

DIGITAL MOVEMENT METER - 96

- Accuracy Class 0.5
- Insensitive to Shocks and Vibrations
- Scale and Indicator illumination

Data Sheet

Analogue Meter with
Digital Movement



APPLICATION

DIGIMOV has been developed mainly for the Industrial applications with highly precise analog display range.

High resistant to shock and vibration particularly suitable for marine, rail and aviation vehicles.

Different ranges for measuring voltage and current with auto zero point set on AUX supply, no input and overload LED indication that make it most user friendly and desirable for measuring output of various transducers. Front polycarbonate window, bezel, PC glass and dial can be easily replaced and customized to suit the user's application. High level accuracy is guaranteed even in extreme environmental conditions.

FEATURES

- High Accuracy and linearity
- Insensitive against shock and vibration
- Operation in any Installed position
- Scale interchangeability
- With backlit and without backlit LED illumination
 - No Input and Overload Input LED indication
- Incorporate high resolution movement
- These meters can measure electrical parameters viz Voltage, Current and output of the transducers.

MOVEMENT

Analog meter using digital technology comprises highly precise and sturdy movement.

Rugged and robustness of the movement gives the ample mechanical stability over Moving coil & Moving iron meters.

Guaranteed insensitive to shocks and vibrations in continuous operation.

SPECIFICATIONS

TECHNICAL DATA

Auxiliary Supply Voltage : 24V DC \pm 20%
(1KV ISOLATION)

Power consumption : < 2.5 W

Starting current : 1A about 0.5 sec.

Rotation speed : less than 2.5 sec. / 240°

Starting Response time : About 2.5 seconds
(Pointer reach on Electrical zero after applying AUX)

Electrical Security

Protection Class : IP 52 & IP 20 Terminals
IP 65 (Front Panel) On request

EMC immunity : IEC/ EN 61 000-4-1 to 4

EMC radiated interference : IEC/ EN 61326 Class B

PROOF VOLTAGE

Isolated model : 1kV AC for 1 min (Input v/s Aux)

2.2kV AC for 1 min (Input, Aux v/s Case)

Insulation Resistance : > 50 Mohm at 500 VDC

External magnetic field : 0.5 mT

REFERENCE CONDITIONS

Accuracy Class 0.5 according to IEC 51
(IS 1248 / DIN EN 60051)

Ambient temperature 23 °C \pm 2° C

Position of use Any

MECHANICAL DATA

Front facia Polycarbonate

Front bezel size 96 mm x 96 mm

(DIN 43 700)

Panel cut-out : refer page 4

Overall depth : refer page 4

Weight 250 gm. approx.

SCALE AND POINTER

Pointer : Plastic pointer

Pointer deflection : 37.5° \pm 1° for Aux supply
indication

(To be made to customer's specification) 240° \pm 1° for measurement
(upto 310°) 5° \pm 1 for overvoltage indication

Scale characteristics : Linear

Scale division : Coarse - fine & Vernier

(To be made to customer's specification)

Scale length :

	240°
96 x 96	152mm

Scale Interchangeability : Interchangeable

Scale Design : To be made according to
Customer's specification

STANDARD MEASURING RANGES

D.C. rated values		A.C. rated value	
Current	Voltage	Current	Voltage
0...1mA	0...75 mV	0...1 A	0...6 V
0...20 mA	0...150 mV	0...5A	0...10 V
4...20 mA	0...5 V		0...15 V
0...10 mA	0...10V		0...25 V
0...15 mA	1...10V		0...40 V
0...25 mA	0...15 V		0...60 V
0...40 mA	0...25 V		0...100 V
0...60 mA	0...30 V		0...150 V
0...100 mA	0...40 V		0...250 V
0...150 mA	0...60 V		0...400 V
0...200 mA	0...100 V		0...500 V
	0...150 V		0...600 V
	0...200 V		
	0...250 V		
	0...300 V		
	0...400 V		
	0...500V		
	0...600V		

ELECTRICAL CHARACTERISTIC VALUES

Illumination : Backlit LED

- Indication** :
1. No Input, No AUX - Pointer on OFF position, below zero scale
 2. Only AUX - Pointer on zero scale and left red LED on
 3. AUX & Input - Both red LED will off
 4. Overload - Right red LED on

ENVIRONMENTAL CONDITIONS

Climatic class :Class 2 to VDE / DIN 3540

Operating Temp. : -25° C ... +55° C

Storage Temp. : -25° C ... +70° C

Relative Humidity : ≤ 75% annual mean non-condensing

Vibration level : 5 - 50 - 5 Hz, 15mm
30g at about 31.51 Hz

Shock level : 50.0g (IEC 51/DIN EN 60 051)

TERMINAL STANDARDS

Terminals Plug - in screw terminal block

STANDARDS	IEC
Rated Voltage	320V,400V
Rated Current	20A ₂
Wire Range	2.5mm ²

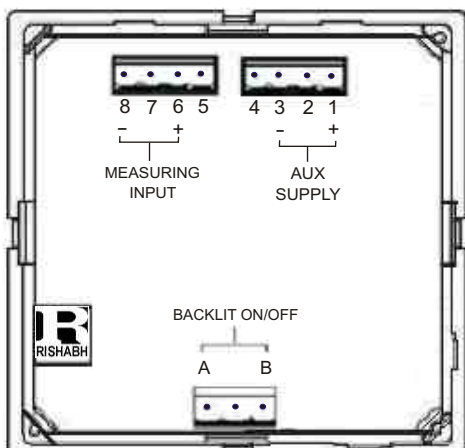
OVERLOAD CAPACITY

According to IS 1248 / IEC 51

Continuously : 1.2 times rated voltage / current

Short Duration : 2 times rated voltage, 5s max.
10 times rated current, 5s max

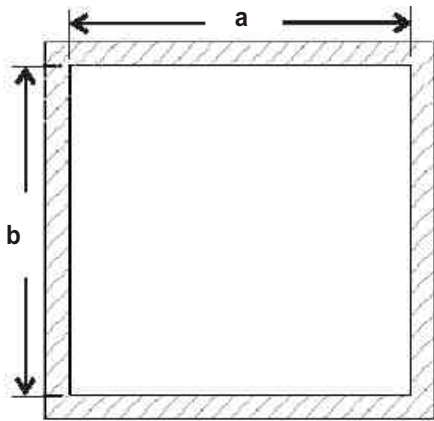
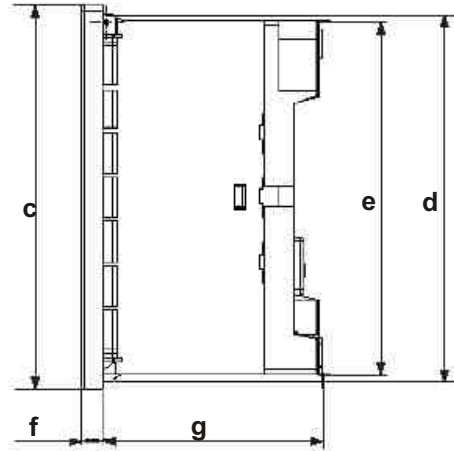
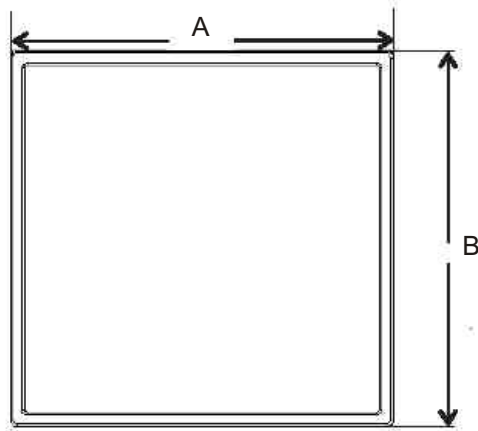
CONNECTION DIAGRAM



8	7	6	5	4	3	2	1
RISHABH <i>Digitov SA</i> Sr. No. 10/01/001							
Range : 0...500V AC							
AUX SUPPLY	1	+	24V DC				
	3	-	±20%				
INPUT	6	+	0...500V AC				
	8	-					
BACKLIT ON/OFF	A	BACKLIT OFF BY SHORTING TERMINAL					
	B						
	A		B				

SAMPLE STICKER

DESIGN & INSTALLATION



Installation Cut - Out

Dimensions in mm	DMM 96
A	96
B	96
a	92 + 0.8
b	92 + 0.8
c	96
d	91.4
e	87.8
f	5.5
g	54.8

ORDERING INFORMATION

RISH <i>digimon</i>	XX - 96	X - XXX	24VDC	240°	X	...
AC INPUT	SA - 96x96					
DC INPUT	SD - 96x96					
INPUT RANGE VOLTAGE / CURRENT (REFER PREVIOUS PAGE) (SPECIFY IF RANGE IS IN mA / mV)						
AUX SUPPLY						
24V DC ± 20% (1KV ISOLATION)						
DEFLECTION				240°		
WITH BACKLIT ILLUMINATION					B	
WITHOUT BACKLIT ILLUMINATION					-	
CUSTOMER SPECIFIC SCALE DESIGN (i.e. 100 DIVISION SCALE / 200 DIVISION SCALE)						



RISHABH INSTRUMENTS
Measure, Control & Record with a Difference

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