



LCD



LED

Application

The digital panel meters **RISH DPM** 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.

Salient Features

- 3/64 DIN Indicator
- Screw terminal connectors for easy installation
- LCD: 3-1/2 digit 0.5" high LCD display with optional negative image, bright red backlighting
- LED: 3-1/2 digit, 0.56" high display
- Limited range display scaling
- User selectable decimal point
- Span adjustment and offset adjustment through potentiometer

Technical Specifications

Measuring Ranges

1. DC Voltage

Range	Resolution	Input Impedance	Max Overload Allowed	Display Type			Display Span
200mV	100 μ V	10M Ω	100VDC	Non Backlight (LCD)	-	-	1999
20V	10mV	10M Ω	250VDC	Non Backlight (LCD)	Negative Image Red (LCD)	Red LED	1999
200V	100mV	9.9M Ω	250VDC	Non Backlight (LCD)	-	Red LED	1999

2. AC/DC TRMS Current

Range	Resolution	Voltage Drop	Max Overload Allowed	Display Type		Display Span
5A AC	10mA	50mVAC	6A AC	Non Backlight (LCD)	Negative Image Red (LCD)	0 to 10/100/1000
5A AC	10mA	50mVAC	6A AC	Non Backlight (LCD)	Negative Image Red (LCD)	0 to 20/200
5A AC	10mA	50mVAC	6A AC	Non Backlight (LCD)	Negative Image Red (LCD)	0 to 30/300
5A AC	10mA	50mVAC	6A AC	Non Backlight (LCD)	Negative Image Red (LCD)	0 to 50/500
5A DC	10mA	50mVDC	6A DC	Non Backlight (LCD)	Negative Image Red (LCD)	0 to 100

3. AC TRMS Voltage

Range	Resolution	Input Impedance	Max Overload Allowed	Display Type		Display Span
200V	100mV	1M Ω	200VAC	Non Backlight (LCD)	Negative Image Red (LCD)	1999

4. Frequency

Range	Resolution	Display Type		Display Span
20-200Hz	0.1Hz	Non Backlight (LCD)	Negative Image Red (LCD)	20 to 199.9

5. DC Process

Range	Resolution	Voltage Drop	Max Overload Allowed	Display Type		Display Span
4 to 20mA	0.10%	200mVdc	60mA	Non Backlight (LCD)	Negative Image Red (LCD)	0 to 100%
0 to 10Vdc	0.10%	Input Impedance 10M Ω	250VDC	Non Backlight (LCD)	Negative Image Red (LCD)	0 to 100%
0 to 100Vdc	0.10%	10M Ω	250VDC	-	Negative Image Red (LCD)	1999

Technical Specifications

Specifications	3-1/2 Digit Display		
	LCD	LED	
Display	Type	7 Segment	
	Height	0.5" (12.7mm)	0.56" (14.2mm)
	Decimal point (Selectable)	3 position	3 position
	Overrange Indication	Most significant digit = "1"	Most significant digit = "1"
	Backlighting	Optional negative image, Red Backlight	NA
	Polarity	Auto with "-" indication; "+" implied	
Power Requirements AC Volt	85-250VAC @ 40-440Hz		
Power Consumption	4.0VA (2.4W) Max	3.6VA (2.16W) Max	
Isolation	250Vrms Max		
Accuracy @ 25°C	200Hz	±0.2% of input ± 0.2Hz	Not Available
	DC V	±(0.1% of reading ±1count)	±(0.1% of reading ±1count)
	AC TRMS V & A	±(0.5% of reading + 5 count) (50Hz - 2KHz)	±(0.5% of reading + 2 count) (50Hz - 5KHz)
	DC Process	±(0.2% of reading ± 1 count)	
Excitation Current	25mA (Maximum)		
Environmental	Operating Temperature	0 to 55°C	
	Storage Temperature	-10 to 60°C	
	Relative Humidity	0 to 85% non condensing @ 40°C	
	Temperature Coefficient	0.2% of input ± 0.5 digits/°C	
Warm-up Time	Less than 20 minutes		
Input Level (Frequency Meter)	500mV to 270VRMS @ 1.0M Ω or 5V to 24V Square Wave (DC Offset = 2Vmax)	Not Available	
Mechanical	Bezel	0.95" * 2.84" (24mm * 72mm)	
	Depth	2.36" (60mm)	
	Panel Cutout	0.88" * 2.68" (22.2mm * 68mm)	
	Case Material	94-0, UL-rated, glass-filled thermoplastic	

Display Scaling

1.Span Adjustment

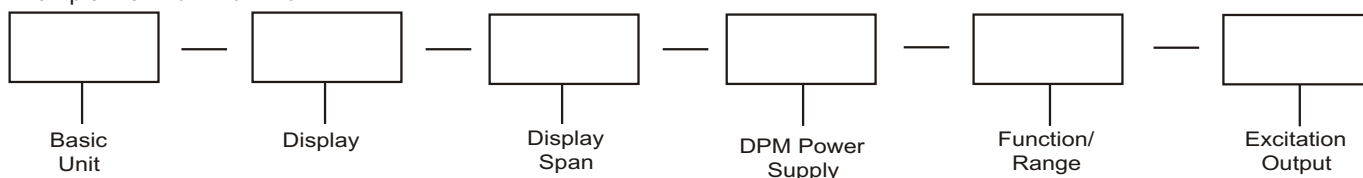
RISH R312 indicators have limited range coarse and fine adjustments for display scaling. There are no optional connections required for these to function. The meter can be scaled up to 2 times, or down to ½ the value of the input or a maximum reading of 1.999 whichever is lower. Example: a 2 volt input has a maximum reading of 1.999 counts, so you can't double the 2 volts, but you can make 1 volt read 1.999. The fine calibration allows for an approximate range of 1% of the "coarse" calibration.

2.Offset Adjustment

Use coarse adjustment for offset. The offset can be scaled up or down approximately 250 counts.

Ordering Information

RISH DPMs can be configured by making an entry in each section.
Example: R312-0-12-0-71-0



Ordering information

Ordering information	Ordering Code
Basic Unit	
3-1/2 Digit	R312
Display	
Non Backlight (LCD)	0
Negative Image Red (LCD)	1
Red LED	2
Display Span	
10	0
20	1
30	2
50	3
100	4
200	5
300	6
500	7
1000	8
1999	9
19999	10
20 to 199.9	11
0 to 100%	12
DPM Power Supply	
85-250VAC	0
Function/Range	
200DCmV	11
20DCV	13
200DCV	14
5ACA TRMS	43
5DCA TRMS	47
200VAC TRMS	34
4-20DCmA (DC Process)	71
0-10DCV (DC Process)	73
0-100DCV (DC Process)	74
20-199.9Hz RMS	81
20-199.9Hz Sq. Wave	83
Excitation Output (N/A w/Frequency)	
None	0
12 DCV @ 25mA	1
24 DCV @ 25mA	2



RISHABH

**RISHABH
INSTRUMENTS**

Measure, Control & Record with a Difference

www.rishabh.co.in

RISHABH INSTRUMENTS PVT.LTD.

F-31, MIDC, Satpur, Nashik-422 007, India.

Tel.: +91 253 2202028, 2202202 Fax : +91 253 2351064

E-mail : India :- marketing@rishabh.co.in

International :- exp.marketing@rishabh.co.in

www.rishabh.co.in

Page 4 of 4

Version : Rev: A 12 / 11