

DPM series

Range of digital panel meters



Pass through
mechanism



Best-in-class
accuracy



Alerts



Touch
keys

Easy to install and use, high in accuracy and alerts to act

The DPM series is a range of digital panel meters for reliable and accurate measurement of both AC parameters (voltage, current, frequency, power, power factor and energy) and DC parameters (voltage and current) for industrial and commercial applications. DPM provides true RMS measurement for AC parameters.



Application

- HV and MV switchgear panels
- Power control centre (PCC) panels
- Motor control centre (MCC) panels
- LV distribution panels
- Control and relay panels
- Test benches
- Laboratory equipment

Benefits

- Clear display, can be easily read even from a distance
- Quick and easy installation with unique pass through concept for current termination (with minimal burden)
- Common product for different panel applications (with field configurability)
- Wide-range aux input makes it suitable for a variety of installation scenarios
- User-friendly touch-sense keys for easy display access
- Compact size to optimise use of panel space

Features

- LED and LCD display product ranges
- Reliable and accurate measurement
- User configurable alert thresholds for various parameters
- Unique pass through mechanism for current termination
- Wide-range AC / DC auxiliary power supply
- High level of protection degree
- Display of minimum and maximum values
- Touch-sense keys for ease of use – display access & configuration
- Current and power demand monitoring
- Available in three different panel cut-outs
- Field programmable – CT / PT commissioning etc
- Password-protected setup mode
- Auto unit adjustment for voltage, current, power and energy

DPM series

Technical specifications

| Electrical | Single-phase | | Three-phase | |
|---------------------------------|---|-----|--|-----|
| | LED | LCD | LED | LCD |
| Connection type | 1 Phase 2 Wire (AC applications) | | 1 Phase 2 Wire / 3 Phase 3 Wire / 3 Phase 4 Wire | |
| Voltmeter | | | | |
| Measuring voltage range | 5 V to 500 V | | | |
| Nominal voltage range | 57.5 V to 240 V (phase to neutral) 100 V to 415 V (phase to phase) | | | |
| Over voltage | 150% U_n continuous | | | |
| Ammeter | | | | |
| Measuring current range | 50 mA to 6 A | | | |
| Nominal current range (I_n) | 1 A or 5 A | | | |
| Overload | 150% I_n continuous | | | |
| Short time over current | 120 A for 1 sec | | | |
| Active power | Measuring voltage range: 5 V to 500 V Voltage (U_n): 57.5 V to 240 V (phase to neutral), 100 V to 415 V (phase to phase) | | Measuring voltage range: 20 V to 500 V Voltage (U_n): 57.5 V to 240 V (phase to neutral), 100 V to 415 V (phase to phase) | |
| | Measuring current range: 50 mA to 6 A, Current (I_n): 1 A or 5 A | | | |
| Reactive power | - | | As for active power | |
| Power factor | - | | 0.1 lag - Unity - 0.1 lead (for I_n and U_n) | |
| Frequency range | 45 to 65 Hz | | | |
| DC Voltmeter | 0 to 250 V_{dc} Tolerance: +20% of V_{dc} | | | |
| DC Ammeter | Configurable external shunt value: -150 mV ... 0 ... +150 mV Tolerance: +20% for shunt input | | | |
| Auxiliary supply range | 40 to 300 V AC / DC | | | |
| Accuracy class | | | | |
| Voltage, current | $\pm 0.5\%$ FS | | | |
| Frequency | ± 0.1 Hz | | | |
| Active power | $\pm 0.5\%$ FS (at unity PF) | | | |
| Reactive power | - | | $\pm 0.5\%$ FS | |
| Power factor | - | | ± 0.005 | |
| Energy | - | | Class 1.0 (acc. to IEC 62053-21) | - |
| DC Voltmeter | $\pm 0.2\%$ FS | - | - | |
| DC Ammeter | $\pm 0.2\%$ FS | - | - | |
| Temperature coefficient | Voltage, current: 0.05% / °C | | | |
| Burden | | | | |
| Voltage circuit | <0.2 VA per phase | | | |
| Current circuit | 1 A: <0.1 VA per phase ; 5 A: <0.3 VA per phase | | | |
| Auxiliary supply | <1.5 VA | | <3 VA | |
| Auxiliary supply (with -RS485) | - | - | <3.5 VA (Energy variant only) | - |



| Mechanical | Single-phase | | Three-phase | |
|--|--|-----|------------------------------------|-----|
| | LED | LCD | LED | LCD |
| Bezel size / (cut-out) | | | | |
| 96 x 96 mm / (92 x 92 (+0.5) mm) | Yes | | | |
| 96 x 48 mm / (92 x 45 (+0.5) mm) | Yes | | Single line: Yes Three line: No | |
| 72 x 72 mm / (68 x 68 (+0.5) mm) | Yes | | | |
| Depth | 55 mm (70.8 mm with parking terminals) | | | |
| Weight | Approx 190 grams | | Approx 290 grams | |
| Enclosure | Flame retardant polycarbonate (as per UL 94 V0) | | | |
| Terminals | | | | |
| Voltage/auxiliary | Combicon connectors: up to 2.5 mm ² cable | | | |
| Current | Pass-through connections: up to 4 mm ² cable | | | |
| Parking terminal for CT termination (Optional) | U-type / ring-type terminations: maximum up to 4 mm ² cable | | | |

| Programming | Single-phase | | Three-phase | |
|------------------------------------|---|-----|-------------------------------------|-----|
| | LED | LCD | LED | LCD |
| AC applications: CT / PT(VT) ratio | Field-programmable primary and secondary values PT(VT) primary up to 2000 kV, CT primary up to 15000 A | | | |
| Alerts | Field-programmable high and low threshold values | | | |
| Demand interval (current / power) | Field-programmable, 1 to 30 minutes | | Field-programmable, 1 to 60 minutes | |
| Display update time | Field-programmable, 1 to 5 seconds | | | |

| Display | Single-phase | | Three-phase | |
|------------------------|---------------|-----------------------------|--|-----------------------------|
| | LED | LCD | LED | LCD |
| Single-line | Yes | Yes | Yes | |
| Multi-line | | | Yes, 3 line | Yes, 4 line |
| Number of digits | 4 digits | 5 digits | 4 digits 6 digits (energy variant only) | 5 digits |
| Character size (H x W) | 14.2 x 8.1 mm | 11 x 7 mm | 14.2 x 8.1 mm | 10.2 x 6.3 mm |
| Bar-graph | | Yes (7 steps up to 150%) | | Yes (7 steps up to 150%) |

| Communication | Single-phase | | Three-phase | |
|---------------|--------------|-----|--|-----|
| | LED | LCD | LED | LCD |
| RS 485 | | | Modbus (energy variant) half-duplex, floating point. Refresh rate: 500ms | |
| Baud rate | | | 1200 - 19200 bps, (default 9600 bps) | |
| Parity bit | | | None, even, odd. | |
| Stop bit | | | 1, 2 | |

| Compliance | LED | | LCD | |
|------------|----------|---|-----|---|
| | Standard | Safety: IEC / EN 61010-1; IEC / EN 61010-2-030 IS 13875, IEC 61326-1 Energy variant only: IEC / EN 62053-21 | | Safety: IEC / EN 61010-1; IEC / EN 61010-2-030 IS 13875, IEC 61326-1 |



| Environmental | LED | LCD |
|--------------------------------------|---|-----|
| Protection Degree (as per IEC 60529) | Front fascia: IP 54 default, terminals IP 20 | |
| ESD | IEC / EN 61000-4-2 (in accordance to standard IEC / EN 61326) | |
| EFT | IEC / EN 61000-4-4 (in accordance to standard IEC / EN 61326) | |
| Insulation | CAT II, 4 kV RMS 50 Hz for 1 minute | |
| Impulse withstand | 6.5 kV | |
| Temperature | -10°C to +60°C (operating), -25°C to +80°C (storage) | |
| Humidity | 95% non-condensing | |
| Flame retardation | UL 94 V0 | |
| ROHS and REACH | Yes | |
| Maximum altitude | 2000 m | |

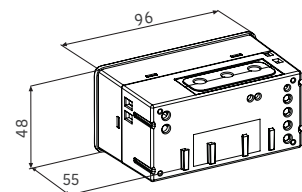
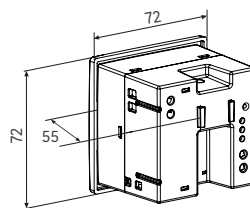
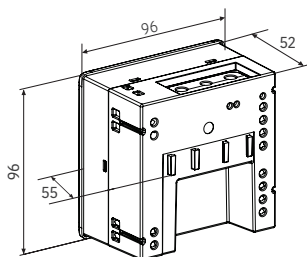
Product ordering key

| Phase | AC Single-phase | | | | | AC Three-phase | | | |
|-------------------------------------|-----------------|---------|-----------------|---------|---------|-----------------|---------|----------------|----------------|
| | Single line LED | | Single line LCD | | | Single line LED | | Three line LED | Three line LCD |
| Dimensions | 96 x 96 | 96 x 48 | 96 x 96 | 96 x 48 | 72 x 72 | 96 x 96 | 96 x 48 | 96 x 96 | 96 x 96 |
| | DPM96 | DPM48 | DPM96 | DPM48 | DPM72 | DPM96 | DPM48 | DPM96 | DPM96 |
| Parameter | | | | | | | | | |
| AC current | I100 | | I150 | | | I300 | | I310 | I360 |
| AC voltage | V100 | | V150 | | | V300 | | V310 | V360 |
| Active power | W100 | | W150 | | | - | | W310 | W360 |
| Reactive power | - | | - | | | - | | R310 | R360 |
| Power factor | - | | - | | | - | | P310 | P360 |
| Frequency | F100 | | F150 | | | - | | - | - |
| Active energy with Modbus | - | | - | | | E300 | - | - | - |
| Voltage - Current - Frequency meter | - | | - | | | - | | M310 | M360 |
| DC measurement | | | | | | | | | |
| DC voltage | V200 | | - | | | - | | - | - |
| DC current | I200 | | - | | | - | | - | - |

Order code (Example)

| Series | Size | Function | Ordering code | Description |
|--------|------|----------|---------------|--|
| DPM | 96 | V150 | DPM96 V150 | Single-phase, single-line LCD voltmeter, 96 x 96 |
| DPM | 48 | V300 | DPM48 V300 | Three-phase, single-line LED voltmeter, 96 x 48 |

Dimensions (mm)



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