ENGLISH

Datasheet

Article No:

136-5385 Digital AC Ammeter, 48x96, 1Phase, 1 or 5 Amps AC, Supply 40-300V ac/dc
136-5387 Digital AC Ammeter, 96x96, 1Phase, 1 or 5 Amps AC, Supply 40-300V ac/dc

136-5388 Digital AC Voltmeter, 48x96, 1Phase, 60…600 Volts LN AC, Supply 40-300V ac/dc
136-5389 Digital AC Voltmeter, 96x96, 1Phase, 60…600 Volts LN AC, Supply 40-300V ac/dc

RS Pro

RS Pro

The RS Pro digital panel meters (DPM) have been designed for industrial applications, which frequently require precise and onsite adjustment of the display range. It can be used in industrial automation and for laboratory uses.

Benefits:

- Fast & Easy Installation on panel without any need of external swivel screws (clip-in mounting for 96x96 size only)
- True RMS measurement.
- 4 Digits ultra bright LED Display (up to 9999).
- On site Programmable CT/PT Ratios.
- User selectable CT Secondary 1A/5A. ·
- User selectable PT Secondary from 60...600 Volts LN AC.
- Wide auxiliary Power Supply which can accept any input between 40V – 300V AC/DC.
- Storage of MIN / MAX values.

Product Features

True RMS measurement
The instrument measures distorted waveform up to 15th Harmonic.

On site programmable PT/CT ratios:
It is possible to program primary of external potential Transformer (PT) for Voltage DPM & primary of external Current Transformer (CT) for Current DPM on site via front panel keys by entering into Programming mode.

User selectable CT Secondary 5A/1A
The secondary of external Current Transformer (CT) can be programmed on site to either 5A or 1A for Current DPM using front panel keys.

User selectable PT Secondary
The secondary of external Potential Transformer (PT) can be programmed on site from 660...600 Volts LN AC for Voltage DPM using front panel keys.

User selectable CT Primary
The Primary of current transformer can be programmed on site from 1A to 999kA for Current DPM using front panel keys.

User selectable PT Primary
The Primary of Potential transformer can be programmed on site from 60 VLN to 999 kVLN for Voltage DPM using front panel keys.

Onsite selection of Auto scroll / Fixed Screen
User can set the display in auto scrolling mode or fixed screen mode using front panel keys.

4 digits LED display (up to 9999):
14mm ultra bright 4 digits LED display.

Higher Security
Provides Security with user programmable password protection.

Function keys:
Using two function keys it is possible to Display various parameters in Current and Voltage DPM. These function keys are also used for programming Password, CT/PT Primary & Secondary values, Reset min/max values, Auto ON/OFF mode selection.

Screen No. storage
In case of power failure, the instrument memorizes the last screen stored. For every 1 min. the instrument stores the screen no. in the non-volatile memory.

Min Max storage of parameters possible
The instrument stores minimum and maximum values. Every 60 sec stored values are updated.

Low back depth
The instrument has very low back depth (behind the panel) of less than 54mm for 96x96 and 68mm for 48x96 type DPM.

Enclosure Protection for dust and water:
Conforms to IP 50 (for front face) IP 20 (for back) & as per IEC60529.

EMC Compatibility
Compliance to International standard IEC 61326.

- Interference Emission : IEC 61326-1 : 2005, Class A
- Interference Immunity : IEC 61326-1 : 2005
- Electrostatic discharge : IEC 61000-4-2 -- 4kV/8kV contact/air. (ESD)
- EM Field : IEC 61000-4-3 -- 10 V/m (80 MHz to 1 GHz)
  -- 3 V/m (1.4 Ghz to 2 GHz)
  -- 1 V/m (2 GHz to 2.7 GHz)
- Burst : IEC 61000-4-4 -- 2 kV (5/50 ns, 5 kHz)
- Surge : IEC 61000-4-5 -- 1 kVLL / 2 kVLN.
- Conducted RF : IEC 61000-4-5 -- 3 V (150 kHz to 80 Mhz)
- Rated Power Frequency magnetic Field : IEC 61000-4-8 -- 30 A/m
- Voltage dip : IEC 61000-4-11 -- 0% during 1 cycle.
  -- 40% during 10/12 cycles.
  -- 70% during 25/30 cycles.
- Short interruptions : IEC 61000-4-11 –
  0% during 25/30 cycles.
  25 cycles for 50 Hz test.
  30 cycles for 60 Hz test.

Technical Specifications

Input Voltage Article No: 136-5388 & 136-5389 Digital AC Voltmeter

Nominal input voltage (AC RMS)	Phase –Neutral 600VL-N AC.
Max continuous input voltage	120% of rated value
Nominal input voltage burden	< 0.3 VA approx.
System PT secondary values	60VLN to 600VLN programmable on site.
System PT primary values	60VLN to 999kVLN programmable on site.

Input Current Article No: 136-5385 & 136-5387 Digital AC Ammeter

Nominal input current	5A AC RMS
System CT secondary values	1A & 5A programmable on site.
System CT primary values	From 1A up to 999kA (for 1 or 5 Amp)
Max continuous input current	120% of rated value
Nominal input current burden	< 0.2 VA approx. per phase

Auxiliary Supply:

External Aux	40 V – 300V AC/DC (± 5 %)
Frequency range	45 to 65 Hz
VA burden	3 VA Approx.

Technical Specifications Continued

Environmental:

Operating temperature	0 to +50°C
Storage temperature	-25°C to +70°C
Relative humidity	0... 90% non-condensing
Warm up time	Minimum 3 minute
Shock	15g in 3 planes
Vibration	10... 55 Hz, 0.15mm amplitude

Enclosure:

Front	IP 50.
Back	IP 20.

Dimensions and Weights:

a) 96x96 DPM

Bezel size	96 mm x 96 mm DIN 43 718.
Panel cut-out	92 +0.8 mm x 92 + 0.8 mm.
Overall depth	55 mm.
Weight	300 gm. Approx.

b) 48x96 DPM

Bezel size	96 mm x 48 mm DIN 43 718
Panel cut-out	92 + 0.8 mm x 43.5 + 0.6 mm.
Overall depth	68 mm.
Weight	250 gm. Approx.

Overload Withstand:

Voltage	2 x rated value for 1 second, repeated 10 times at 10 second intervals
Current	20x rated value for 1 second, repeated 5 times at 5 min intervals

Operating Measuring Ranges:

Voltage Range	10... 120% of rated value
Current Range	10 ... 120% of rated value
Frequency	45...65 Hz

Reference conditions for Accuracy:

Reference temperature	23°C +/- 2°C
Input waveform	Sinusoidal (distortion factor 0.005)
Input frequency	50 or 60 Hz ±2%
Auxiliary supply voltage	Rated Value ±1%
Auxiliary supply frequency	Rated Value ±1%

Accuracy:

Voltage	±0.5% of range + 1 Digit (10... 100% of Nominal value)
Current	±0.5% of range + 1 Digit (10... 100% of Nominal value)

Technical Specifications Continued

Influence of Variations:
Temperature coefficient:

(for rated value range of use (0...50°C))	0.025%/°C for Voltage
	0.05%/°C for Current

Display update rate:

Response time to step input	1 sec approx.

Applicable Standards:

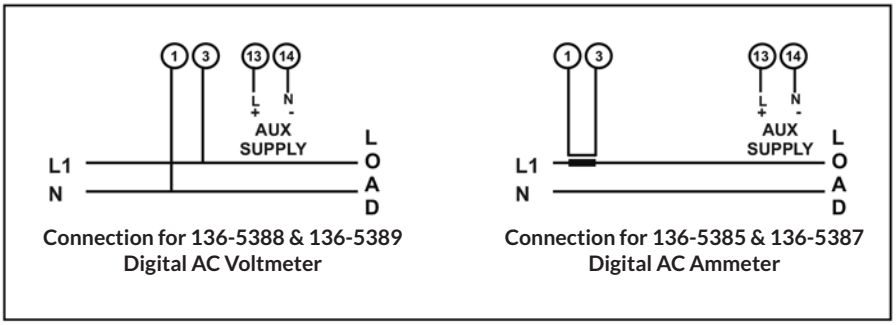
EMC	IEC 61326-1: 2005
Safety	IEC 61010-1-2001 , Permanently connected use
IP for water & dust	IEC60529

Safety:

Pollution degree:	2
Installation category:	III
High Voltage Test	3.3 kV AC, 50Hz for 1 minute between Aux. and measuring inputs

Electrical Connections

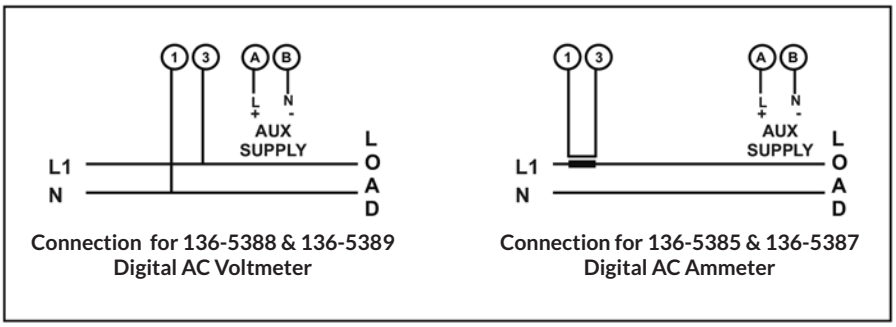
A) For 96x96 DPM



Connection for 136-5388 & 136-5389
Digital AC Voltmeter

Connection for 136-5385 & 136-5387
Digital AC Ammeter

B) For 48x96 PDM

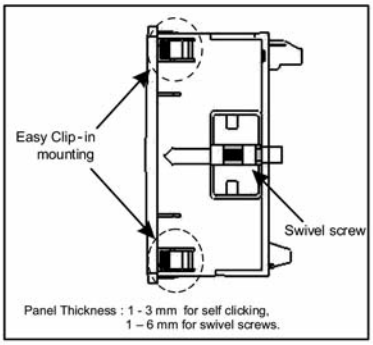


Connection for 136-5388 & 136-5389
Digital AC Voltmeter

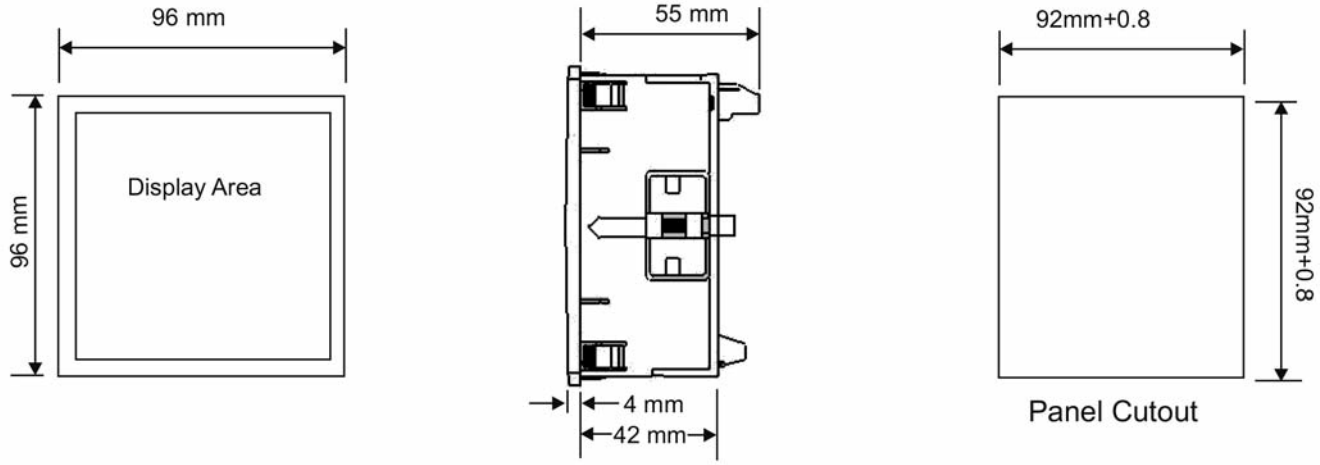
Connection for 136-5385 & 136-5387
Digital AC Ammeter

Installation:

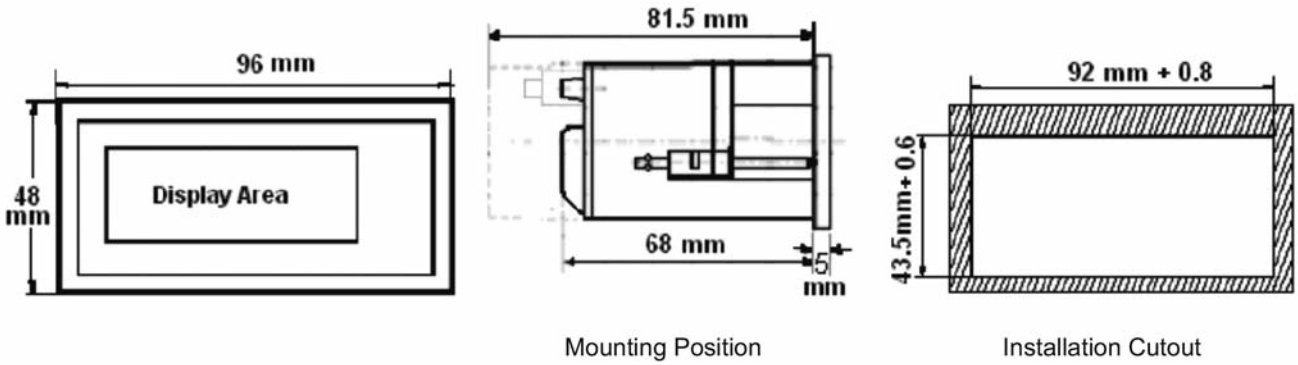
Easy Clip in installation on Panel for 96 x 96 size:



A) For 96x96 DPM



B) For 48x96 DPM



Ordering Information:

Article No: 136-5385
RS Pro
48X96mm, 1 Phase (Single Phase), AC Ammeter 14mm display
Input. 1 or 5 Amps AC,
Voltage supply. 40-300V AC/DC auxiliary
(Programmable CT primary and secondary values & Storage of MIN/MAX Values)

Article No: 136-5387
RS Pro
96X96mm, 1 Phase (Single Phase), AC Ammeter 14mm display
Input. 1 or 5 Amps AC,
Voltage supply. 40-300V AC/DC auxiliary
(Programmable CT primary and secondary values & Storage of MIN/MAX Values)

Article No: 136-5388
RS Pro
48X96mm, 1 Phase (Single Phase), AC Voltmeter 14mm display
Input. 60...600 Volts LN AC,
Voltage Supply. 40-300V AC/DC auxiliary
(Programmable PT primary and secondary values & Storage of MIN/MAX Values)

Article No: 136-5389
RS Pro
96X96mm, 1 Phase (Single Phase), AC Voltmeter 14mm display
Input. 60...600 Volts LN AC,
Voltage Supply. 40-300V AC/DC auxiliary
(Programmable PT primary and secondary values & Storage of MIN/MAX Values)

Articles No: 136-5388 & 136-5389 Digital AC Voltmeter	
Network type	**Displayed Parameter**
3) 1 Phase 2 wire	a. Phase Voltage V b. Max Voltage V c. Min Voltage V

Articles No: 136-5385 & 136-5387 Digital AC Ammeter	
Network type	**Displayed Parameter**
2) 1 Phase 2 wire	a. Phase Current A b. Max Phase Current A c. Min Phase Current A