NHP Electrical Engineering Products

EM530 and EM540 three-phase energy analysers

Ideal for commercial and industrial applications where comms enabled energy and power metering is required!

nhp.com.au | nhpnz.co.nz

1300 647 647 | 0800 647 647

nhpsales@nhp.com.au | sales@nhp-nz.com

Monitor and manage your energy usage with the Carlo Gavazzi EM530 and EM540 range of smart energy meters. The EM530 and EM540 are ideal for commercial and industrial applications where monitoring energy both remotely and locally is required. The meters provide all the main electrical variables as well as harmonics up to the 15th harmonic.

The EM530 and EM540 single or three-phase meters feature a native Modbus RTU communication, where energy data can be accessible to any Modbus RTU enabled building or energy management system, making it an ideal meter to meet Green Star, NABERS or/and BCA NCC requirements.

An onboard configuration wizard and the compact 3-DIN size makes it quick and easy to install and configure without compromising on the accuracy and monitoring abilities. Also featured are a self-wiring check and troubleshooting functionality, where an on-screen warning/indication can advise of incorrect phase sequence and current flow direction.

Features

- Compact size space-saving in panelboards and switchboards
- Active energy accuracy class 0.5S IEC/EN62053-22
- Flexible installation with DIN mounting standard or panel mounting options
- Measure the total harmonic distortion current and voltages up to the 15th harmonic
- Easily integrate data to other systems through Modbus RTU RS485
- Quick and easy to install and configure through the backlit LCD display or through a free downloadable configuration software

EM530

The EM530 energy analyser is connected through 5A current transformers for two three-phase systems up to 415V_{L-L}. It can be installed in any low-voltage switchboard or panelboard and configured through the backlit display, which ensures enhanced readability in light low light environments.

Compatible with any current transformer with 5A secondary current, the EM530 can be installed in systems with rated current up to 10kA, even in retrofit applications if used with split core CTs.

Ordering information

Description	Catalogue no.
3-phase energy meter CT 5A RS485 with 1 x digital input	EM530DINAV53XS1X

EM540

Eliminate the need for current transformers by measuring up to 65A current via direct connection with the Carlo Gavazzi EM540. It can be installed in any low-voltage switchboard or panelboard and configured through the backlit display which ensures enhanced readability even low light environments.

The EM540 can be used either as a DIN rail mounting or a panel mounting energy meter with a purpose fit accessory.

Ordering information

Description	Catalogue no.
3-phase energy meter direct 65A RS485 with 1 x digital input	EM540DINAV23XS1X

Technical data

	EM530	EM540
Attributes	EM530DINAV53XS1X	EM540DINAV23XS1X
Housing (H x W x D)	90 mm x 53 mm x 62 mm (3 DIN modules)	90 mm x 53 mm x 62 mm (3 DIN modules)
Display type	Backlit LCD Energy variable: 8 + 3 DGT Power: 1 + 2 DGT	Backlit LCD Energy variable: 8 + 3 DGT Power: 1 + 2 DGT
Accuracy	Class 0.5S (kWh) EN 62053-22 Class 2 (kVArh) EN 62053-23	Class 1 (kWh) EN 62053-22 Class 2 (kVArh) EN 62053-23
Refresh rate	0.5 seconds	0.5 seconds
System type	Two-phase (3-wire) Three-phase with neutral (4-wire) Three-phase without neutral (3-wire)	Two-phase (3-wire) Three-phase with neutral (4-wire) Three-phase without neutral (3-wire)
Voltage inputs	Direct 240V L-N AC, 415V L-L AC	Direct 240V L-N AC, 415V L-L AC
Current inputs	In: 5A CT	Imax: 65A
Digital inputs	1 (Voltage free contact)	1 (Voltage free contact)
Measurement variables	**System: phase variables:** V_{LL}, V_{LN}, $A_{dmd\ max}$, VAr, VA, I_N, W_{dmd}, $W_{dmd\ max}$, VA_{dmd}, $VA_{dmd\ max}$, Hz, kWh, kVArh, PF, h; **Phase variables:** V_{LL}, V_{LN}, A_{dmd}, A, W, VAr, VA, PF, T_{rms} method, THDi %, $THDv_{L-N}$ %, $THDv_{L-L}$ %	**System: phase variables:** V_{LL}, V_{LN}, $A_{dmd\ max}$, VAr, VA, I_N, W_{dmd}, $W_{dmd\ max}$, VA_{dmd}, $VA_{dmd\ max}$, Hz, kWh, kVArh, PF, h; **Phase variables:** V_{LL}, V_{LN}, A_{dmd}, A, W, VAr, VA, PF, T_{rms} method, THDi %, $THDv_{L-N}$ %, $THDv_{L-L}$ %
Harmonic distortion	THD up to 15th harmonic	THD up to 15th harmonic
Outputs - serial	RS485 Modbus RTU	RS485 Modbus RTU
Power supply	Self-powered through voltage inputs	Self-powered through voltage inputs
Frequency	50/60 Hz	50/60 Hz
Protection degree	IP40 (front) IP20 (terminals)	IP40 (front) IP20 (terminals)

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SALES 1300 647 647
nhpsales@nhp.com.au

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SALES 0800 647 647
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