

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 250 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 250 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 250 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	-		± 0.002	
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 VA			
Auxiliary supply (with -RS485)	-	-	<2 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	52 mm (72 mm with optional parking terminal)			
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 - 38400 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 Energy variant only: IEC / EN 62053-21			



Environmental	LED	LCD
Protection Degree (as per IEC 60529)	Front fascia: IP 54 default / IP 65 (optional), 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	

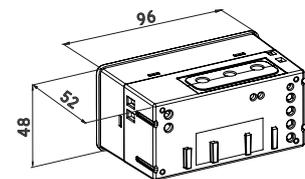
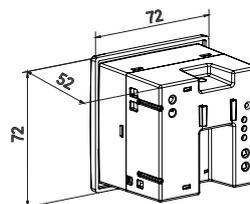
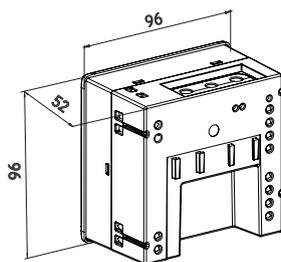
Product ordering key

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	DPM48
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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