ENGLISH

Datasheet

**Article No: 136-5377**
**Digital Multi-Function Meter, 96x96, 3Ph, V A F**

**Article No: 136-5378**
**Digital Multi-Function Meter, 96x96, 3Ph, V A F, with Limit Relay/Switch option**

# RS Pro

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- True RMS Measurement
- Onsite Programmable
- Limit Switch Output
- Low Back Depth
- 3 Line Ultra Bright LED Display
- Run Hour / On Hour indication

**RS Pro** measures important electrical parameters in 3 phase 4 Wire, 3 phase 3 Wire and 1 phase Network & replaces the multiple analog panel meters. It measures electrical parameters like AC Voltage, AC Current, Frequency & many more. The instrument also has an optional limit switch.

## Applications:

- Distribution Panels
- Electrical load monitoring
- Genset, Test Benches and Laboratories
- Motor Control Panels

## Product Features

**True RMS measurement**
Measures distorted waveform up to 15th Harmonic.

**Onsite programmable**
Onsite Programable System Configuration 3PH4W / 3PH3W and Single phase. Onsite Programable CT ratios and PT ratios

**Limit Switch (Optional)**
Potential free, very fast acting relay contact configurable as limit (alarm) switch. The instrument will trip the relay if the programmed parameter exceeds the programmed Trip Limits.

**3 line 3 digits Ultra Bright LED display**
Simultaneous display of 3 different parameters.

**Run Hour, ON Hour, Number of Interruptions**
Run Hour records the number of hours load is connected. ON Hour is the period for which the auxiliary supply is ON. Number of Interruptions indicates the number of times the Auxiliary Supply was interrupted.

**RPM Measurement**
The instrument display Rotation per minutes for generator applications. Number of poles can be set on site depending upon application requirement.

**Storage of Parameters possible**
The instrument stores minimum and maximum values for System Voltage, System Current, Run Hour, ON Hour & number of Interrupts. Every 60 sec stored values are updated.

**Low Back Depth**
The instrument has very low back depth (behind the panel) of less than 55 mm.

**Parameter Screen recall**
In case of power failure, the instrument memorizes the last displayed screen.

**Onsite selection of Auto scroll / Fixed Screen**
User can set the display in auto scrolling mode or fixed screen mode locally via front panel keys by entering into Programming mode.

**Enclosure Protection for dust and water**
Conforms to IP 54 (front face) as per IEC60529

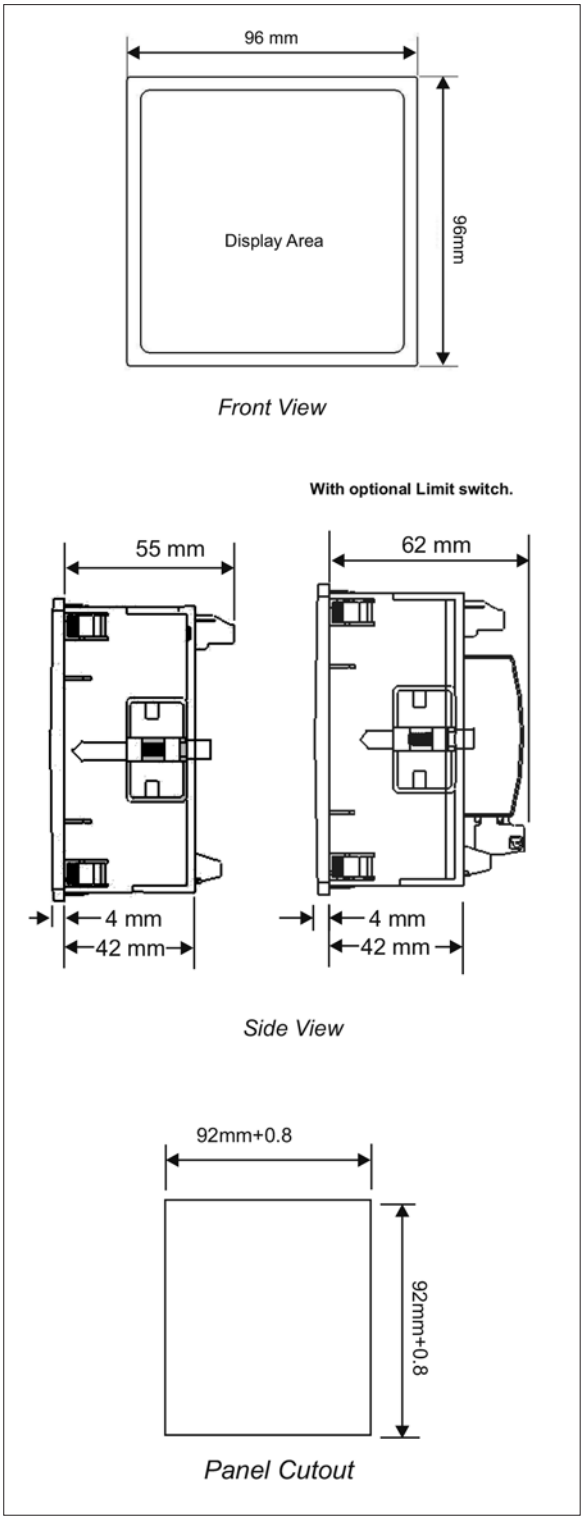
**Compliance to International Safety standards**
Compliance to International Safety standard IEC 61010-1- 2010

**EMC Compatibility**
Compliance to International standard IEC 61326

## Technical Specifications

| | |
|---|---|
| **Input Voltage:** | |
| Nominal input voltage (AC RMS) | 100 VL-L - 500 VL-L (57.7 VL-N - 290VL-N) |
| System PT primary values | 100 VLL to 799 kVLL programmable on site. |
| System PT secondary values | 100 VLL to 500 VLL programmable on site. |
| Max continuous input voltage | 120% of Nominal value |
| **Input Current:** | |
| Nominal input current | 1A / 5A AC RMS |
| System CT primary values | From 1A up to 799 kA programmable on site. |
| System CT secondary values | 1A / 5A Programmable at site. |
| Max continuous input current | 120% of Nominal value |
| **Auxiliary Supply:** | |
| External Aux | 40 V – 300V AC-DC (± 5 % )<br>or<br>20 V – 40V AC / 20 V – 60V DC |
| Aux supply frequency | 45 to 65 Hz range |
| **VA Burden:** | |
| Nominal input voltage burden | < 0.3 VA approx. per phase |
| Nominal input current burden | < 0.2 VA approx. per phase |
| Auxiliary Supply burden | < 4 VA approx |
| **Operating Measuring Ranges:** | |
| Current | 5... 120% of Nominal value |
| Voltage | 10... 120% of Nominal value |
| Frequency | 45 - 65 Hz |
| **Reference Condition for Accuracy:** | |
| Reference Temperature | 23°C +/- 2°C |
| Input Frequency | 50/60 Hz ±2% |
| Current | 10... 100% of Nominal value |
| Voltage | 20... 100% of Nominal value |
| Auxiliary Supply Voltage | Nominal Value ±1% |
| Auxiliary Supply Frequency | Nominal Value ±1% |
| **Accuracy:** | |
| Voltage | ±1.0% of Nominal Value |
| Current | ±1.0% of Nominal Value |
| Frequency | ±0.5% of Mid Frequency |

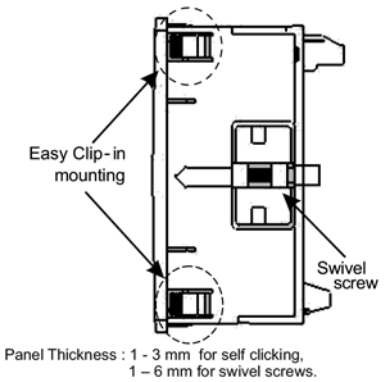
## Dimension Details



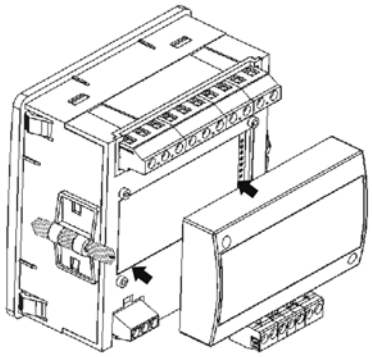
## Technical Specifications

| | |
|---|---|
| **Overload Withstand:** | |
| Voltage | 2 x Nominal value for 1 second, repeated 10 times at 10 second intervals |
| Current | 20x Nominal value for 1 second, repeated 5 times at 5 min intervals |
| **Influence of Variations**: | |
| Temperature coefficient | 0.05%/°C |
| **Display update rate:** | |
| Response time to step input | 1 sec approx. |
| **Applicable Standards:** | |
| EMC | IEC 61326 |
| Immunity | IEC 61000-4-3. 10V/m min – Level 3 industrial<br>Low level |
| Safety | IEC 61010-1-2010 , Permanently connected use |
| IP for water & dust | IEC60529 |
| Pollution degree | 2 |
| Installation category | III |
| High Voltage Test | 3.3 kV AC, 50Hz for 1 minute between all Electrical circuits |
| **Environmental** | |
| Operating temperature | -10 to +55°C |
| Storage temperature | -20 to +65°C |
| Relative humidity | 0... 90% non condensing |
| Warm up time | Minimum 3 minute |
| Shock | 15g in 3 planes |
| Vibration 1 | 0... 150 ... 10 Hz, 0.15mm amplitude |
| **Interfaces** | |
| Relay(Optional) | 240 VAC ,5 A<br>Configured as Limit Switch |

## Installation

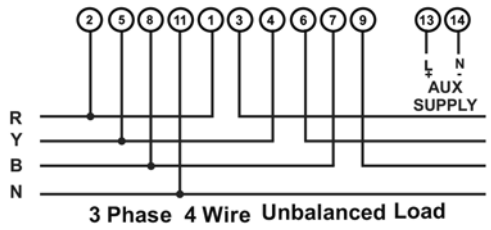



Easy Clip in Installation on Panel.

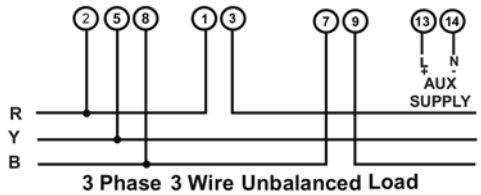


Optional Limit Switch pluggable module.

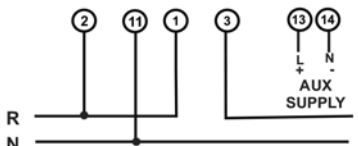
## Electrical Connection




3 Phase 4 Wire Unbalanced Load




3 Phase 3 Wire Unbalanced Load




1 Phase 2 Wire

## Display Parameter:

| Sr No | Parameter | 3 Phase 4 Wire | 3 Phase 3 Wire | Single Phase 2W |
|---|---|---|---|---|
| 1. | System Voltage | ✓ | ✓ | × |
| 2. | Voltage R–N | ✓ | × | ✓ |
| 3. | Voltage Y–N | ✓ | × | × |
| 4. | Voltage B–N | ✓ | × | × |
| 5. | Voltage R–Y | ✓ | ✓ | × |
| 6. | Voltage Y–B | ✓ | ✓ | × |
| 7. | Voltage B–R | ✓ | ✓ | × |
| 8. | System Current | ✓ | ✓ | × |
| 9. | Current R | ✓ | ✓ | ✓ |
| 10. | Current Y | ✓ | ✓ | × |
| 11. | Current B | ✓ | ✓ | × |
| 12. | Frequency | ✓ | ✓ | ✓ |
| 13. | RPM | ✓ | ✓ | ✓ |
| 14. | Max (System Voltage / System Current) | ✓ | ✓ | ✓ |
| 15. | Min (System Voltage / System Current) | ✓ | ✓ | ✓ |
| 16. | Run Hour | ✓ | ✓ | ✓ |
| 17. | On Hour | ✓ | ✓ | ✓ |
| 18. | Number of Auxiliary Interruptions | ✓ | ✓ | ✓ |

✓- Available × - Not available

## Ordering Information:

**Article No : 136-5377**
RS Pro Volts, Amps and Frequency, 96X96mm 3 Phase 3/4W programmable onsite,
AC VAF meter, 14mm display,
Input. 100-500VLL,
Input. 1 or 5 Amps AC,
Supply Voltage. 40-300V AC/DC auxiliary (Programmable CT/PT primary and secondary values)

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AC VAF meter, 14mm display,
Input. 100-500VLL,
Input. 1 or 5 Amps AC,
Supply Voltage. 40-300V AC/DC auxiliary (Programmable CT/PT primary and secondary values with Limit Switch/Relay O/P)