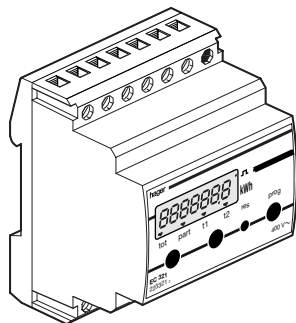


## three phase kWh meter 50 to 1500 1 and 2 tariff level

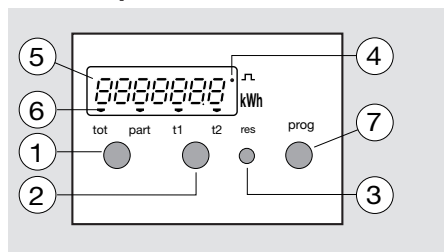


### EC 320, EC 321

#### Operating principle

This kilowatt hour meter measures the active electrical energy used in an electrical installation. This device has a total counter, a resettable partial counter and a calibrated pulsed output. In case of two tariff levels, the EC 321 will count separately the energy used in tariff 1 and in tariff 2.

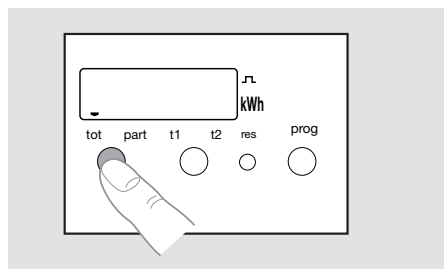
#### Product presentation:



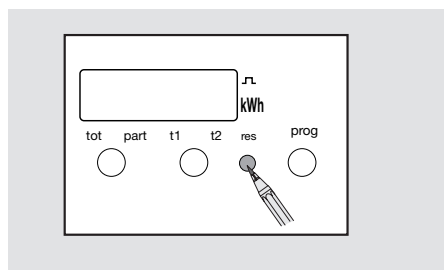
- ① **tot./part.** to select display of total or of partial consumption.
- ② **t1/t2** to select display of tariff 1 or 2.
- ③ **res** to reset the partial counter.
- ④ LED blinking each 10 Wh.
- ⑤ 7 digits display.
- ⑥ indicator of operating mode.
- ⑦ **prog** to set the counter (to give the ratio of the CT and the type of network).

#### Total or partial counter

1. Automatically, the device will display the partial consumption.
2. To display the total consumption (since the first installation of the counter), press key ①.



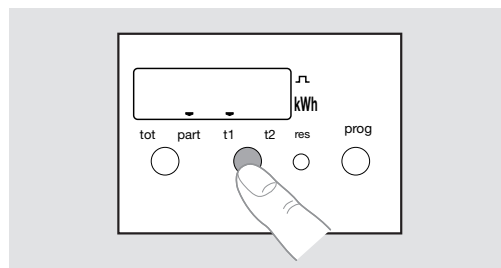
3. To switch back to the partial consumption, press key ①.
4. To reset the partial counter, press the key ③ with the tip of a pen during 3 seconds.



#### Tariff 1 and tariff 2 (EC 321)

The counter will split the consumption (total and partial) in the corresponding tariff (1 or 2).

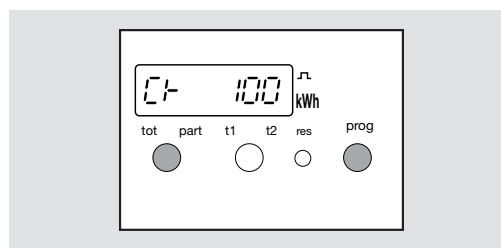
5. Automatically, the counter will display the energy used in the tariff in progress.
6. To display the partial or the total consumption in tariff 1 or in tariff 2, or the total tariff 1 + tariff 2, press successively key ②. The indicator ⑥ will indicate to which tariff corresponds the consumption displayed. ex : partial consumption on tariff 1.



7. To reset the partial counter (tariff 1 and 2) see point 4.

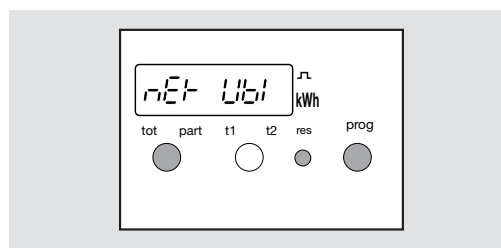
#### To set the C.T. calibre.

8. Press key ⑦ during 3 seconds, the counter will display the calibre in memory (CT primary current, 100A pre-registered).
9. Press successively key ① to scroll the different calibres (50, 100, 150, 200, 250, 300, 400, 600, 800, 1000, 1250 or 1500). The display will blink.
10. To register the calibre, press key ⑦. The display will stop blinking.
11. To switch back to the consumption display, press key ⑦ during 3 seconds.



#### To set the circuit type.

12. Press key ⑦ during 3 seconds, then press key ③. The type of the circuit will be displayed :
  - net Ubl : unbalanced circuit (3 CT : I1,I2,I3)
  - net bl : balanced circuit (1 CT : I1)
 net Ubl unbalanced circuit is pre-registered.
13. To select and register, see points 9 to 11.



#### Technical specifications

##### Voltage input :

- working voltage : 400 V  $\sim$   $\pm$  20 %
- frequency : 50/60 Hz  $\pm$  2 Hz
- consumption :  $\leq$  2 VA

##### Current input :

- measure with current transformer
- primary current : 50 A to 1500 A
- secondary current : 5 A
- consumption :  $\leq$  1 VA for phase

##### Electrical characteristics :

- IP 30 in the enclosure
- insulation class : II
- consumption :  $\leq$  5 VA

##### Accuracy : IEC 1036 class 2 (2 %)

##### Functional characteristics :

- direct reading : unit = 0.1 kWh
- display capacity : 999 999.9 kWh kWh ⑤
- instant consumption : blinking LED 10 Wh ④
- savings of measures are made regularly and in case of power failure.

##### Impulse transmitter :

- relais reed
- 1 pulse : 100 Wh
- pulse duration : 60 ms  $\pm$  3 ms
- external supply 100 Vdc max.
- operating current : 0,3 A max.

##### Tariff level input :

- supply : 230 V  $\sim$   $\pm$  20 %
- tariff level 1 : 0 Vac
- tariff level 2 : 230 Vac

##### Environment :

- working temperature : -5 °C to +45 °C
- storage temperature : -20 °C to +70 °C
- relativ humidity : 85% without condensation

##### Connection capacity :

- flexible : 1 to 6 mm<sup>2</sup> rigid : 1.5 to 10 mm<sup>2</sup>

##### Size : 4 ■ of 17.5 mm

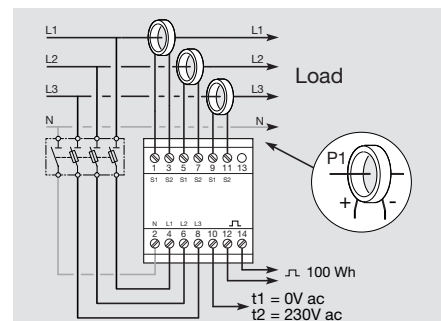
#### Installation :

For a connection with flexible wire, use ferrules.

#### Electrical connection :

According to the type of network, different connections are possible :

- 4 wires (3 phases+neutral) with 3 CT or 1 CT
- 3 wires (3 phases) with 3 CT or 1 CT
- 2 wires (2 phases - L1 & L2) with 2 CT.



#### Warranty



A warranty period of 24 months is offered on hager products, from date of manufacture, relating to any material of manufacturing defect. If any product is found to be defective it must be returned via the installer and supplier (wholesaler). The warranty is withdrawn if :
 

- after inspection by hager quality control dept the device is found to have been installed in a manner which is contrary to IEE wiring regulations and accepted practice within the industry at the time of installation.
- the procedure for the return of goods has not been followed.

 Explanation of defect must be included when returning goods.