extinguishing: UL 94 V-0
Degree of protection	IP 50
Weight	300 g approx. (packing included)
Approval	CE

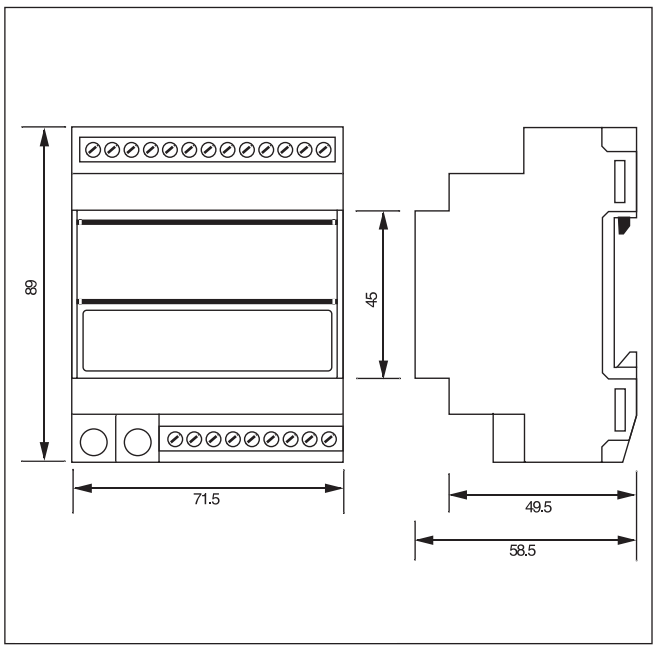
Output Specifications

Range/load	
0 to 20 mA	Load: ≤ 500 Ω
4 to 20 mA	Load: ≤ 500 Ω
0 to 10 V	Load: ≥ 10 kΩ
0 to ±1 V	Load: ≥ 10 kΩ
Adjustment	Easy field adjustment from 50 to 130% of the I/U inputs which can be modified without any calibrator being requested
Response time	300 ms typical
Temperature drift	200 ppm/°C

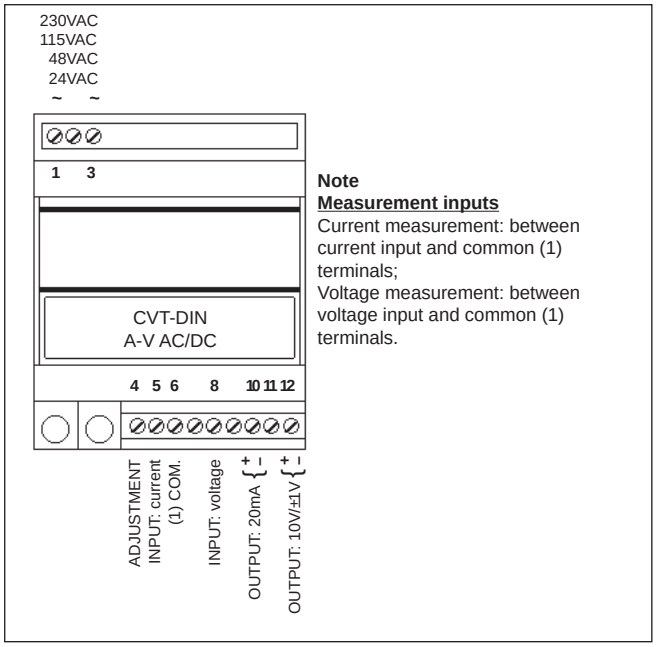
Supply Specifications

AC supply	230 VAC, -15% +10%, 50/60 Hz (standard) 24 VAC, 48 VAC, 115 VAC, -15% +10%, 50/60 Hz (on request)
Power consumption	≤ 5 VA

Dimensions



Connections



Note
Measurement inputs
Current measurement: between current input and common (1) terminals;
Voltage measurement: between voltage input and common (1) terminals.