

# Conzerv EM64xxH series

multi-function, load manager, VAF PF, energy, and dual source meters

Introducing Conzerv™ EM64xxH series meters that are ideal replacement for multiple analog meters for standalone metering in custom panels, switch boards, switchgear, genset panels, motor control centres, power factor improvement panels, and OEM panel board. The dual source meters are for the measurement of power and energy from the alternate source system.



## Applications

### Electrical installation remote monitoring

- Energy accounting and balancing
- Control panels
- Motor control centres
- Power distribution boards
- Dual or Alternate source power and energy measurement (Utility vs. Genset, Utility vs. Solar power, Utility vs. Wind power or combination of any two sources)
- Original equipment manufacturers (OEMs)
- Building management system
- Panel instrumentation
- Energy management system
- PF improvement panel

### Security and data integrity

- **Password settings:** configurable password from 0000 to 9999 to prevent unauthorised set-up changes or resetting stored data (energy and demand).
- **Tamper proof:** terminal cover with sealing provisions to protect against tampering of input signals in dual source meter.
- **Protection cover:** no risk of dropping screws inside panel or enclosure. Suitable for connection with ring type lugs. Protect against accidental contact with live terminals.
- **Cybersecurity:** enable/disable COM port to protect against possible misuse, and enhance troubleshooting and maintenance of communication network.

### Rugged constructions for industrial/commercial and residential use, EMI/EMC tested as per IEC 61326-1

Emission	FCC Part 15/Class A/CE
Electro static discharge	IEC 61000-4-2
Radiated field	IEC 61000-4-3
Fast transient	IEC 61000-4-4
Impulse waves	IEC 61000-4-5
Conducted immunity	IEC 61000-4-6
Magnetic field	IEC 61000-4-8
Voltage dips	IEC 61000-4-11
Safety construction	Self extinguishable, V0 plastic
Ingress protection	IP 51 and Rear IP 30

## Communication

- Modbus RTU: 2-Wires, 4800, 9600, 19200, or 38400 baud.
- Parity: Even, Odd, None, 1 stop bit if parity is Odd or Even, 2 stop bits if None.
- DLF3000: firmware update through communication port.

## Key features and essential measurements

- True RMS, 32 samples/second
- Voltage, Current, and Power Factor: Average and per-phase
- Derived neutral current
- Power: Active energy (W) with the option of choosing VA or VAR parameter (one power at a time), total and per-phase
- Demand: Configurable to either W, VA, or VAR with maximum demand reading
- Integrated parameters: kWh, kVARh, or kVAh, 2 quadrant energy, any one energy at a time
- Separate registers for dual source energy and Run Hrs
- Frequency, % Load, % Unbalance (V&I)
- Phase angle between V & A, per-phase
- On Hours, Run Hours, and power Interrupts
- Revolution per minute (RPM)
- Total Harmonic Distortion (THD%) for Voltage and Current, per-phase
- Old registers to retrieve last cleared integrated values (energy and Run Hrs)

## Accuracy and standards

- Tested as per IEC 62052-11 requirements
- Active energy: Class 1.0 as per IEC 62053-21 and Class 0.5 as per IEC 62053-22
- Reactive energy: Class 2.0 as per IEC 62053-24
- V, I, W, VA:  $\pm 0.5\%$  of reading
- VAR:  $\pm 2.0\%$  of reading
- Power factor:  $\pm 0.01$
- Frequency:  $\pm 0.05\%$  for F-nominal 50/60 Hz  $\pm 2$ ,  $\pm 0.2\%$  for frequency range from 30 to 48 Hz, 52 to 58 Hz, and 62 to 70 Hz
- EMI/EMC tested as per IEC 61326-1

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## UL and CE markings as per UL/IEC 61010-1 Edition-3

ISO/EHS/OHSAS certified manufacturing facility reinforces product quality and reliability. Independent lab reports available for CE/UL.



## Green Premium eco-mark

Confidently confirm and incorporate compliance status of our products into your environmental policies. Schneider Electric commits to disclose reliable, comprehensive information on the environmental impacts of our products.

## Safety, certification, and marking

- CE as per IEC 61010-1 edition 3
- UL and CAN/CSA – C22.2 as per UL 61010-1 edition 3
- Measurement CAT III for 480 V L-L
- Double insulated, Protection class II
- Green premium – RoHS, EOL, REACH, PEP
- RCM, EAC

## Front panel display

- 8 segment alpha numeric bright display, brilliant 3 line, 4 digits per line, red colour LED, digit height 14.2 mm (0.55 in)
- Multi-colour coded 12 LEDs at the front side to indicate as Analog load bar with over load indication and option to change full scale based on connected load
- 5+3 digits for energy and 4 digits for other parameters with auto scale/range and auto scroll features
- User configurable parameters in favourite page and display lock feature
- Indication for presence of alternate source

## Safe, easy, and fast installation

- Accuracy Class 1.0 as per IEC 62053-21, and Class 0.5 as per IEC 62053-22 (Energy test clause): critical for precision energy accounting and balancing, cost allocation, and tenant billing. All references are supported by type test reports conducted in external laboratory to reinforce the measurement accuracy and reliability.
- Reactive energy accuracy IEC 62053-23 Class 2.0: for increased precision on energy billing even with low power factor, minimizing errors and potential penalties that cost you money.
- THD% for voltage and current, per-phase: accurate harmonics monitoring under varied operating conditions helps determine harmonic contents and causes.
- **Suppression current:** to disregard negligible current flowing in the circuit (for example, auxiliary circuit) for accurate measurement of energy in the feeder.
- **Universal wiring system:** supports combination of 1-phase, 2-phase, 3-phase wiring configuration in different 13 wiring schemes, suitable for purpose-built machines, OEMs and export bound panel.
- **AC/DC control power with universal operating range:** connect to a universal control power range of 44 V to 300 V AC/DC, allowing tremendous cost savings during installation.
- **UL and CE markings as per UL/IEC 61010-1 Edition-3:** ISO/EHS/OHSAS certified manufacturing facility reinforces product quality and reliability. Independent lab test reports available for obtaining CE/UL marking.
- **Alternate or dual source sensor:** 2 pin connector to detect the presence of alternate source power flowing in the circuit, Input range: DC: 18 to 60 V  $\pm$  10% ON state, 0 to 4 V OFF state, AC: 80 to 277 V  $\pm$  10% ON state, 0 to 30 V OFF state.

Model Reference	Commercial Reference	Short Description	RS-485	Acc Class	VAF	PF	W, VA, VAR	Wh/ VAh/ VARh	% Unbalance (V&I)	ON/ Run Hrs Pwr Intr	Phase Angle	RPM
EM6433H	METSEEM6433HCL10RS	EM6433H RS CL 1.0	■	1.0	A	-	□	□	-	On Hrs, Intr	-	-
EM6433H	METSEEM6433HCL05RS	EM6433H RS CL 0.5	■	0.5	A	-	□	□	-	On Hrs, Intr	-	-
EM6436H	METSEEM6436HCL10NC	EM6436H NC CL 1.0	-	1.0	VAF	■	□	□	■	■	■	-
EM6436H	METSEEM6436HCL10RS	EM6436H RS CL 1.0	■	1.0	VAF	■	□	□	■	■	■	-
EM6436H	METSEEM6436HCL05RS	EM6436H RS CL 0.5	■	0.5	VAF	■	□	□	■	■	■	■
EM6438H	METSEEM6438HCL10RS	EM6438H RS CL 1.0	■	1.0	-	■	□	□	-	■	■	■
EM6438H	METSEEM6438HCL05RS	EM6438H RS CL 0.5	■	0.5	-	■	□	□	-	■	■	■
EM6459H	METSEEM6459HCL10NC	EM6459H NC CL 1.0	-	1.0	VAF	■	-	-	■	■	■	■
EM6459H	METSEEM6459HCL10RS	EM6459H RS CL 1.0	■	1.0	VAF	■	-	-	■	■	■	■
EM6459H	METSEEM6459HCL05RS	EM6459H RS CL 0.5	■	0.5	VAF	■	-	-	■	■	■	■

□ Only one power and energy measurement at a time, selectable through set-up mode.

See your Schneider Electric representative for complete ordering information

Schneider Electric Industries SAS Head Office  
35 rue Joseph Monier, 92500 Rueil Malmaison Cedex, France  
Phone: +33 (0)1 41 29 70 00  
[www.schneider-electric.com](http://www.schneider-electric.com)

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