ADR-D 400 D90

VE045100



Three-phase DIN-rail network analyser (7 modules), 400 Vac supply, direct connection 100 A, with RS-485 MODBUS. Designed for TRMS measurement of voltage, current, active, reactive and apparent power, power factor, frequency, active and reactive energy. Isolated RS-485 serial output supports MODBUS protocol, enabling connection to a Master device (PC/PLC) for data display and storage.

General features

- Through-holes for direct insertion
- Keys for device programming
- Backlit display for visualisation of electrical quantities
- Power supply separate and independent from measurements
- Maximum measurable current: 100 A
- Maximum continuous overload in class 1 operation: 100 A
- Direct voltage conductor insertion
- Direct current conductor insertion (diameter 12.5 mm – max conductor cross-section 25 mm²)
- Displaying via LCD display
- Resettable active energy meter
- Resettable reactive energy meter
- Backlighting with timer or deactivation option
- RS-485 output with MODBUS RTU protocol
- Can be used in three-phase systems with neutral (with balanced or unbalanced load)
- Can be used in three-phase systems without neutral (only with balanced and symmetrical load)
- Overcurrent or overvoltage indication
- Insertion error signal
- Measured quantities:
  - Voltages (TRMS) (chained and phase)
  - Currents (TRMS)
  - Active, reactive, apparent power
  - Active and reactive energy
  - Frequency
  - Power factor (cos φ)
  - Phase angle

Technical specifications

Power supply	
Power supply	400 Vac (-15% ÷ +10%)
Frequency	50 / 60 Hz
Absorption	< 4 VA

Vemer S.p.A. declines all responsibility for the use of the products for purposes other than those for which they are intended, as indicated in the technical documentation. Vemer S.p.A. reserves the right to make, without prior notice, such changes as may, in its sole discretion, improve the technical and functional characteristics of the products and the related production logic. The technical characteristics and images of the products indicated are given for information only and are not binding in any way, since they may be modified without prior notice.

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Measure	
Current measurement accuracy	± 0.5% of full scale ± 1 digit (f.s. 90 A)
Voltage measurement accuracy	± 0.5% of full scale ± 1 digit (f.s. 253 V)
Frequency measurement accuracy	± 0,1 Hz ± 1 digit
Active energy measurement accuracy	Class 1
Reactive energy measurement accuracy	Class 3
Power factor measurement accuracy	± 1%, ± 1 digit
Active power measurement accuracy	± 1% full scale ± 1 digit (f.s. 100 W - 1 kW - 10 kW - 100 kW)
Reactive power measurement accuracy	± 1% full scale ± 1 digit (f.s. 100 W - 1 kW - 10 kW - 100 kW)
Voltage circuit absorption	< 2,5 VA
Current circuit absorption	< 2,5 VA
AC current range	100 A
AC voltage range	(phase-to-phase) 440 V (phase-neutral) 3x253 V
Type of insertion - current	Direct through through-hole
Type of insertion - voltage	Direct
Nominal - rated current	10 A
Operating conditions	
Operating temperature range	-10 ÷ 45 °C
Relative humidity	10% ÷ 90% non-condensing RH
Storage temperature range	-25 ÷ 70 °C
Viewing	
Display	Backlit LCD
Outputs	
Serial interface output	✓
Terminations	
Termination type	Terminal blocks
Maximum cable cross-section	(voltage input) 2.5 mm² (current input) 25 mm² (pulse output) 2.5 mm²
Mechanical features	
Protection degree	IP20 IP51 (on the front)
Overall dimensions	
Height (A)	87 mm
Width (B)	126 mm

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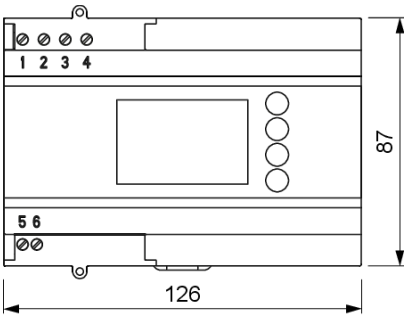
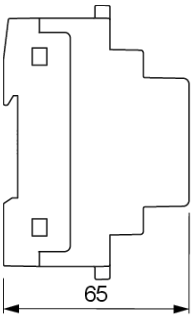
Overall dimensions	
Depth (C)	65 mm

Dimensions

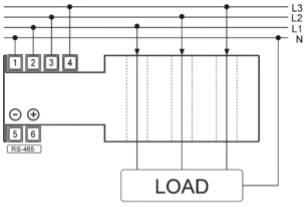
Front View



Side View



Wiring diagram



Reference standards

Compliance with Community Directives:

• 2014/35/UE (LVD) • 2014/30/UE (EMCD) • 2011/65/UE e 2015/863/UE (ROHS)

is declared with reference to the following Standards:

• EN 61010-1 • EN IEC 61000-6-2 • EN IEC 61000-6-3 • EN IEC 62052-11 • EN IEC 62053-21 • EN IEC 62053-23 • EN IEC 63000

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