

MULTISPAN

Product Manual

MULTI FUNCTION METER

DSM-14N



Technical Specification

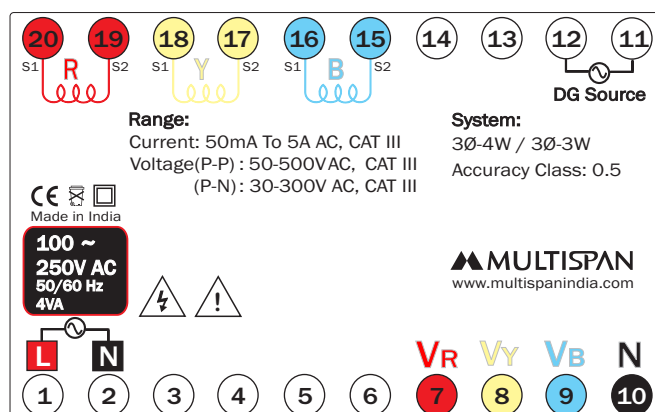


Model	DSM-14N
Display	UPPER: 7 Seg, 6digit,0.40", RED LED display for KWH LOWER: 7 Seg, 4digit,0.40", RED LED
Size (mm)	96(H) X 96 (W) X 52 (D) mm
Panel Cutout	92 X 92 mm
Input Current	50mA to 5AMP AC, (WITHOUT CT) CAT III
Voltage	50 To 500V AC (P-P) CAT III 30 To 300V AC (P-N) CAT III
System	3 Phase 4 Wire/3 Phase 3 Wire System
Power Supply	100 To 250V AC,50/60 Hz, Approx 4VA
Maximum Current	CT ratio is selectable (UP to 6000/5A)
⏮ & ⏭ Key	Manual or Auto Mode
Protection Level (As per request)	IP-65 (Front side) As per IS/IEC 60529 : 2001
Operating Temperature	0°C To 55°C
Relative Humidity	Up to 95% RH Non Condensing

Note

- DG - When fast blinking, indicates that the DG power measuring
- When normal blinking, indicates that the reading view is for DG.
 - EB - When fast blinking, indicates that the EB power measuring
- When normal blinking, indicates that the reading view is for EB.
- * Press ⏮ key for SCROLL & HOLD Facility.
 * By default value of MD Time is 15 minutes.
 * When 230 V supply to the DG source terminal,
 then instrument measure DG power.

Connection Diagram



Parameters

Parameter Display	Measurement Range
Line Voltage (Phase-to-Phase) (Vpp)	50 - 500 V
Phase Neutral Voltage (Vpn)	30 - 300 V
Line CURRENT (~A)	50mA -5A (Direct without CT)
Active Power (KW) Total	0.000 - 9999 KW
Active Power per Phase(KW)	0.000 - 9999 KW
Active Energy (KWH)	000.000 - 999999 KWh
Apparent Energy (KVAh)	000.000 - 999999 KVAh
Reactive Energy (KVArh)	0.000 - 9999 KVArh
Power Factor (PF) Average	0.10 - 1.00
Power Factor per phase (PF)	0.10 - 1.00
Apparent Power (KVA)	0.000 - 9999 KVA
Frequency (Freq)	45 - 65 Hz
Reactive Power (KVAr)	0.000 - 9999 KVAr
Load hours	9999.59 Hrs/Min.
No load hours	9999.59 Hrs/Min.
RPM	1500 RPM
MD KW	0.000 - 9999 KW
MD KVA	0.000 - 9999 KVA
MD KVAr	0.000 - 9999 KVAr

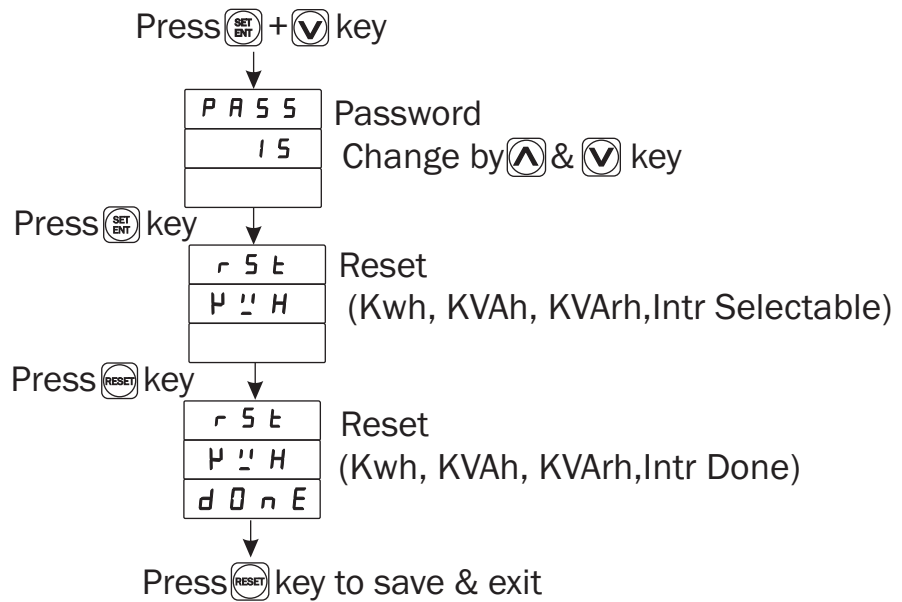
Wiring Connection

To select connection press  key and power on the instrument.
To save the connection power off the instrument.

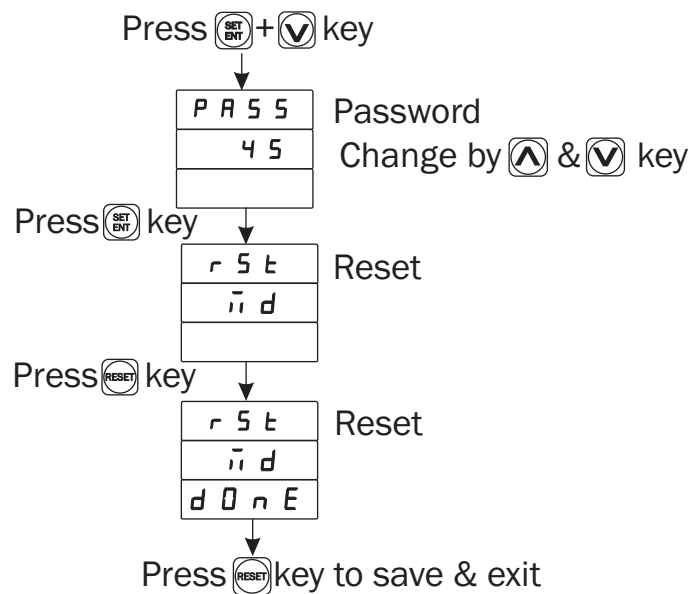
	3 Phase/3wire	3 Phase/4wire
Upper Display		
Lower Display		

Change by  key

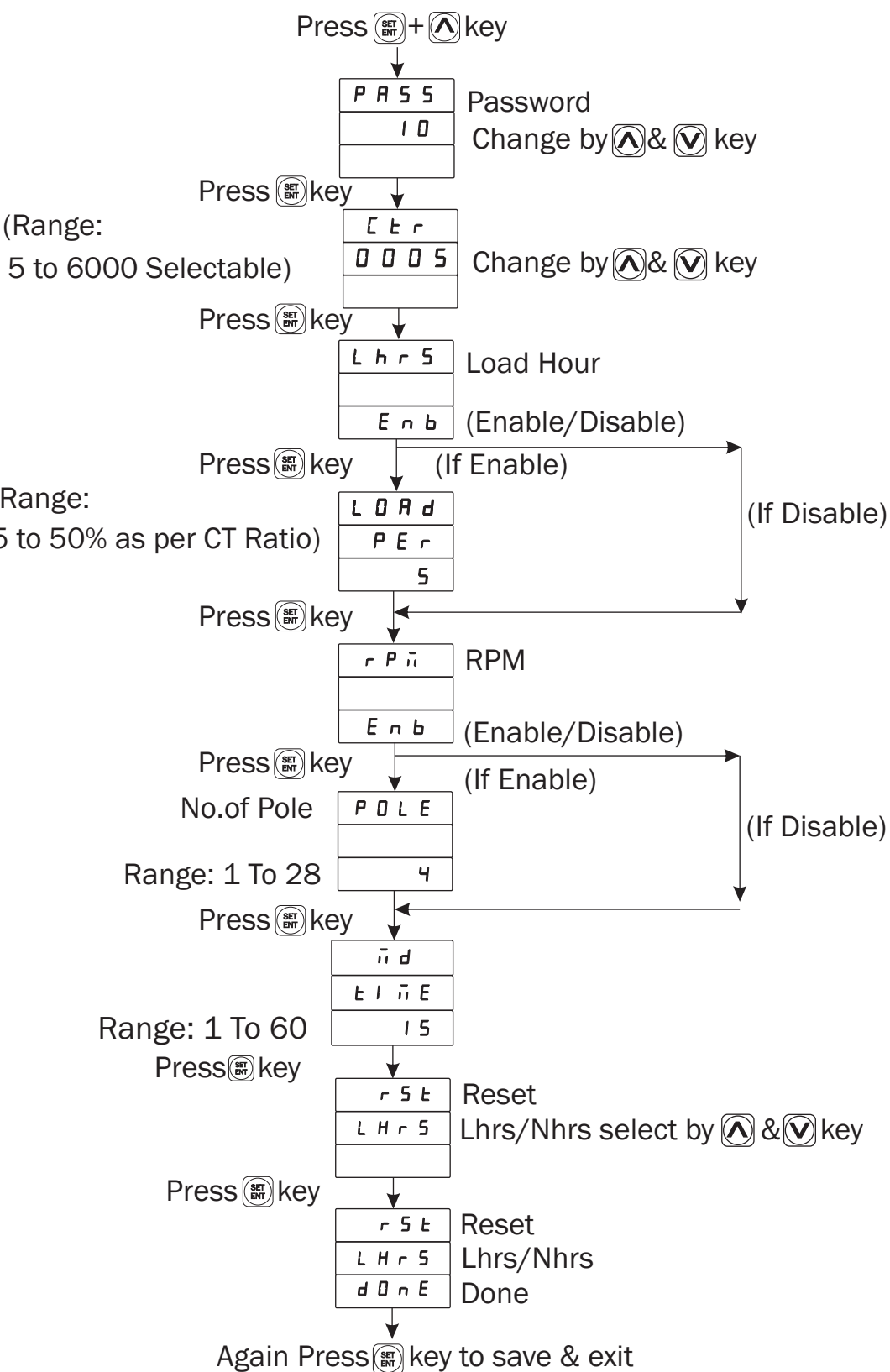
Reset :- Kwh, KVAh, KVArh



Reset MD



CT SELECTION PROCEDURE



PARAMETER DISPLAY

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	3P-3W	3P-4W
Display Line 1	KW	KW
Display Line 2	KVA	KVA
Display Line 3	PF	PF

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	3P-3W	3P-4W
Display Line 1	NA	VRN
Display Line 2	NA	VYN
Display Line 3	NA	VBN

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	3P-3W	3P-4W
Display Line 1	IR	IR
Display Line 2	IY	IY
Display Line 3	IB	IB

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	3P-3W	3P-4W
Display Line 1	VRV	VRV
Display Line 2	VYB	VYB
Display Line 3	VBR	VBR

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	3P-3W	3P-4W
Display Line 1	Value	Value
Display Line 2	kvar	kvar
Display Line 3		

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	3P/3W	3P/4W
Display Line 1	Value	Value
Display Line 2	Frequency	Frequency
Display Line 3		

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	3P-3W	3P-4W
Display Line 1	NA	R-KW
Display Line 2	NA	Y-KW
Display Line 3	NA	B-KW

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	3P-3W	3P-4W
Display Line 1	NA	R-PF
Display Line 2	NA	Y-PF
Display Line 3	NA	B-PF

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	3P-3W	3P-4W
Display Line 1	KWH	KWH
Display Line 2	DG	DG
Display Line 3		

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	3P-3W	3P-4W
Display Line 1	KVAH	KVAH
Display Line 2	DG	DG
Display Line 3		

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	3P-3W	3P-4W
Display Line 1	KVARH	KVARH
Display Line 2	DG	DG
Display Line 3		

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	3P-3W	3P-4W
Display Line 1	MAX	MAX
Display Line 2	KW	KW
Display Line 3	MAX KW	MAX KW

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	3P-3W	3P-4W
Display Line 1	MAX	MAX
Display Line 2	KW	KW
Display Line 3	MAX KVA	MAX KVA

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	3P-3W	3P-4W
Display Line 1	MAX	MAX
Display Line 2	KW	KW
Display Line 3	MAX KVAR	MAX KVAR

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	3P-3W	3P-4W
Display Line 1	LHRS	LHRS
Display Line 2	Load Hour	Load Hour
Display Line 3	Min.	Min.

(Load Hour time range:- 0 to 9999.59(Hour.Min)

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	3P-3W	3P-4W
Display Line 1	nhrs	nhrs
Display Line 2	no load hour	no load hour
Display Line 3	Min	Min

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	3P-3W	3P-4W
Display Line 1	INTR	INTR
Display Line 2	DG	DG
Display Line 3	Value	Value

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	3P-3W	3P-4W
Display Line 1	KWH	KWH
Display Line 2	EB	EB
Display Line 3		

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	3P-3W	3P-4W
Display Line 1	KVAH	KVAH
Display Line 2	EB	EB
Display Line 3		

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	3P-3W	3P-4W
Display Line 1	KVRH	KVRH
Display Line 2	EB	EB
Display Line 3		

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	3P-3W	3P-4W
Display Line 1	MAX	MAX
Display Line 2	KW	KW
Display Line 3	MAX KW	MAX KW

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	3P-3W	3P-4W
Display Line 1	Lhrs	Lhrs
Display Line 2	Load Hour	Load Hour
Display Line 3	Min	Min

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	3P-3W	3P-4W
Display Line 1	MAX	MAX
Display Line 2	KVA	KVA
Display Line 3	MAX KVA	MAX KVA

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	3P-3W	3P-4W
Display Line 1	NHRS	NHRS
Display Line 2	No Load Hour	No Load Hour
Display Line 3	Min	Min

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	3P-3W	3P-4W
Display Line 1	MAX	MAX
Display Line 2	KVAR	KVAR
Display Line 3	MAX KVAR	MAX KVAR

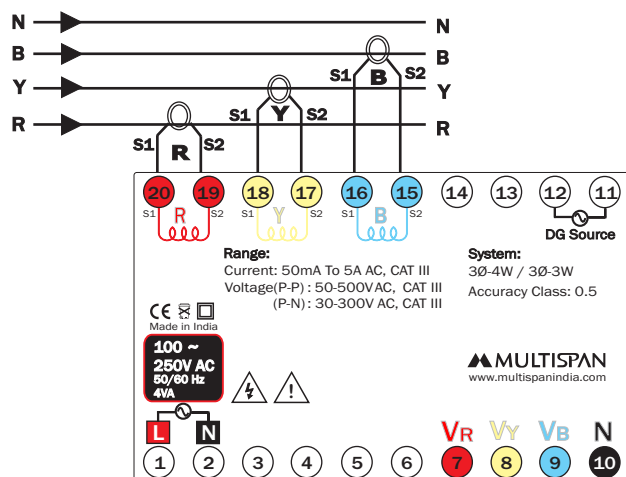
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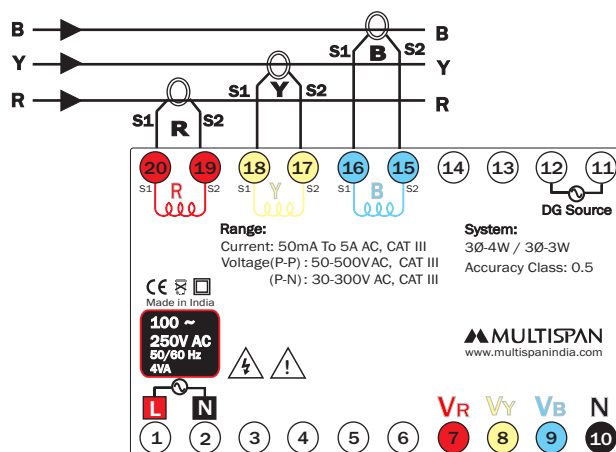
	3P-3W	3P-4W
Display Line 1	RPM	RPM
Display Line 2	Value	Value
Display Line 3		

(RPM Range:- 0 to 6000 RPM)

Connection Diagram for 3 Phase-4 Wire System



Connection Diagram for 3 Phase-3 Wire System



Safety Precautions

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If all the equipment is not handled in a manner specified by the manufacturer, it might impair the protection provided by the equipment .

=> Read complete instructions prior to installation and operation of the unit.



WARNING : Risk of electric shock.

Warning Guidelines

- 1) To prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement. Do not touch the terminals while power is being supplied.
- 2) To reduce electro magnetic interference, use wire with adequate rating and twists of the same of equal size shall be made with shortest connection.
- 3) Cable used for connection to power source, must have a cross section of 1²mm or greater. These wires should have insulations capacity made of at least 1.5kV.
- 4) A better anti-noise effect can be expected by using standard power supply cable for the instrument.

Installation Guidelines

- 1) This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after installation and internal wiring.
- 2) Do not allow pieces of metal, wire clippings, or fine metallic fillings from installation to enter the product or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
- 3) Circuit breaker or mains switch must be installed between power source and supply terminal to facilitate power 'ON' or 'OFF' function. However this mains switch or circuit breaker must be installed at convenient place normally accessible to the operator.
- 4) Use and store the instrument within the specified ambient temperature and humidity ranges as mentioned in this manual.

Mechanical Installation

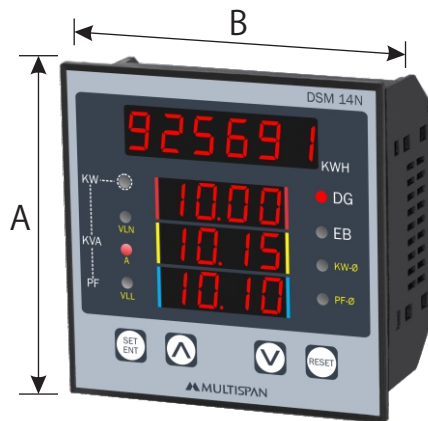
- 1) Prepare the panel cutout with proper dimensions as show above.
- 2) Fit the unit into the panel with the help of clamp given.
- 3) The equipment in its installed state must not come in close proximity to any heating source, caustic vapors, oils steam, or other unwanted process by products.
- 4) Use the specified size of crimp terminal (M3.5 screws) to wire the terminal block. Tightening the screws on the terminal block using the tightening torque of the range of 1.2 N.m.
- 5) Do not connect anything to unused terminals.

Maintenance

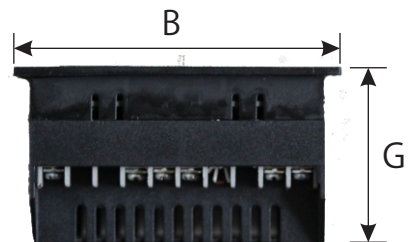
- 1) The equipment should be cleaned regularly to avoid blockage of ventilating parts.
- 2) Clean the equipment with a clean soft cloth. Do not use isopropyl alcohol or any other cleaning agent.
- 3) Fusible resistor must not be replaced by operator.

Mechanical Dimension

Prepare the panel cutout with proper dimensions as show below.



Right Side View



Top View

MODEL	A	B	C	D	E	F	G
DIMENSIONS	96mm	96mm	92mm	92mm	3mm	52mm	56mm

Note:

Note:

JHB Branch

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Cape Branch

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Product improvement and upgrade is a constant procedure. So for more updated operating information and support,
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