

# 滑軌式電度錶



FONLEE  
豐立自動控制器材有限公司  
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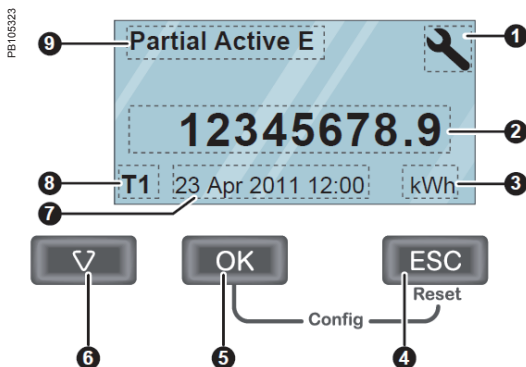
**Schneider**  
Electric™  
施耐德電機



Acti9 iEM3100/3200 energy meter



Acti9 iEM3300 energy meter



### Front Panel Display and Buttons

- 1 Configuration mode
- 2 Values and parameters
- 3 Unit
- 4 Cancellation
- 5 Confirmation
- 6 Selection
- 7 Date and time
- 8 Tariff currently used (on select models)
- 9 Functions/Measurements

- The Acti9 iEM3000 Energy Meter Series offers a cost-attractive, competitive range of DIN rail-mounted energy meters ideal for sub-billing and cost allocation applications.

Combined with communication systems, like Smart Link, the Acti9 iEM3000 Series makes it easy to integrate electrical distribution measurements into customer's facility management systems. It's the right energy meter at the right price for the right job.

Three versions are available: 63A direct measure (iEM3100 models), current transformers associated meter (iEM3200 models), and 125A direct measure (iEM3300 models). For each range, eight versions are available (seven for the iEM3300) to satisfy basic to advanced applications:

- iEM3100/iEM3200/iEM3300: kWh meter with partial counter
- iEM3110/iEM3210/iEM3310: kWh meter with partial counter and pulse output. MID certified.
- iEM3115/iEM3215: multi-tariff meter controlled by digital input or internal clock, MID certified.
- iEM3135/iEM3235/iEM3335: energy meter, four quadrant, multi-tariffs with partial counter and current, voltage, power measurement. M-Bus communication, digital I/O and MID certified.
- iEM3150/iEM3250/iEM3350: kWh meter with partial counter and current, voltage, power measurement. Modbus communication.
- iEM3155/iEM3255/iEM3355: energy meter, four quadrant, multi-tariffs with partial counter and current, voltage, power measurement. Modbus communication, digital I/O, MID certified.
- iEM3165/iEM3265/iEM3365: energy meter, four quadrant, multi-tariffs with partial counter and current, voltage, power measurement. BACnet communication, digital I/O and MID certified.
- iEM3175/iEM3275/iEM3375: energy meter, four quadrant, multi-tariffs with partial counter and current, voltage, power measurement. LON communication, digital input and MID certified.

### Innovative design makes the meters smart and simple:

- Easy to install for panel builders
- Easy to commission for contractors and installers
- Easy to operate for end users

### Applications

#### Cost management applications

- ☒ Bill verification
- ☒ Sub-billing, including WAGES view (four user-defined tariffs)
- ☒ Cost allocation, including WAGES view

#### Network management applications

- ☒ Basic electrical parameters like current, voltage and power
- Onboard overload alarm to avoid circuit overload and trip
- Easy integration with PLC systems by input/output interface

### Market segments

- ☒ Buildings & Industry
- ☒ Data centres and networks
- ☒ Infrastructure (airports, road tunnels, telecom)

### Characteristics

- ☒ Self-powered meters
- ☒ Chain measurement (meters + CTs) accuracy class 1
- ☒ Compliance with IEC 61557-12, IEC 62053-21/22, IEC 62053-23, EN50470-3
- Compact, 5 module width
- Graphical display for easy viewing
- ☒ Onboard Modbus, LON, M-Bus or BACnet communication
- ☒ Easy wiring (without CTs) Acti9 iEM3100 and iEM3300 models
- ☒ Double fixation on DIN rail (horizontal or vertical)
- ☒ Anti-tamper security features ensure the integrity of your data
- ☒ MID compliant (selected models) providing certified accuracy and data security

| Function guide                                         |                                              | iEM3100<br>iEM3200<br>iEM3300 | iEM3110<br>iEM3210<br>iEM3310 | iEM3115<br>iEM3215 | iEM3135<br>iEM3235<br>iEM3335 | iEM3150<br>iEM3250<br>iEM3350 | iEM3155<br>iEM3255<br>iEM3355 | iEM3165<br>iEM3265<br>iEM3365 | iEM3175<br>iEM3275<br>iEM3375 |
|--------------------------------------------------------|----------------------------------------------|-------------------------------|-------------------------------|--------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Width (18 mm module, DIN rail mounting)                |                                              | 5 / 5 / 8                     | 5 / 5 / 8                     | 5 / 5              | 5 / 5                         | 5 / 5 / 8                     | 5 / 5 / 8                     | 5 / 5                         | 5 / 5                         |
| Direct measurement (up to 63A or 125A)                 |                                              | 63A / - / 125A                | 63A / - / 125A                | 63A / -            | 63A / -                       | 63A / - / 125A                | 63A / - / 125A                | 63A / -                       | 63A / -                       |
| Measurement inputs through CTs (1A, 5A)                |                                              | - / ■ / -                     | - / ■ / -                     | - / ■              | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     |
| Measurement inputs through VTs                         |                                              |                               |                               |                    | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     |
| Active Energy measurements class (Total & partial kWh) |                                              | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  | 1 / 0.5S           | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  |
| Four Quadrant Energy measurements                      |                                              |                               |                               |                    | ■                             |                               | ■                             | ■                             | ■                             |
| Electrical measurements (I, V, P, ...)                 |                                              |                               |                               |                    | ■                             | ■                             | ■                             | ■                             | ■                             |
| Multi-tariff (internal clock)                          |                                              |                               |                               | 4                  | 4                             |                               | 4                             | 4                             | 4                             |
| Multi-tariff (external control)                        |                                              |                               |                               | 4                  | 2                             |                               | 2                             | 2                             | 2                             |
| Measurement display (number of lines)                  |                                              | 3                             | 3                             | 3                  | 3                             | 3                             | 3                             | 3                             | 3                             |
| Digital inputs                                         | Programmable (Tariff control or WAGES input) |                               |                               |                    | 1                             |                               | 1                             | 1                             | 1                             |
|                                                        | Tariff control only                          |                               |                               | 2                  |                               |                               |                               |                               |                               |
| Digital outputs                                        | Programmable (kWh pulse or kW alarm)         |                               |                               |                    | 1                             |                               | 1                             | 1                             |                               |
|                                                        | kWh pulse only                               |                               | 1                             |                    |                               |                               |                               |                               |                               |
| kW overload alarm                                      |                                              |                               |                               |                    | 1                             |                               | 1                             | 1                             |                               |
| M-Bus protocol                                         |                                              |                               |                               |                    | ■                             |                               |                               |                               |                               |
| Modbus protocol                                        |                                              |                               |                               |                    |                               | ■                             | ■                             |                               |                               |
| BACnet protocol                                        |                                              |                               |                               |                    |                               |                               |                               | ■                             |                               |
| LON                                                    |                                              |                               |                               |                    |                               |                               |                               |                               | ■                             |
| MID (legal metrology certification)                    |                                              |                               | ■                             | ■                  | ■                             |                               | ■                             | ■                             | ■                             |

PB108423



Acti9 iEM3100 models direct connected (63 A) Direct connected up to 63 A

PB108424



Acti9 iEM3200 models (1 A / 5 A CT connected)

### Connectivity advantages

|                             |                                                                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Programmable digital input  | External tariff control signal (4 tariffs)<br>Remote Reset partial counter<br>External status, e.g. breaker status<br>Collect WAGES pulses |
| Programmable digital output | kWh overload alarm (iEM3135, iEM3155, iEM3165<br>iEM3235, iEM3255, iEM3265, iEM3335, iEM3355, iEM3365)<br>kWh pulses                       |
| Graphic LCD display         | Scroll energies<br>Current, voltage, power, frequency, power factor                                                                        |
| Communication               | Serial communication options are available with M-Bus, Modbus, BACnet or LON protocols                                                     |

### Standards

|               |                                                                                             |
|---------------|---------------------------------------------------------------------------------------------|
| IEC standards | IEC 61557-12, IEC 61036, IEC 61010, IEC 62053-21/22<br>Class 1 and Class 0.5S, IEC 62053-23 |
|---------------|---------------------------------------------------------------------------------------------|

### Multi-tariff capability

The Acti9 iEM3000 Series allows arrangement of kWh consumption in four different registers. This can be controlled by:

- Digital Inputs. Signal can be provided by PLC or utilities
- Internal clock programmable by HMI
- Through communication

### This function allows users to:

- Make tenant metering for dual source applications to differentiate backup source or utility source
- Understand well the consumption during working time and non working time, and between working days and weekends
- Follow up feeders consumption in line with utility tariff rates

| Function guide                                         |                                              | iEM3100<br>iEM3200<br>iEM3300 | iEM3110<br>iEM3210<br>iEM3310 | iEM3115<br>iEM3215 | iEM3135<br>iEM3235<br>iEM3335 | iEM3150<br>iEM3250<br>iEM3350 | iEM3155<br>iEM3255<br>iEM3355 | iEM3165<br>iEM3265<br>iEM3365 | iEM3175<br>iEM3275<br>iEM3375 |
|--------------------------------------------------------|----------------------------------------------|-------------------------------|-------------------------------|--------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Width (18 mm module, DIN rail mounting)                |                                              | 5 / 5 / 8                     | 5 / 5 / 8                     | 5 / 5              | 5 / 5                         | 5 / 5 / 8                     | 5 / 5 / 8                     | 5 / 5                         | 5 / 5                         |
| Direct measurement (up to 63A or 125A)                 |                                              | 63A / - / 125A                | 63A / - / 125A                | 63A / -            | 63A / -                       | 63A / - / 125A                | 63A / - / 125A                | 63A / -                       | 63A / -                       |
| Measurement inputs through CTs (1A, 5A)                |                                              | - / ■ / -                     | - / ■ / -                     | - / ■              | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     |
| Measurement inputs through VTs                         |                                              |                               |                               |                    | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     | - / ■ / -                     |
| Active Energy measurements class (Total & partial kWh) |                                              | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  | 1 / 0.5S           | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  | 1 / 0.5S / 1                  |
| Four Quadrant Energy measurements                      |                                              |                               |                               |                    | ■                             |                               | ■                             | ■                             | ■                             |
| Electrical measurements (I, V, P, ...)                 |                                              |                               |                               |                    | ■                             | ■                             | ■                             | ■                             | ■                             |
| Multi-tariff (internal clock)                          |                                              |                               |                               | 4                  | 4                             |                               | 4                             | 4                             | 4                             |
| Multi-tariff (external control)                        |                                              |                               |                               | 4                  | 2                             |                               | 2                             | 2                             | 2                             |
| Measurement display (number of lines)                  |                                              | 3                             | 3                             | 3                  | 3                             | 3                             | 3                             | 3                             | 3                             |
| Digital inputs                                         | Programmable (Tariff control or WAGES input) |                               |                               |                    | 1                             |                               | 1                             | 1                             | 1                             |
|                                                        | Tariff control only                          |                               |                               | 2                  |                               |                               |                               |                               |                               |
| Digital outputs                                        | Programmable (kWh pulse or kW alarm)         |                               |                               |                    | 1                             |                               | 1                             | 1                             |                               |
|                                                        | kWh pulse only                               |                               | 1                             |                    |                               |                               |                               |                               |                               |
| kW overload alarm                                      |                                              |                               |                               |                    | 1                             |                               | 1                             | 1                             |                               |
| M-Bus protocol                                         |                                              |                               |                               |                    | ■                             |                               |                               |                               |                               |
| Modbus protocol                                        |                                              |                               |                               |                    |                               | ■                             | ■                             |                               |                               |
| BACnet protocol                                        |                                              |                               |                               |                    |                               |                               |                               | ■                             |                               |
| LON                                                    |                                              |                               |                               |                    |                               |                               |                               |                               | ■                             |
| MID (legal metrology certification)                    |                                              |                               | ■                             | ■                  | ■                             |                               | ■                             | ■                             | ■                             |

PB108423



Acti9 iEM3100 models direct connected (63 A) Direct connected up to 63 A

PB108424



Acti9 iEM3200 models (1 A / 5 A CT connected)

### Connectivity advantages

|                             |                                                                                                                                            |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Programmable digital input  | External tariff control signal (4 tariffs)<br>Remote Reset partial counter<br>External status, e.g. breaker status<br>Collect WAGES pulses |
| Programmable digital output | kWh overload alarm (iEM3135, iEM3155, iEM3165<br>iEM3235, iEM3255, iEM3265, iEM3335, iEM3355, iEM3365)<br>kWh pulses                       |
| Graphic LCD display         | Scroll energies<br>Current, voltage, power, frequency, power factor                                                                        |
| Communication               | Serial communication options are available with M-Bus, Modbus, BACnet or LON protocols                                                     |

### Standards

|               |                                                                                             |
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|---------------|---------------------------------------------------------------------------------------------|

### Multi-tariff capability

The Acti9 iEM3000 Series allows arrangement of kWh consumption in four different registers. This can be controlled by:

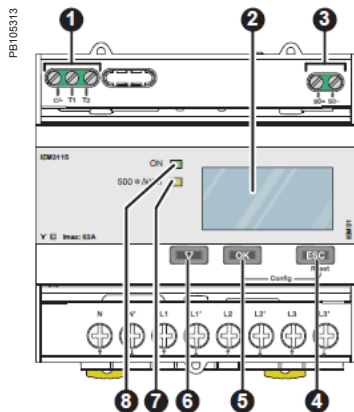
- Digital Inputs. Signal can be provided by PLC or utilities
- Internal clock programmable by HMI
- Through communication

### This function allows users to:

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- Understand well the consumption during working time and non working time, and between working days and weekends
- Follow up feeders consumption in line with utility tariff rates

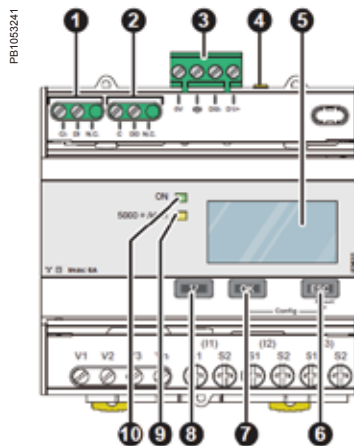
| Specification guide                       | iEM3100/iEM3300 Models                                                       |                    |           |                    |                    |                    |                    |                    |
|-------------------------------------------|------------------------------------------------------------------------------|--------------------|-----------|--------------------|--------------------|--------------------|--------------------|--------------------|
|                                           | iEM3100<br>iEM3300                                                           | iEM3110<br>iEM3310 | iEM3115   | iEM3135<br>iEM3335 | iEM3150<br>iEM3350 | iEM3155<br>iEM3355 | iEM3165<br>iEM3365 | iEM3175<br>iEM3375 |
| Current (max.) Direct connected (iEM31xx) | 63A for iEM3100 models, 125A for iEM3300 models                              |                    |           |                    |                    |                    |                    |                    |
| Meter constant LED                        | 500/kWh                                                                      |                    |           |                    |                    |                    |                    |                    |
| Pulse output                              |                                                                              | Up to 1000p/kWh    |           | Up to 1000p/kWh    |                    | Up to 1000p/kWh    |                    |                    |
| Multi-tariff                              |                                                                              |                    | 4 tariffs | 4 tariffs          |                    | 4 tariffs          |                    |                    |
| Communication                             |                                                                              |                    |           | M-bus              | Modbus             | Modbus             | BACnet             | LON                |
| DI/DO                                     |                                                                              | 0/1                | 2/0       | 1/1                |                    | 1/1                | 1/1                | 1/0                |
| MID (EN50470-3)                           |                                                                              | ■                  |           | ■                  |                    | ■                  | ■                  | ■                  |
| Network                                   | 1P+N, 3P, 3P+N                                                               |                    |           |                    |                    |                    |                    |                    |
| Accuracy class                            | Class 1 (IEC 62053-21 and IEC61557-12) Class B (EN50470-3)                   |                    |           |                    |                    |                    |                    |                    |
| Wiring capacity                           | 16 mm <sup>2</sup> for iEM3100 models, 50 mm <sup>2</sup> for iEM3300 models |                    |           |                    |                    |                    |                    |                    |
| Display max.                              | LCD 99999999.9kWh                                                            |                    |           |                    |                    |                    |                    |                    |
| Voltage (L-L)                             | 3 x 100/173 V AC to 3 x 277/480 V AC (50/60 Hz)                              |                    |           |                    |                    |                    |                    |                    |
| IP protection                             | IP40 front panel and IP20 casing                                             |                    |           |                    |                    |                    |                    |                    |
| Temperature                               | -25°C to 55°C (K55)                                                          |                    |           |                    |                    |                    |                    |                    |
| Product size                              | 5 x 18 mm for iEM3100 models, 8 x 18 mm for iEM3300 models                   |                    |           |                    |                    |                    |                    |                    |
| Overvoltage and measurement               | Category III, Degree of pollution 2                                          |                    |           |                    |                    |                    |                    |                    |
| kWh                                       | ■                                                                            | ■                  | ■         | ■                  | ■                  | ■                  | ■                  | ■                  |
| kVARh                                     |                                                                              |                    |           | ■                  |                    | ■                  | ■                  | ■                  |
| Active power                              |                                                                              |                    |           | ■                  | ■                  | ■                  | ■                  | ■                  |
| Reactive power                            |                                                                              |                    |           | ■                  |                    | ■                  | ■                  | ■                  |
| Currents and voltages                     |                                                                              |                    |           | ■                  | ■                  | ■                  | ■                  | ■                  |
| Overload alarm                            |                                                                              |                    |           | ■                  |                    | ■                  | ■                  | ■                  |
| Hour counter                              |                                                                              |                    |           | ■                  |                    | ■                  | ■                  | ■                  |

| Specification guide                                                     | iEM3200 Models                                                               |                |          |                                  |         |                |         |         |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------|----------|----------------------------------|---------|----------------|---------|---------|
|                                                                         | iEM3200                                                                      | iEM3210        | iEM3215  | iEM3235                          | iEM3250 | iEM3255        | iEM3265 | iEM3275 |
| 1 A / 5 A CTs (max current)                                             | 6 A                                                                          |                |          |                                  |         |                |         |         |
| Meter constant LED                                                      | 5000/kWh                                                                     |                |          |                                  |         |                |         |         |
| Pulse output frequency                                                  |                                                                              | Up to 500p/kWh |          | Up to 500p/kWh                   |         | Up to 500p/kWh |         |         |
| Multi-tariff                                                            |                                                                              |                | 4 tariff | 4 tariffs                        |         | 4 tariffs      |         |         |
| Communication                                                           |                                                                              |                |          | M-bus                            | Modbus  | Modbus         | BACnet  | LON     |
| DI/DO                                                                   |                                                                              | 0/1            | 2/0      | 1/1                              |         | 1/1            | 1/1     | 1/0     |
| MID (EN50470-3)                                                         |                                                                              | ■              | ■        | ■                                |         | ■              | ■       | ■       |
| Network                                                                 | 1P+N, 3P, 3P+N support CTs                                                   |                |          | 1P+N, 3P, 3P+N support CTs & VTs |         |                |         |         |
| Accuracy class                                                          | Class 0.5S (IEC 62053-22 and IEC61557-12) Class C (EN50470-3) <sup>(1)</sup> |                |          |                                  |         |                |         |         |
| Wiring capacity                                                         | 6 mm² for currents and 4 mm² for voltages                                    |                |          |                                  |         |                |         |         |
| Display max.                                                            | LCD 99999999.9kWh or 99999999.9MWh                                           |                |          |                                  |         |                |         |         |
| Voltage (L-L)                                                           | 3 x 100/173 V AC to 3 x 277/480 V AC (50/60 Hz)                              |                |          |                                  |         |                |         |         |
| IP protection                                                           | IP40 front panel and IP20 casing                                             |                |          |                                  |         |                |         |         |
| Temperature                                                             | -25°C to 55°C (K55)                                                          |                |          |                                  |         |                |         |         |
| Product size                                                            | 5 steps of 18 mm                                                             |                |          |                                  |         |                |         |         |
| Overvoltage & measurement                                               | Category III, Degree of pollution 2                                          |                |          |                                  |         |                |         |         |
| kWh                                                                     | ■                                                                            | ■              | ■        | ■                                | ■       | ■              | ■       | ■       |
| kVARh                                                                   |                                                                              |                |          | ■                                |         | ■              | ■       | ■       |
| Active power                                                            |                                                                              |                |          | ■                                | ■       | ■              | ■       | ■       |
| Reactive power                                                          |                                                                              |                |          | ■                                |         | ■              | ■       | ■       |
| Currents and voltages                                                   |                                                                              |                |          | ■                                | ■       | ■              | ■       | ■       |
| Overload alarm                                                          |                                                                              |                |          | ■                                |         | ■              | ■       | ■       |
| Hour counter                                                            |                                                                              |                |          | ■                                |         | ■              | ■       | ■       |
| (1) For 1 A CTs Class 1 (IEC6253-21 and IEC61557-12 Class B (EN50470-3) |                                                                              |                |          |                                  |         |                |         |         |



### Acti9 iEM3000 Series parts

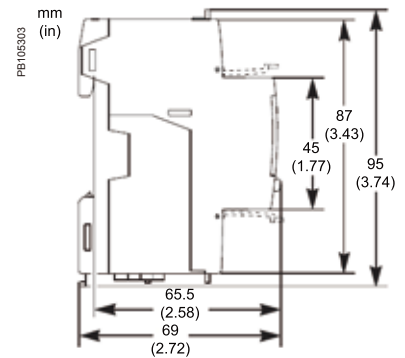
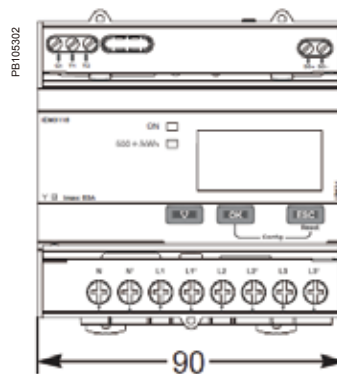
1. Digital inputs for tariff control (iEM3115 / iEM3215)
2. Display for measurement and configuration
3. Pulse out for remote transfer (iEM3110 / iEM3210)
4. Cancellation
5. Confirmation
6. Selection
7. Flashing yellow meter indicator to check accuracy
8. Green indicator: on/off, error



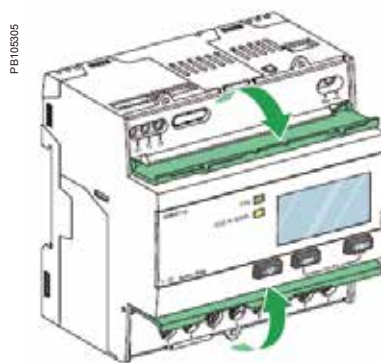
### Acti9 iEM3000 Series parts

1. Digital inputs for tariff control (iEM3115 / iEM3215)
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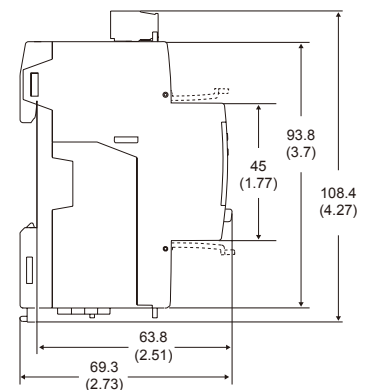
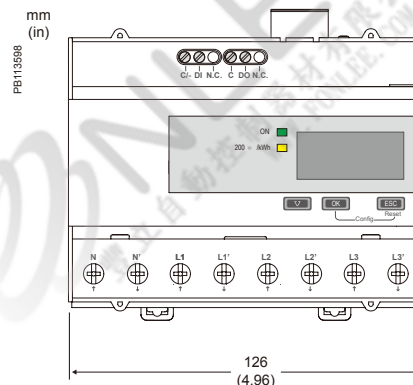
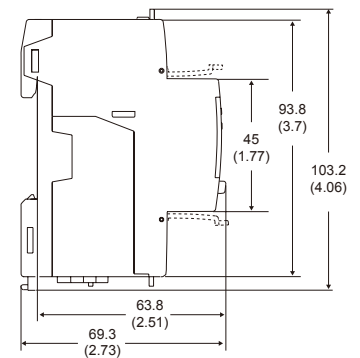
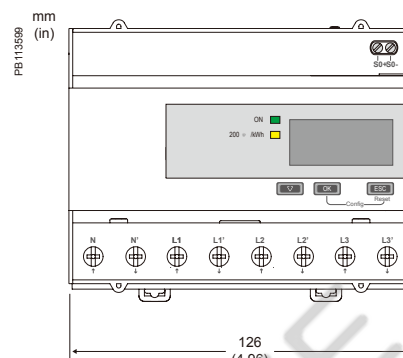
### iEM3000/iEM3200 series dimensions



### Acti9 iEM3100/iEM3200 Series front flaps open and closed



### iEM3300 series dimensions



# Acti9 iEM3000 Series Energy Meters

## Functions and characteristics

| Meter model and description                                                                   | Current measurement       | Part no.  |
|-----------------------------------------------------------------------------------------------|---------------------------|-----------|
| iEM3100 basic energy meter                                                                    | Direct connected 63 A     | A9MEM3100 |
| iEM3110 energy meter with pulse output                                                        | Direct connected 63 A     | A9MEM3110 |
| iEM3115 multi-tariff energy meter                                                             | Direct connected 63 A     | A9MEM3115 |
| iEM3135 advanced multi-tariff energy meter & electrical parameter plus M-Bus comm port        | Direct connected 63 A     | A9MEM3135 |
| iEM3150 energy meter & electrical parameter plus Modbus RS485 comm port                       | Direct connected 63 A     | A9MEM3150 |
| iEM3155 advanced multi-tariff energy meter & electrical parameter plus Modbus RS485 comm port | Direct connected 63 A     | A9MEM3155 |
| iEM3165 advanced multi-tariff energy meter & electrical parameter plus BACnet MS/TP comm port | Direct connected 63 A     | A9MEM3165 |
| iEM3175 advanced multi-tariff energy meter & electrical parameter plus LON TP/FT-10 comm port | Direct connected 63 A     | A9MEM3175 |
| iEM3200 basic energy meter                                                                    | Transformer connected 5 A | A9MEM3200 |
| iEM3210 energy meter with pulse output                                                        | Transformer connected 5 A | A9MEM3210 |
| iEM3215 multi-tariff energy meter                                                             | Transformer connected 5 A | A9MEM3215 |
| iEM3235 advanced multi-tariff energy meter & electrical parameter plus M-Bus comm port        | Transformer connected 5 A | A9MEM3235 |
| iEM3250 energy meter & electrical parameter plus Modbus RS485 comm port                       | Transformer connected 5 A | A9MEM3250 |
| iEM3255 advanced multi-tariff energy meter & electrical parameter plus Modbus RS485 comm port | Transformer connected 5 A | A9MEM3255 |
| iEM3265 advanced multi-tariff energy meter & electrical parameter plus BACnet MS/TP comm port | Transformer connected 5 A | A9MEM3265 |
| iEM3275 advanced multi-tariff energy meter & electrical parameter plus LON TP/FT-10 comm port | Transformer connected 5 A | A9MEM3275 |
| iEM3300 basic energy meter                                                                    | Direct connected 125 A    | A9MEM3300 |
| iEM3310 energy meter with pulse output                                                        | Direct connected 125 A    | A9MEM3310 |
| iEM3335 advanced multi-tariff energy meter & electrical parameter plus M-Bus comm port        | Direct connected 125 A    | A9MEM3335 |
| iEM3350 energy meter & electrical parameter plus Modbus RS485 comm port                       | Direct connected 125 A    | A9MEM3350 |
| iEM3355 advanced multi-tariff energy meter & electrical parameter plus Modbus RS485 comm port | Direct connected 125 A    | A9MEM3355 |
| iEM3365 advanced multi-tariff energy meter & electrical parameter plus BACnet MS/TP comm port | Direct connected 125 A    | A9MEM3365 |
| iEM3375 advanced multi-tariff energy meter & electrical parameter plus LON TP/FT-10 comm port | Direct connected 125 A    | A9MEM3375 |

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iEM2000T



iEM2000



iEM2010



iME1zr.

### Function

Digital kilowatt-hour meters designed for sub-metering of active energy (rms) consumed by a single-phase or three-phase electric circuit with or without distributed neutral.

#### iEM2000T

40 A single-phase kilowatt-hour meter without display, with remote transfer of metering impulses (static output).

#### iEM2000

40 A single-phase kilowatt-hour meter.

#### iEM2010

40 A single-phase kilowatt-hour meter with remote transfer of metering impulses (static output).

#### iME1

Single-phase kilowatt-hour meter.

#### iME1z

Single-phase kilowatt-hour meter with partial meter.

#### iME1zr

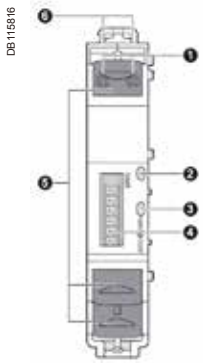
Single-phase kilowatt-hour meter with partial meter and remote transfer of metering impulses (relay output).

### Catalogue numbers

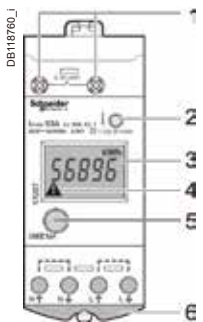
| Type                                 | Rating (A) | Voltage (V AC) | Tolerance (V AC) | Width in mod. of 9 mm | Cat. no.   |
|--------------------------------------|------------|----------------|------------------|-----------------------|------------|
| <b>Single-phase circuit (1L + N)</b> |            |                |                  |                       |            |
| iEM2000                              | 40         | 230            | ±20              | 2                     | A9MEM2000  |
| iEM2010                              | 40         | 230            | ±20              | 2                     | A9MEM2010  |
| iEM2000T                             | 40         | 230            | ±20              | 2                     | A9MEM2000T |
| iME1                                 | 63         | 230            | ±20              | 4                     | A9M17065   |
| iME1z                                | 63         | 230            | ±20              | 4                     | A9M17066   |
| iME1zr                               | 63         | 230            | ±20              | 4                     | A9M17067   |

### Main technical data

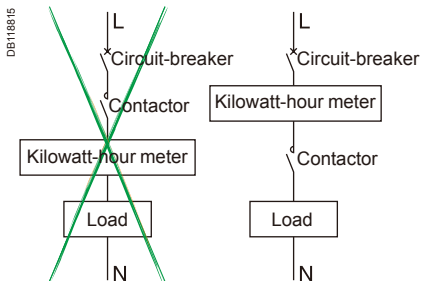
|                                       | iEM2000T                                                                 | iEM2000/iEM2010                                                          | iME                                                                      |
|---------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>Accuracy class</b>                 | 1                                                                        | 1                                                                        | 1                                                                        |
| <b>Frequency</b>                      | 48/62 Hz                                                                 | 48/62 Hz                                                                 | 48/62 Hz                                                                 |
| <b>Consumption</b>                    | <10VA                                                                    | <10VA                                                                    | 2.5 VA                                                                   |
| <b>Operating temp</b>                 | -10°C to +55°C                                                           | -10°C to +55°C                                                           | -25°C to +55°C                                                           |
| <b>Connection by tunnel terminals</b> | Top terminals: 4 mm <sup>2</sup><br>Bottom terminals: 10 mm <sup>2</sup> | Top terminals: 4 mm <sup>2</sup><br>Bottom terminals: 10 mm <sup>2</sup> | Top terminals: 6 mm <sup>2</sup><br>Bottom terminals: 16 mm <sup>2</sup> |
| <b>Compliance with standard</b>       | IEC 61557-12 :<br>- PMD/DD/K55/1<br>IEC 62053-21 (accuracy)              | IEC 61557-12 :<br>- PMD/DD/K55/1<br>IEC 62053-21 (accuracy)              | IEC 61557-12 :<br>- PMD/DD/K55/1<br>IEC 62053-21 (accuracy)              |
| <b>Sealable screw shield</b>          | Yes                                                                      | Yes                                                                      | Yes                                                                      |
| <b>MID Compliance</b>                 | No                                                                       | Yes                                                                      | No                                                                       |



iEM2010



iME1zr.



Example: meter on a load switching

### Description

#### iEM2000, iEM2010, iEM2000T

- 1 Remote transfer pulse output (iEM2000T, iEM2010).
- 2 Green power-on indicator light.
- 3 Yellow metering indicator light (flashing).
- 4 Display unit (iEM2000, iEM2010).
- 5 Seal.
- 6 Allow the comb busbar to pass.

#### iME1, iME1z, iME1zr

- 1 Pulse output for remote transfer (iME1zr).
- 2 Flashing meter indicator.
- 3 Total or partial meter display (iME1z, iME1zr).
- 4 Wiring error indicator.
- 5 Push-button: total or partial meter display, reset partial meter (ME1z, ME1zr).
- 6 Sealing connection.

### Installation

- The front panel of the product is IP40 and its housing is IP20.
- Its installation must be appropriate to the operating conditions.
- The protection must not be less than IP65 for outdoor use.

### Use with a contactor

A measurement instrument is normally continually supplied.

For a non-continuous supply (load switching), we recommend that you place the breaking device downstream from the measurement instrument to limit disturbances on the module inputs.

These disturbances, particularly on inductive loads, may result in early ageing of the device.

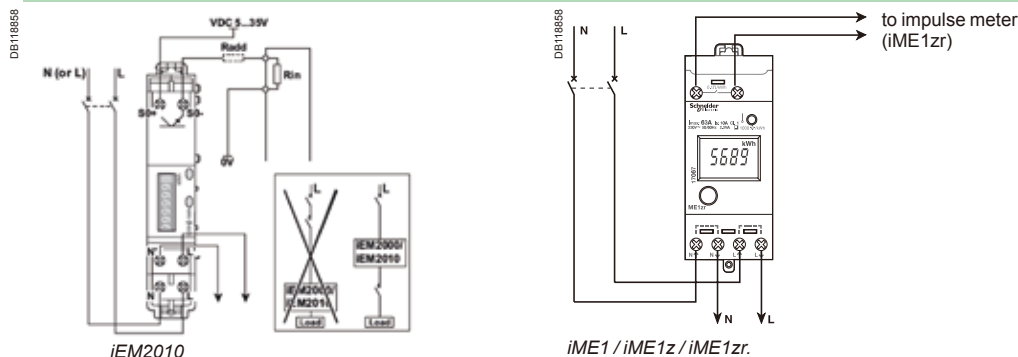
You must also place the measurement instrument at a distance from the breaking device to limit the risk of disturbance.

## Specific technical data

| iEM2000, iEM2010, iEM2000T, iME1, iME1z and iME1zr specific technical data |                                                     |                                                                                                                        |          |                                                                                                           |                                                                                                           |                                                                                                                                                        |
|----------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                            | iEM2000                                             | iEM2010                                                                                                                | iEM2000T | iME1                                                                                                      | iME1z                                                                                                     | iME1zr                                                                                                                                                 |
| Direct measurement                                                         | Up to 40 A                                          |                                                                                                                        |          | Up to 63 A                                                                                                |                                                                                                           |                                                                                                                                                        |
| Metering and activity indicator light (yellow)                             | 3,200 flashes per kWh                               |                                                                                                                        |          | 1,000 flashes per kWh                                                                                     |                                                                                                           |                                                                                                                                                        |
| Wiring error indicator                                                     | Yes                                                 |                                                                                                                        |          |                                                                                                           |                                                                                                           |                                                                                                                                                        |
| Total meter (max. capacity) on one phase                                   | 999 999.9 kWh                                       |                                                                                                                        |          | 999.99 MWh                                                                                                |                                                                                                           |                                                                                                                                                        |
| Total meter display                                                        | In kWh with 7 significant digits (not for iEM2000T) |                                                                                                                        |          | In kWh or MWh with 5 significant digits. No decimal point in kWh; 2 digits after the decimal point in MWh |                                                                                                           |                                                                                                                                                        |
| Partial meter (max. capacity) on one phase with RESET                      | -                                                   |                                                                                                                        |          | -                                                                                                         | 99.99 MWh                                                                                                 |                                                                                                                                                        |
| Partial meter display                                                      | -                                                   |                                                                                                                        |          | -                                                                                                         | In kWh or MWh with 4 significant digits. No decimal point in kWh; 2 digits after the decimal point in MWh |                                                                                                                                                        |
| Remote transfer                                                            | -                                                   | By static output:<br>- ELV insulation voltage: 4 kV, 50 Hz<br>- 20 mA/35 V DC max.<br>- 100 impulses of 120 ms per kWh |          | -                                                                                                         | -                                                                                                         | By NO impulse contact:<br>- ELV insulation voltage: 4 kV, 50 Hz<br>- 18 mA/24 V DC, 100 mA/230 V AC<br>- 1 impulse of 200 ms (contact closing) per kWh |

## Connection

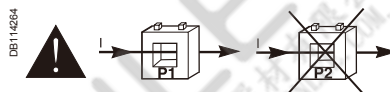
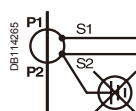
## Single-phase circuit



## Caution

■ Do not earth the CT secondary (S2).

■ You must comply with the routing direction of power cables in the current transformer primary. Cables enter in "P1" and leave in "P2" to the loads.



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施耐德電機股份有限公司

台北總公司

台北市114內湖區基湖路37號2樓

電話：02-8751-6388

傳真：02-8751-6398

[www.schneider-electric.com.tw](http://www.schneider-electric.com.tw)

林口服務事業部暨物流處理中心

桃園縣龜山鄉工四工業區頂湖路9號1樓

電話：03-396-0633

傳真：03-318-4905

台中機械自動化中心

台中市公益路二段51號9樓B1室

電話：04-2319-3328

傳真：04-2329-6389

高雄辦事處

高雄市前鎮區中山二路260號21樓A2

電話：07-537-6798

傳真：07-537-6799

客戶服務專線：0800-886-399

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