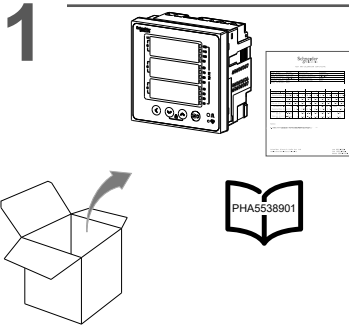




PHA5538901-03



i **PM1125H digital multi-function meter**
 To download user manuals and other documentation, visit www.se.com. Type PM1125H search field (document number: PHA5538902). Refer to the user manual when you see this icon.



Note: Do not use the product if it is damaged. Contact Schneider Electric customer care representative for support.

Commercial Reference	CL 1.0 RS-485	CL 0.5 RS-485	CL 0.2 RS-485	UL	CE	Control Power
METSEPM1125HCL10RS	✓	-	-	✓	✓	1*
METSEPM1125HCL10RD	✓	-	-	✓	✓	1*
METSEPM1125HCL05RD	-	✓	-	✓	✓	1*
METSEPM1125HCL02RD	-	-	✓	✓	✓	1*
METSEPM1125HCL1LVD	✓	-	-	✓	✓	2*
METSEPM1125HCL5LDD	-	✓	-	✓	✓	2*

1*
 AC: 48-277 V L-N ±10%
 DC: 48-277 V ±10%
 2*
 DC: 10-32 V ±10%

2 Safety Precautions

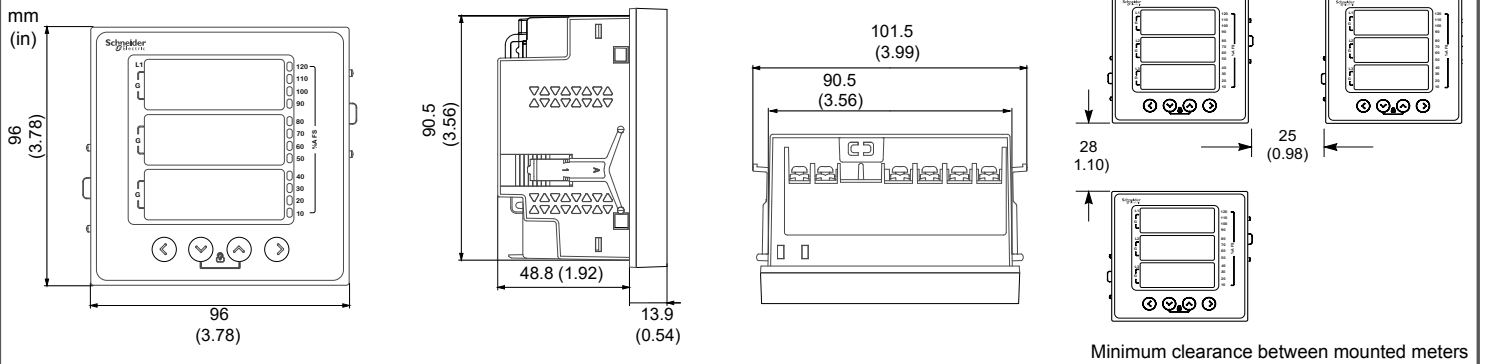


HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

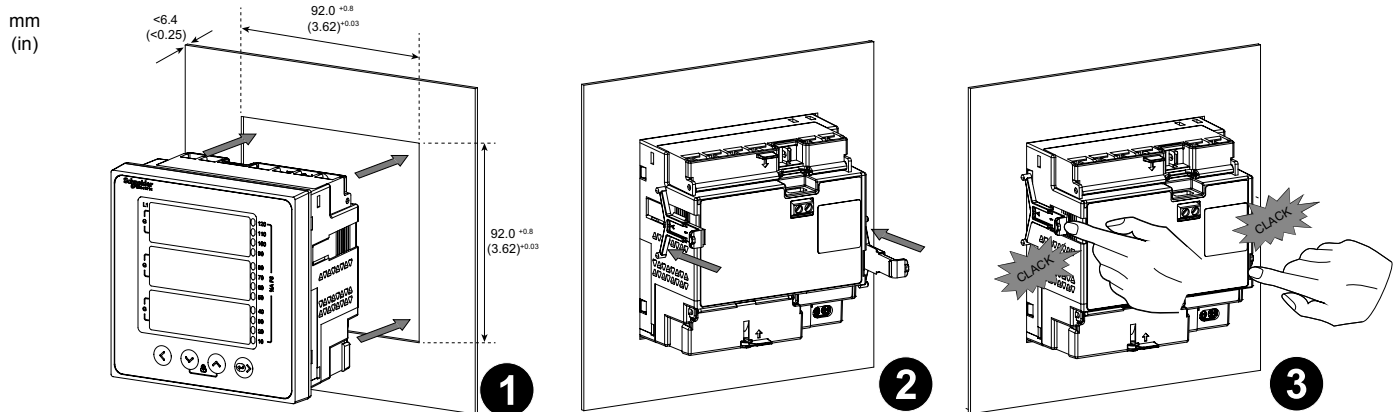
- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E in the USA or applicable local standards.
- Turn off all power to this device before working on it.
- Always use a properly rated voltage sensing device to confirm that all power is off.
- Do not exceed the device's ratings for maximum limits.
- Do not use this device for critical control or protection applications where human or equipment safety relies on the operation of the control circuit.
- Always use grounded external CTs for current inputs.

Failure to follow these instructions will result in death or serious injury.

3 Dimensions



4 Mounting



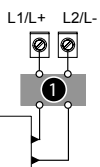
5

Control Power

NOTICE

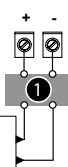
HAZARD OF PRODUCT DAMAGE

Do not exceed the device's ratings for maximum limits.
Failure to follow these instructions can result in equipment damage.



① 500 mA fuses

L1/L+ and L2/L- are non-polarized. If using an AC power supply with neutral, connect neutral to the meter's L2/L- terminal. Always use a fuse on L1/L+. Fuse L2/L- when connecting an ungrounded neutral to the control power. If using a control power transformer, fuse both primary and secondary sides of the transformer. The fuses / circuit breakers must be rated for the installation voltage and sized for the available fault current.

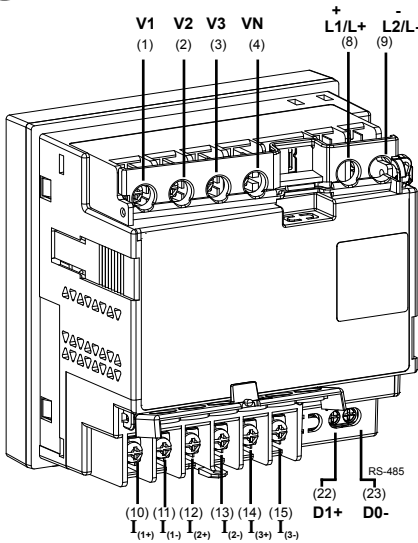


① 500 mA fuses

+ and - are polarized. Connect + to positive and - to negative of the DC power supply. Always use a fuse on +. The fuses / circuit breakers must be rated for the installation voltage and sized for the available fault current.

6

Wiring



RS-485



Straight-line topology only. Loop or ring topology is not supported.

Note: Resistor is an optional accessory that you can buy separately. To terminate a series, it is recommended to use a 120 Ω / 0.5 W resistor.

	Potential Transformer	Current Transformer
IEC		
ANSI		

V1, V2, V3, VN				
L1/L+, L2/L- (METSEPM1125CL10RS/ METSEPM1125HCL10RD/ METSEPM1125HCL05RD/ METSEPM1125HCL02RD)	0.82 - 3.31 mm ² (18 - 12 AWG)	0.28 in (7 mm)		
+, - (METSEPM1125HCL1LVD/ METSEPM1125HCL5LDD)			0.9 - 1.0 N·m (8.0 - 9.0 in·lb)	PH1/PH2
I ₁₊ , I ₁₋ , I ₂₊ , I ₂₋ , I ₃₊ , I ₃₋	2.08 - 3.31 mm ² (14 - 12 AWG)	3.68 mm ±0.08 [0.145 in ±0.003] DIA 6.35 mm [0.250 in] MAX		
D0-, D1+	0.33 - 3.31 mm ² (22 - 12 AWG)	0.24 in (6 mm)	0.5 - 0.6 N·m (4.4 - 5.3 in·lb)	PH1
Recommended cable		RS-485: Belden 3105A / Belden 3106A		

Ⓐ 500 mA fuses / circuit breaker #

Ⓑ Shorting block #

Ⓒ PT primary fuses and disconnect switch #

not supplied

◆ indicates wiring for a balanced system

Clearly label the device's disconnect circuit mechanism and install it within easy reach of the operator.

The fuses / circuit breakers must be rated for the installation voltage and sized for the available fault current.

Fuse for neutral terminal is required if the source neutral connection is not grounded.

Direct connect maximum voltage						
Power system configuration types*						
Maximum voltage at terminals (UL / IEC)	≤ 277 V L-N / 480 V L-L (CAT III)	≤ 480 V L-L (CAT III)	≤ 480 V L-L (CAT III)	≤ 277 V L-N (CAT III)	≤ 277 V L-N / 480 V L-L (CAT III)	

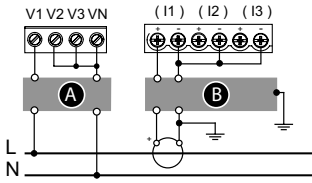
* The meter display allows configuration of 5 power system types, additional 8 can be configured through ION setup.

6

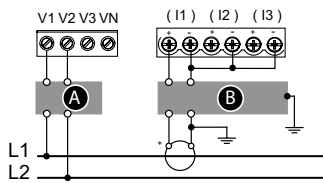
Wiring

1PH

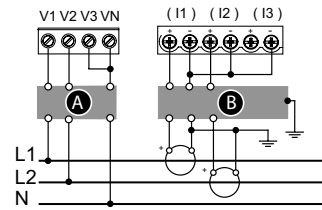
1PH2W LN



1PH2W LL

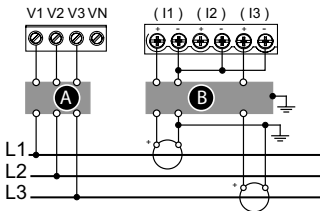


1PH3W LL with N

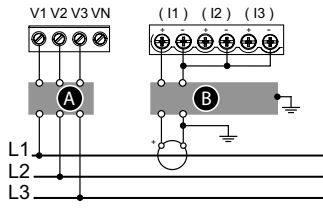


3PH3W

2 CT

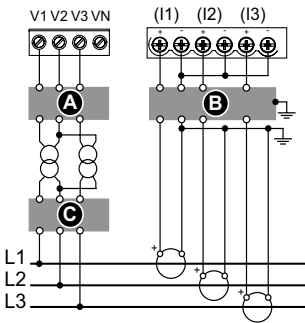


1 CT ♦

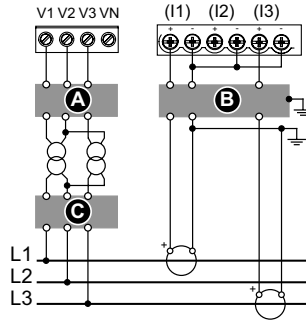


3PH3W

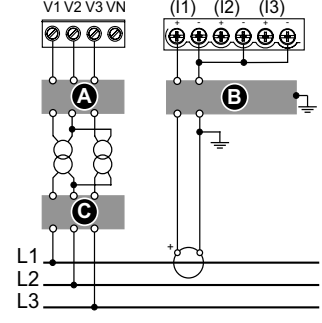
2 VT, 3 CT



2 VT, 2 CT

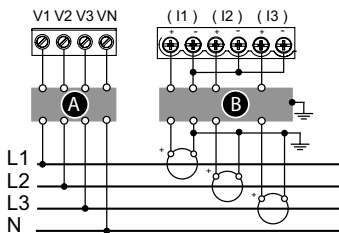


2 VT, 1 CT ♦

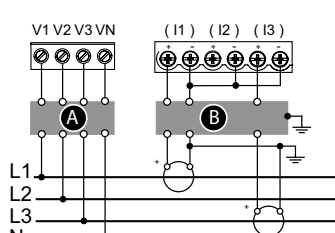


3PH4W

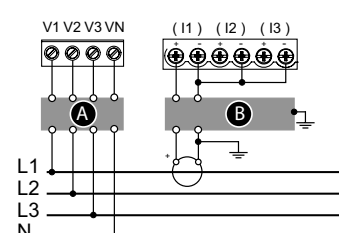
3 CT



2 CT ♦

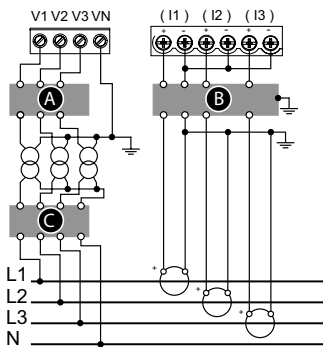


1 CT ♦

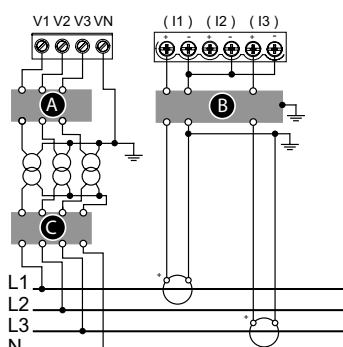


3PH4W

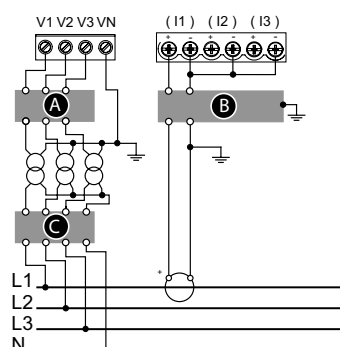
3 VT, 3 CT



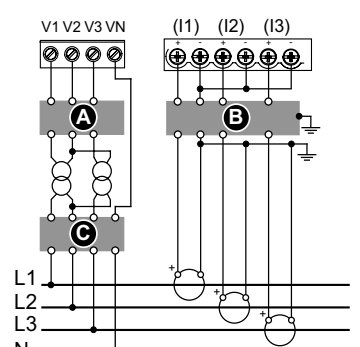
3 VT, 2 CT ♦



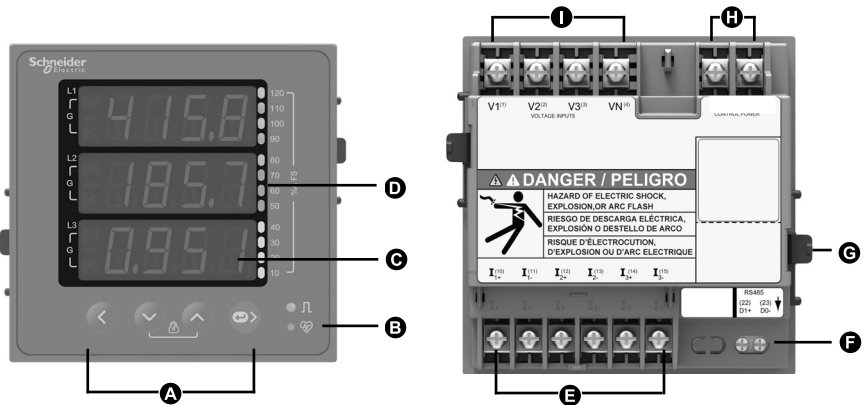
3 VT, 1 CT ♦



2 VT, 3 CT ♦



7 Description



- A** Menu selection buttons
 - ◀ Left key: To navigate left
 - ▼ Down key: To navigate down
 - ▲ Up key: To navigate up
 - ➡ Right/OK key: To navigate right/ Enter key
- B** LED indicators
 - Red: Pulse
 - Green: Heartbeat
- C** Alpha numeric LED display
- D** Analog load bar
- E** Current inputs
- F** RS-485
- G** Retainer clip
- H** Control power
- I** Voltage inputs

8 Basic setup menus

Home Page: The factory set start-up page

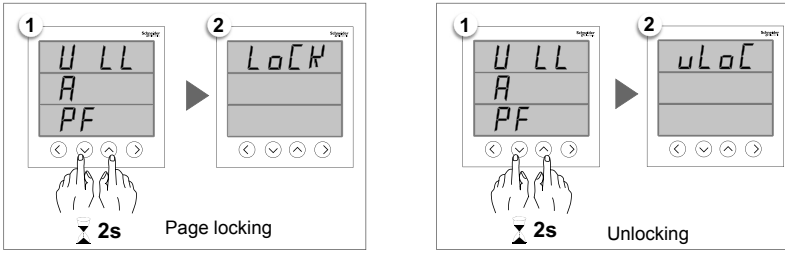
Menu navigation (Level 1)

TYPE	PaLE
Ut	Pd
UtPR	PdCY
UtSE	PdUt
Ct	PdP
CtPR	LEd
CtSE	LPLS
FREQ	Comm
ASUP	Id
LABL	bAud
FSo	PRtY
PSEL	PASS

1. Navigate to **Maintain** (Maintenance) through home page using the **Up** or **Down** keys. Press **OK**.
2. Navigate to **Set** (Setup) using the **Up** or **Down** keys. Press **OK**.
3. Enter the password (the default password is **0000**). Press **OK**.
4. Press the **Up** or **Down** key to navigate to the required parameter.
5. Press **OK** to select the parameter.
6. Use the **Up** or **Down** key to change the settings. Press **OK**.
7. Press the **Left** key.
8. Press **OK** to save your settings.

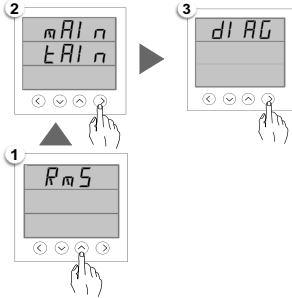
8.1 Example: Changing VT parameter (3P4L to 3VT)

8.2 Page lock/unlock



- Page lock sets the current page as the default page.
- You cannot enter the Setup page or Clear page when a meter page is locked.

8.3 Diagnostics page

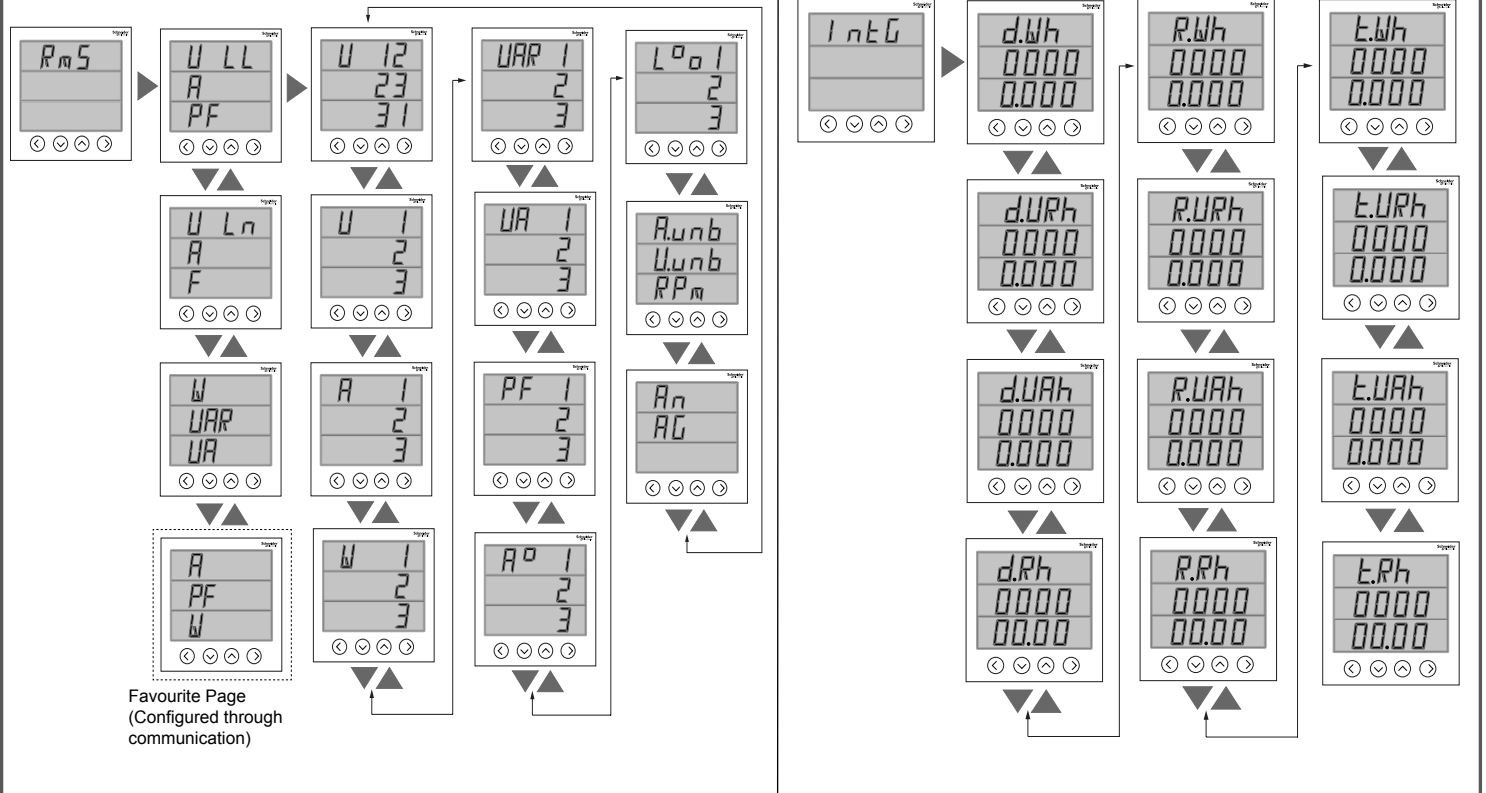


Diagnostic screens provide meter information, status, and event data for troubleshooting.

8.4 Setup parameter

TYPE 3P.4L	TYPE: Power System Configurations; [1P.Ln, 1P.LL, 1P.3L, 3P.3L, 3P.4L] Default: 3P.4L <i>Note: Other power system configurations can be set through ION setup.</i>
VT no.Vt	VT: Voltage Transformer; [no.Vt, 2.VT, 3.VT, 1.VT] Default: no.Vt <i>Note: The VT Connect parameters are enabled based on selected power system configuration.</i>
VT.PR 415	VT.PR Primary Voltage (V L-L); [0100 V to 999000 V]; Default: 415 <i>Note: VT.PR will not be enabled if VT Connect is no.VT.</i>
VT.SE 415	VTSE: Secondary Voltage (V L-L); [100, 110, 115, 120, 415] Default: 415 <i>Note: VT.SE will not be enabled if VT Connect is no.VT.</i>
CT A.123	CT: Current Transformer; [A.1, A.2, A.3, A.12, A.23, A.31, A.123] Default: A.123 <i>Note: The CT terminal parameters are enabled based on the selected power system and VT connect configuration.</i>
CT.PR 5	CT.PR: CT Primary; [1 A to 32760 A] Default: 5 <i>Note: CT Primary can be set to 32767 A through ION setup.</i>
CT.SE 5	CT.SE: CT Secondary; [1A, 5 A] Default: 5
FREQ 50	FREQ: System Frequency; [50 Hz , 60 Hz] Default: 50
A.SUP 005	A.SUP: A.Suppression (Minimum current at which meter starts functioning); [1 to 99 mA] Default: 5
LABL 123	LABL: Phase labeling; [123 , Abc, rst, pqr, ryb] Default: 123
FS% 100	FS%: Full scale value (Rescaling analog load bar with respect to CT loading); [1 to 100] Default: 100
P.SEL W	P.SEL: Power parameter selection for energy pulse LED output; [VA, W, VAR] Default: W

Pd t.b	PD: Power demand; [t.sb, t.b , t.rb] Default: t.b
Pd.CY 15	PD.CY: Demand period; [1 to 60 min] Default: 15
Pd.vt 15	PD.VT: Demand update time; [1 to 60 min] Default: 15
Pd.P VA	PD.P: Demand parameter; [VA, W, VAR] Default: VA
LED oFF	LED: [Off , Intg] Default: Off
L.PLS 0001	L.PLS: Pulses per energy; [1 to 9999000] Default: 1
Comm on	COMM: Communication; [ON , OFF, RTFT] Default: ON ON/OFF: To enable/disable communications port. RTFT: For configuring legacy communication data models. <i>Note: Id, baud rate, and parity cannot be viewed if comm is off.</i>
Id 0001	ID: Unit Id; [1 to 247] Default: 1
baud 19.20	BAUD: BPS (Bits per second); [4800, 9600, 19200 , 38400] Default: 19200
PRty EVEN	PRTY: Parity; [Even , Odd, None] Default: Even
PASS 0000	PASS: Password; Configurable from 0000 to 9999 Default: 0000 Record your password in a secure location.
POLE 4	POLE: To determine RPM of alternator/generator based on number of poles and network frequency; [2, 4, 6, 8, 10, 12, 14, 16] Default: 4



10 Specifications

Control power

(METSEPM1125HCL10RS /
METSEPM1125HCL10RD /
METSEPM1125HCL05RD /
METSEPM1125HCL02RD)

- AC: 48-277 V L-N \pm 10%
- Frequency: 50 / 60 Hz \pm 5 Hz
- AC burden: < 4 VA at 240 V L-N, 50 Hz
- DC: 48-277 V \pm 10%
- DC burden: < 2 W at 240 V DC
- Installation category III

(METSEPM1125HCL1LVD /
METSEPM1125HCL5LDD)

- DC: 10-32 V \pm 10%
- DC burden: < 2 W at 24 V DC
- Installation category III

Voltage inputs

- Measured voltage: 20 to 277 V L-N / 35 to 480 V L-L
- Frequency: 50 / 60 Hz \pm 2 Hz
- Permanent overload: 750 V L-L continuous
- Impedance: 5 M Ω
- Burden: \leq 0.2 VA @ 240 V L-N, 50 Hz
- Measurement category III, 480 V L-L

Current inputs

- 1 A or 5 A nominal
- Measured current: Current range (5 A nominal): 50 mA to 6 A, Current range (1 A nominal): 10 mA to 1.2 A
- Withstand: 10 A continuous
- Impedance: 0.3 m Ω
- Burden: \leq 0.1 VA max @ 5 A, 50 Hz
- Suppression current: 5 mA to 99 mA

Environment

- Operating temperature: -10 to 60°C (14 to 140°F)
- Humidity: 5% to 95% RH non-condensing at 37°C (98.6°F)
- Pollution degree 2
- Altitude: \leq 2000 meters (6562 ft)
- Front IP51 (IP54 w/ gasket), Rear IP30 - as per IEC 60529
- Not suitable for wet locations
- For indoor use only

Notices

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it.

Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material. A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

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- This product must be installed, connected and used in compliance with prevailing standards and/or installation regulations.
- If this product is used in a manner not specified by the manufacturer, the protection provided by the product may be impaired.
- The safety of any system incorporating this product is the responsibility of the assembler/installer of the system.

As standards, specifications and designs change from time to time, always ask for confirmation of the information given in this publication.