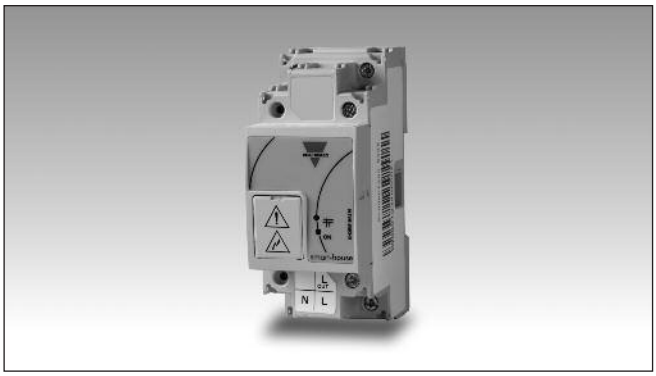
Smart Dupline®
Energy Meter
Type SH2EM16A230



- **Load 16 A**
- **Instantaneous variables readout: current, voltage, power**
- **Energy measurement: kWh**
- **2 DIN housing**
- **LED indication for power supply, Dupline® bus**
- **Connection to other cabinet modules via local bus**

Product Description

This is an energy meter over smart Dupline. Single phase variables: VLN, A, W. Energy measurements: total kWh. The measured values are then logged in the Sx2WEB24.

Ordering Key

SH 2 EM 16A 230

- **smart-house**
- **2-DIN housing**
- **Energy meter**
- **Resistive load**
- **Power supply**

Type Selection

Housing	Mounting	Supply: 115 to 240 VAC
2 DIN	DIN-rail	**SH2EM16A230**

Input Specifications

Rated inputs	
Current type	By direct connection
Voltage	115/240 VAC
Current range (direct)	16 A
Accuracy	
Current Overloads	
Voltage Overloads	
Frequency	

Supply Specifications

Power supply	Overvoltage cat. II (IEC 60664-1, par. 4.3.3.2)
Rated operational voltage	115/240 VAC
Operational voltage range	115/240 VAC ±10%
Rated operational power	1 W, 2.5 VA
Connection	Terminals L, N
Power on delay	Typ. 2 s

Dupline® Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	5.5 V
Maximum Dupline® current	1 mA

The Dupline® bus is present on the internal bus: the modules can be connected one next to the other without the need of wiring the Dupline® bus. See “Wiring diagram”.

General Specifications

Installation category	Cat. II
Dielectric strength	
Power supply and Dupline® to output	4 KV AC for 1 min. 6 KV impulse 1.2/50µs (IEC60664-1, TAB. A.1)
Address assignment	Automatic: the controller recognises the module through the SIN (Specific Identification Number) that has to be filled in the Sx tool.
Environment	
Degree of protection	
Front	IP 50
Screw terminal	IP 20
Pollution degree	2 (IEC 60664-1, par. 4.6.2)
Operating temperature	-20° to +50°C (-4° to 122°F)
Storage temperature	-50° to +85°C (-58° to 185°F)
Humidity (non-condensing)	20 to 80% RH
LED's indication	
Power LED	1 green
Dupline® LED	1 yellow
Connection	
Terminal	3, screw-type
Cable cross-section	Max. 1.5 mm^2
Tightening torque	0.4 Nm / 0.8 Nm

Housing	
Dimensions	2 DIN module
Material	Noryl
Weight	150 g
CE Marking	Yes
EMC	
Immunity	EN 61000-6-2
- Electrostatic discharge	EN 61000-4-2
- Radiated radiofrequency	EN 61000-4-3
- Burst immunity	EN 61000-4-4
- Surge	EN 61000-4-5
- Conducted radio frequency	EN 61000-4-6
- Power frequency magnetic fields	EN 61000-4-8
- Voltage dips, variations, interruptions	EN 61000-4-11
Emission	EN 61000-6-3
- Conducted and radiated emissions	CISPR 22 (EN55022), cl. B
- Conducted emissions	CISPR 16-2-1 (EN55016-2-1)
- Radiated emissions	CISPR 16-2-3 (EN55016-2-3)

Mode of Operation

Addressing
If the module is connected to the Sx2WEB24 controller, no addressing is needed since the module is provided with a specific identification number (SIN): the user has only to insert the SIN number in the Sx tool when creating the system configuration.

Faulty load recognition
If the measured current is lower than 20mA, the module gives a message of faulty load. This information can be read by the Sx2WEB24, via smart-Dupline® and then shown on the Sx Tool if connected to the Sx2WEB24.

Energy measurement
The electrical values measured by the SH2EM16A230 are: current, voltage, power, energy. These readouts are sent to the Sx2WEB24 and logged there, the instant values and the logged ones are accessible to the user by connecting to the webserver resident in the Sx2WEB24.

Electrical Values Readout

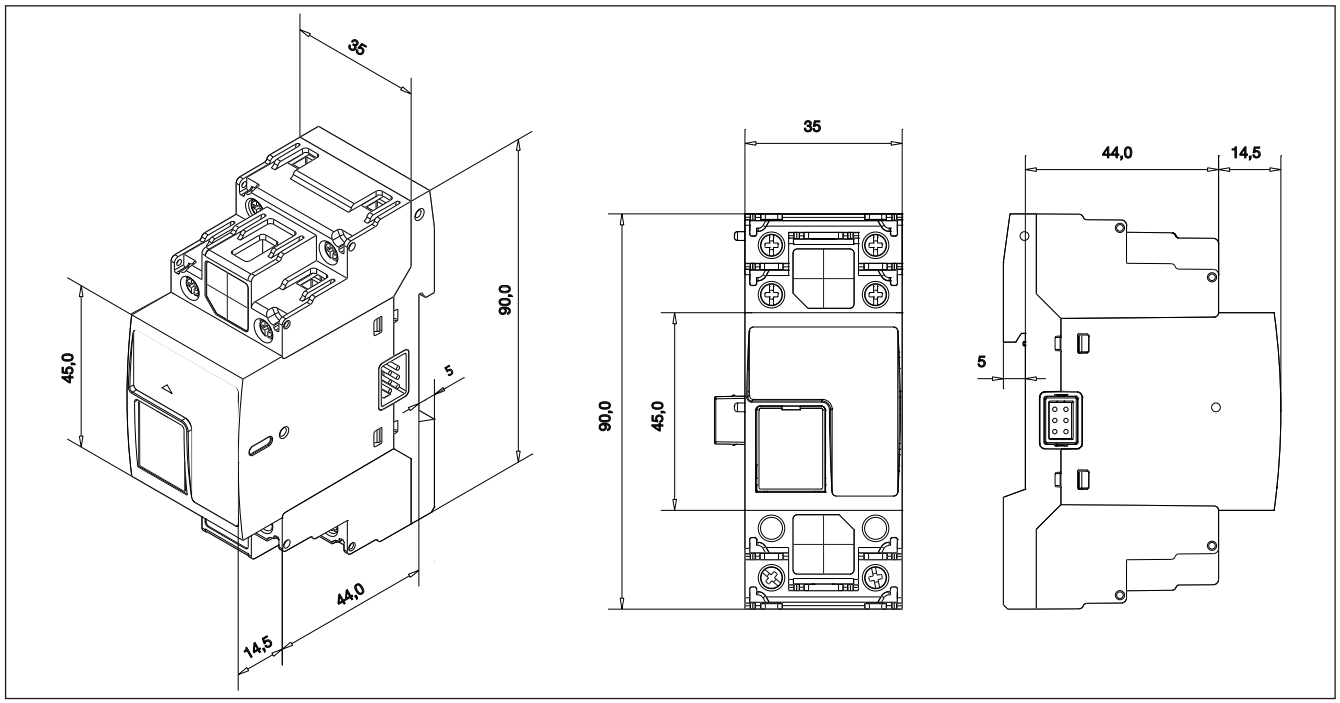
Rated values	
A	0 to 16000 mA
V	103 to 264.0 V
W	0.1 to 4500.0 W
kWh	0.1 to 99999999.9 kWh with roll over
Wdmd	0.1 to 4500.0 W
VA	0.1 to 4500.0 VA
var	0.1 to 4500.0 var
PF	-1.000... 0...1.000 PF

LEDs Indication

Green LED: Power status.
ON: supply ON
OFF: supply OFF

Yellow LED: if the Dupline® bus is working properly, it is always ON.
If there is a fault on the bus it will be flashing.
It is OFF if the bus is OFF or not connected.

Dimensions



Wiring Diagrams