

Jewell DPM 72 x 144 4½ Digit (DC Input)

Jewell
Instruments

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Application:

The Jewell DPM 72 x 144 4½ digit have been designed for industrial applications, which frequently require precise and on-site adjustment of the display range. It can be used in industrial automation and for laboratory uses.

- Active Power (kW) DPM
- Reactive Power (kVAR) DPM
- Apparent Power (kVA) DPM
- Power Factor (PF) Meter

Features:

- Available in size 72mm x 144mm
- DC Current ranges and DC Voltage ranges
- 4½ digit ultra bright display
- User defined caption
- Auxiliary Power Supply:
 - AC-230V (+10% / -15%)
 - AC-110V (+10% / -15%)
 - DC-110V (+10% / -15%)
 - DC-24V (±15%)
- Highly adaptable DPMs suitable for a wide range of measuring applications.
- Versions available for DC Current (mA) and DC Voltage (mV & Volts) inputs.
- The chosen input range is user adjustable from 10% to 100% of the full scale value for DC Current, mv DC and Voltage DC, for simple adaptation of the digital readout to the input value.

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Jewell DPM Power / Power Factor Size 96/96



Specifications:

Display:

Display Range	19999
Decimal Point Position	Selectable by short links at the rear side of the display
Negative Display Indication	"_"
Digit Height	26mm/7- segment digits
Overload Indication	Last 4 digits blank (1)

Measuring Ranges:

[Max. Overload 120% of full-scale range value]

Model	Jewell DPM 72 x 144 4½ Digit A DC
DC Current Ranges Available (Voltage drop < 600 mV)	0....20 mA and 4....20 mA (Range selection by input choice)
Model	Jewell DPM 72 x 144 4½ Digit V DC
1. DC mV Ranges Available (Input Current < 300µA)	0....60 mV, 0....75 mV, 0....150 mV and 0....200 mV (Range selection by input choice)
2. DC Voltage Ranges Available	0....2V or 0....20V or 0....200V or 0....500V or 0....1000V or Please specify any non-standard input Voltage range, available on request.

Description:

Jewell DPM 72 x 144 A/V DC:

72 X 144 A DC	DC Current measurement, 2 ranges
72 X 144 V DC	DC Voltage measurement; 1.) mV input, 4 ranges or 2.) Voltage input, 5 ranges

Applicable Regulations and Standards:

Protection Class Front	IP 20 to IEC EN 60 529 IP 50
Device Safety	IEC EN 61 010
EMC Immunity	IEC/EN 61 000-4-1 to 4
EMC Radiated Interference	IEC/EN 61326 Class B

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Technical Specifications:

Accuracy:

Jewell DPM 72 x 144 4½ Digit A DC

Measuring Accuracy Current (Voltage Drop <600 mV)
Temperature Coefficient
Zero Point Drift
Range Adjustment Span

Jewell DPM 72 x 144 4½ Digit V DC

1. milli Volt Ranges	Measuring Accuracy milli Volts (Input Current <300µA)	<0.1% of range + 1 digit
	Temperature Coefficient	300 ppm/°C
	Zero Point Drift	200 ppm/°C
	Range Adjustment Span	From 10% to 100% of range
2. Volt ranges	Measuring Accuracy Volts (Input Current <300µA)	<0.1% of range + 1 digit
	Temperature Coefficient	300 ppm/°C
	Zero Point Drift	200 ppm/°C
	Range Adjustment Span	From 10% to 100% of range

Power Supply:

4 Ranges for power supply are available

Direct Voltage DC	24 V DC (±15%)	5.5W Approx. (isolated)
	110 V DC (+10% / -15%)	5.5W Approx. (isolated)
Alternating Voltage AC	110 V AC (+10% / -15%)	5.5W Approx. (isolated)
	230 V AC (+10% / -15%)	5.5W Approx. (isolated)
Frequency	47-60 Hz	

Environmental Conditions:

Climatic Class	Class 2 to VDE/DIN 3540
Operating Temperature	0...55°C
Storage Temperature	-25°C...+65°C
Safety Class	II to IEC 348/VDE 0411
IP Protection	IEC EN 60 529 For back: IP 20 For front: IP 50 (IP 54 on request)
Device Safety	According to IEC EN 61 010

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Technical Specifications Cont.:

High Voltage Test	For AC Aux.: 2 kV AC, 50 Hz for 1 minute For DC Aux.: 1 kV AC, 50 Hz for 1 minute
EMC Immunity	According to IEC/EN 61 000-4-1 up to 4
EMC Radiated Interference	According to IEC/EN 61326 class B

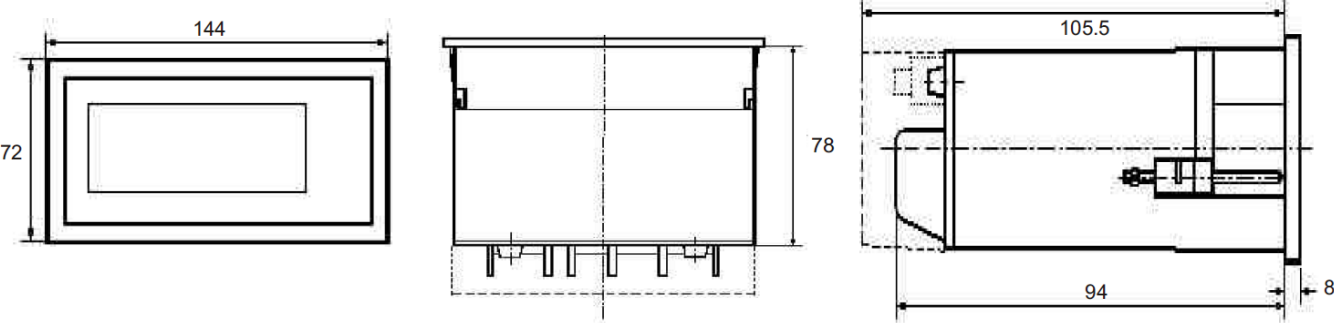
Dimensions and Weights:

Bezel Size	72 mm x 144 mm DIN 43 700
Panel Cut-out	68 + 0.7 mm x 138 + 1.0 mm
Overall Depth	94 mm
Weight	500 gm Approx.

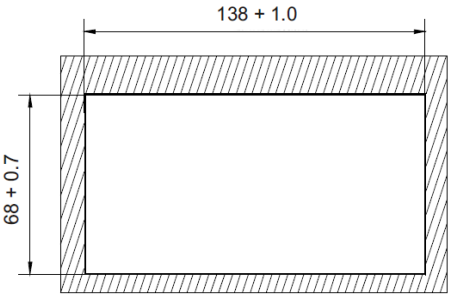
Sundry

Connections	Plug-in screw terminal blocks
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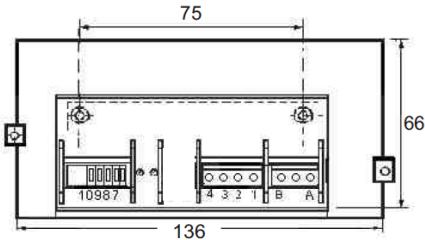
Design & Installation:



Installation cut-out



Connections



Electrical Connection:

Connection for Jewell DPM 72 x 144 A DC

Current DC	0....20 mA Terminals 1 and 2 with terminals 5 and 6 open.
	4....20 mA Terminals 1 and 3 plus jumper between terminals 5 and 6.

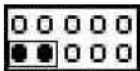
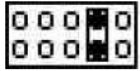
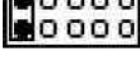
Connection for Jewell DPM 72 x 144 V DC

Milli Volts DC	0....60 mV / 0...75 mV	Terminals 1 and 2
	0....150 mV	Terminals 1 and 3
	0....200 mV	Terminals 1 and 4

Connection for Jewell DPM 72 x 144 V DC - Volts

Volts DC	0....2 V, or 0....20V, or 0....200V, or 0....500V, or 0....1000V	Terminals 1 and 4
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Decimal Point Adjustment

Short Link Position	Decimal point position on Display
	xxxxx
	x.xxxx
	xx.xxx
	xxx.xx
	xxxx.x

Order Details:

	Example 1	Example 2
Type	DPM 72 x 144 A DC	DPM 72 x 144 V DC
Measuring Input	0...20 mA	0....1000 V
Display Full Scale	0...19999	0....19999
Display Caption	mA	V
Aux. Supply	24V DC	230V AC, 50 Hz