

# C series

## Product brief

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### Key applications

- Landlord sub-metering
- Object metering

### Meter performance

- Direct connected up to 40 A
- Active energy
- Low power consumption
- Alarm function

### Communication

- Pulse output

### Installation

- Small size - 1 DIN (single phase) or 3 DIN (three phase) modules width
- Wide temperature range
- Easy configuration

### Approvals

- MID type approval “annex B”
- MID initial verification “annex F”
- IEC type approval

# C series

## Description



The EQ meters, C series are truly compact meters for single phase and three phase metering. The C series is mounted on a DIN rail and is suitable for installation in distribution boards and small consumer units.

### General features

Only one module wide, the C series is a very compact meter for single phase and three phase applications. The meters have an LCD with large digits showing energy register and instrumentation values. The meters have a wide temperature range which makes it possible to install the meters in many locations. Navigating the meters are easily done via the push-button below the display.

### Instrumentation

The C series meters support reading of instrument values. A number of electrical properties can be read:

- Power factor
- Active power
- Current
- Voltage

### Outputs

The C series meters have an output that can be used as pulse output or alarm output. The alarm quantity and levels is easily configured on the meter with the push button. The output can be used for controlling external apparatus like a contactor or an alarm indicator (connected via an external relay).

### Approvals

The C series meters are type approved according to IEC and MID. MID is the Measuring Instruments Directive 2004/22/EC from the European Commission. The type approval is according to standards that covers all relevant technical aspects of the meter. These include climate conditions, electromagnetic compatibility (EMC), electrical requirements, mechanical requirements and accuracy.

MID versions have initial verification according to annex F of the Measuring Instruments Directive.

# C11 and C13

## Single and three phase meter

### 40A

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C11

#### Description C11

Direct connected electricity meter. IEC approval. Instrument values. Alarm function. Optional - Verified and approved according to MID, 1 DIN.

#### Ordering details

Voltage V	Accuracy Class	I/O	Communi- cation	Type	Order Code	Pkg qty	Weight 1 pc
<b>Steel</b>							
Active energy							
1 x 230 V AC	Class B (Cl. 1)	Pulse output	-	C11 110 - 100*)	2CMA100014R1000	1	0.07
	Class 1			C11 110 - 300	2CMA170550R1000	1	0.07

\*) MID approval



C13

#### Description C13

Direct connected electricity meter. IEC approval. 3 element metering. Instrument values. Alarm function. Optional - Verified and approved according to MID, 3DIN.

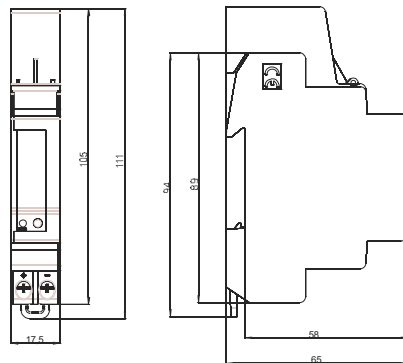
#### Ordering details

Voltage V	Accuracy Class	I/O	Communi- cation	Type	Order Code	Pkg qty	Weight 1 pc
<b>Steel</b>							
Active energy							
3 x 230/400 V AC	Class B (Cl. 1)	Pulse output	-	C13 110 - 100*)	2CMA100191R1000	1	0.17
	Class 1			C13 110 - 300	2CMA100192R1000	1	0.17

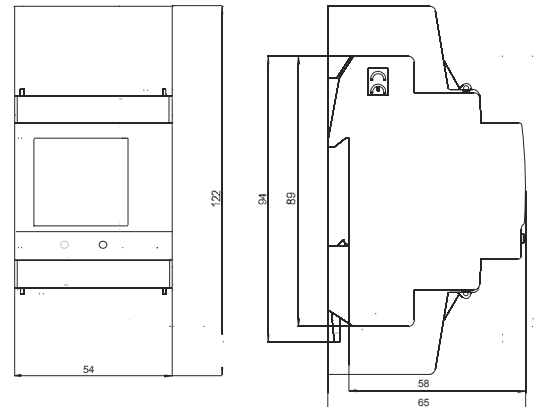
\*) MID approval

#### Dimensions

##### C11



##### C13



# C series

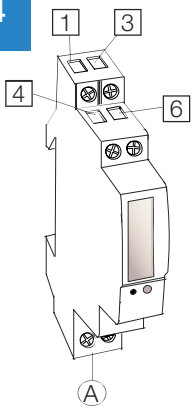
## Technical data

	C11	C13
<b>Voltage/current inputs</b>		
Nominal voltage	230 V AC	3x230/400
Voltage range	230 V AC (-20% - +15%)	3x220-240 VAC (-20% - +15%)
Power dissipation voltage circuits	< 0.8 VA (0.2 W) total	1.5 VA (0.6 W) total
Power dissipation current circuits	0.02 W at 230 V AC and $I_b$	0.04 VA (0.04 W) per phase at 230 V AC and $I_b$
Base current $I_b$	5 A	
Rated current $I_n$	-	
Reference current $I_{ref}$	5 A	
Transitional current $I_{tr}$	0.5 A	
Maximum current $I_{max}$	40 A	
Minimum current $I_{min}$	0.25 A	
Starting current $I_{st}$	< 20 mA	
Terminal wire area	1 - 10 mm <sup>2</sup>	0.5 - 10 mm <sup>2</sup>
Recommended tightening torque	0,8 Nm	
<b>General data</b>		
Frequency	50 or 60 Hz ± 5%	
Accuracy Class	B (Cl.1)	
Active energy	1%	
Display of energy	6 digits LCD	
<b>Communication</b>		
Terminal wire area	-	
Recommended tightening torque	-	
<b>Pulse indicator (LED)</b>		
Pulse frequency	1000 imp/kWh	
Pulse length	40 ms	
<b>Environmental</b>		
Operating temperature	- 25°C - +70°C	
Storage temperature	- 25°C - +85°C	
Humidity	75% yearly average, 95% on 30 days/year	
Resistance to fire and heat	Terminal 960°C, cover 650°C (IEC 60695-2-1)	
Resistance to water and dust	IP20 on terminal block without protective enclosure and IP51 in protective enclosure, according to IEC 60529.	
Mechanical environment	Class M1 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).	
Electromagnetic environment	Class E2 in accordance with the Measuring Instrument Directive (MID), (2004/22/EC).	
<b>Outputs</b>		
Current	2 - 100 mA	
Voltage	5 - 40 V DC	
Pulse output frequency	100 (imp/kWh)	
Pulse length	200 ms	
Terminal wire area	0.5 - 6 mm <sup>2</sup>	
Recommended tightening torque	0.8 Nm	
<b>EMC compatibility</b>		
Impulse voltage test	6 kV 1.2/50 µs (IEC 60060-1)	
Surge voltage test	4 kV 1.2/50 µs (IEC 61000-4-5)	
Fast transient burn test	4 kV (IEC 61000-4-4)	
Immunity to electromagnetic HF-fields	80 MHz - 2 GHz at 10 V/m (IEC 61000-4-3)	
Immunity to conducted disturbance	150 kHz - 80 MHz, (IEC 61000-4-6)	
Immunity to disturbance with harmonics	2kHz - 150kHz	
Radio frequency emission	EN 55022, class B (CISPR22)	
Electrostatic discharge	15 kV (IEC 61000-4-2)	
Standards	IEC 62052-11, IEC 62053-21 class 1, GB/T 17215.211-2006, GBT 17215.321-2008 class 1, GB 4208-2008, EN 50470-1, EN 50470-3 category B	
<b>Mechanical</b>		
Material	Glass reinforced polycarbonate	
<b>Dimensions</b>		
Width	17,5 mm	54 mm
Height	111 mm	122 mm
Depth	65 mm	65 mm
DIN modules	1	3

# C series

## Wiring diagrams

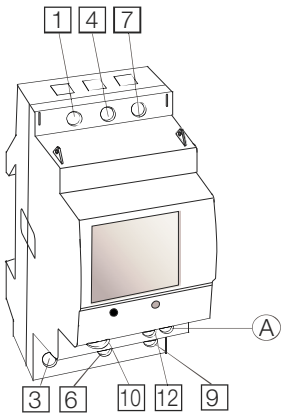
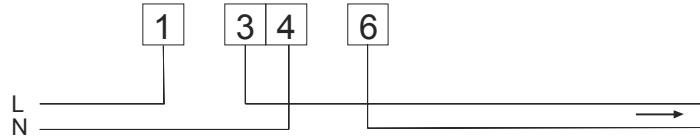
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- 1 Phase in
- 3 Phase out
- 4 6 Neutral

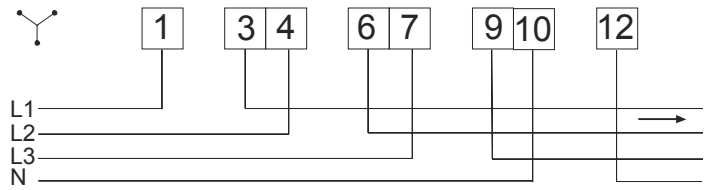
### Terminal blocks

C11



- 1 4 7 Phase in
- 3 6 9 Phase out
- 10 12 Neutral

C13



**Output** (A) = Please see the pictures on the left

