

drax

ES-10A 4 Terminal Single Phase Electricity Meter

Product guide

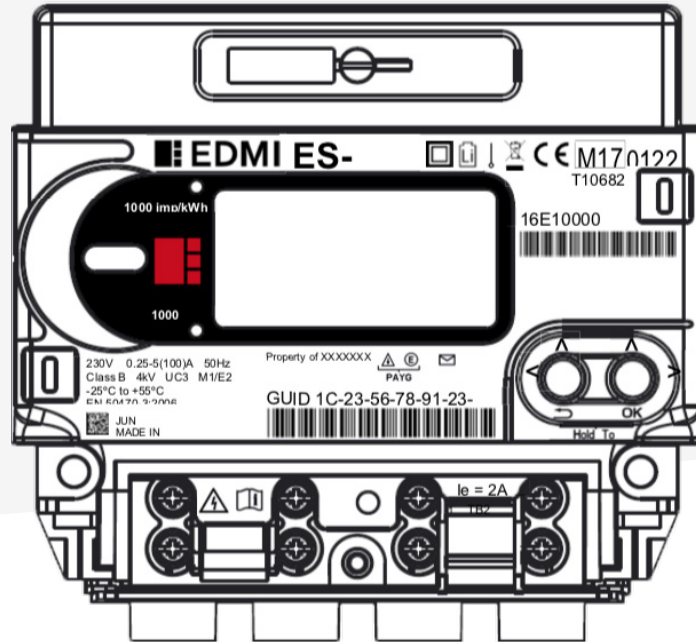




- 1 Liquid crystal display (LCD)
- 2 Navigation buttons (for menu navigation and selection):
 - Left button: Press to navigate up or left (as applicable), press and hold to return
 - Right button: Press to navigate down or right (as applicable), press and hold for OK
- 3 LED energy indicators:
 - Top: Flashing at 1 pulse per Wh (1/1000th kWh) (Watt hour) - equivalent to 1/1000th kiloWatt hours (kWh)
 - Bottom: Flashing at 1 pulse per varh (1/1000th kvarh) (volt-ampere reactive hours) - equivalent to 1/1000th kilovolt-ampere reactive hours (kvarh)
- 4 Local optical port
- 5 Tamper evident seals protecting the meter lid screws
- 6 Terminal cover – beneath this cover is the terminal block for the main supply and the Auxiliary Load Control Switch
- 7 ICHIS cover – remove to install a Communications Hub on the meter



**Figure 1-1:
Meter markings**



EDMI ES-10A

Logo of EDM (the meter manufacturer) and model type



Protective class indicator (or 'Double Insulated' symbol)



Battery and type (Lithium) symbol



Single phase connection symbol



WEEE marking, or 'Do not dispose'



CE mark

M160122

MID marking

T10682

EC Type Examination Cert No.

16E1000001



Serial number

GUID 12-34-56-78-91-23-45-67



GUID

230V 0.25-5(100)A 50Hz

Voltage, Maximum and Nominal Current,
Nominal Frequency

-25°C to +55°C

Operating temperature range

EN 50470-3:2006

Reference to European standard EN 50470-3



JUN 2016
MADE IN MALAYSIA

QR code linking to EDM web site, year of manufacture, and country of manufacture

Property of Drax

Meter provider



PAYG

Enunciators to indicate low credit and emergency credit available (Prepayment mode only)



Enunciator to indicate message

1000 imp/kWh

1000 imp/kvarh

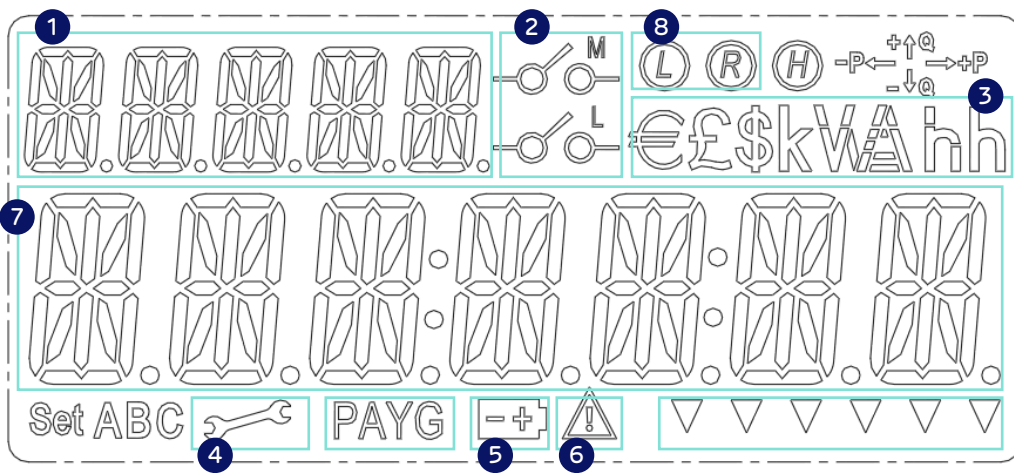
LED pulsing outputs (pulses per fundamental unit)

1. The liquid crystal display (LCD)

The LCD is the main user interface for the meter (Figure 1-1). Its purpose is to provide feedback during installation, manufacture, calibration, diagnostics issues and simply for your reference. It has a central row of 5 'starburst' type digits to display values/date/time/messages and 5 upper left 'starburst' type digits to display a description/label.

The LCD has a number of fixed segments to indicate a range of functions. For low light conditions, the LCD has a backlight, which comes on when a button is pressed, unless configured not to do so at manufacture.

Figure 1-1:
Liquid crystal displays



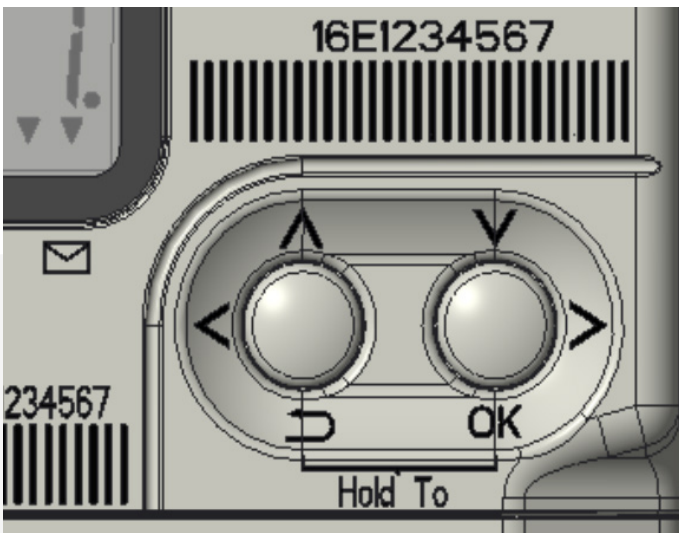
- | | |
|--|---|
| <p>1 5 character label, shows:</p> <ul style="list-style-type: none"> • Description for main character array (9) • Current menu level | <p>4 Engineering menu activated</p> |
| <p>2 Relay state icons. M for main disconnect relay, L for ALCS. Operating states:</p> <ul style="list-style-type: none"> • M icon ON: Main supply has been disconnected • L icon ON: ALCS is on • M & L icons ON: Meter is currently in a 'Non-Disablement' period • M & L icons OFF: Supply connected, ALCS off | <p>5 Internal battery low indicator</p> |
| <p>3 Currency and unit symbols. Only £ will be used in the UK.</p> | <p>6 Alert indicator</p> |
| | <p>7 Main character array. Shows all figures for billing, information and content for messages</p> |
| | <p>8 Load limiting indicator. Icon is lit when site has a restricted maximum load</p> |

2. The pushbuttons & user interface

You can interact with the ES-10A meter using two multifunctional buttons. Figure 2-1 shows the two buttons and the labeling around them. The left button acts as both as the 'up' and 'left' functions, and the right button acts as the 'down' and 'right' functions.

The two buttons have further functionality when you hold them down for a period of 1 second. Holding the left button acts as a 'return' function, holding the right button acts as an 'OK' function. The 'Hold To' text underneath 'hold to' is there to prompt you to hold the buttons to perform these actions.

Figure 2-1:
Pushbuttons



To...	...do this
Move down the menu structure one level...	...press the OK (right/down) button and hold it for 1 second.
Move left, within the same level of the menu structure...	...press and release the Left button.
Move right, within the same level of the menu structure...	...press and release the Right button.
Move up the menu structure one level...	...press the Return (left/up) button and hold it for 1 second.
Confirm a selection (i.e. Press OK)...	...press the OK (right/down) button and hold it for 1 second.

Note: After a period of inactivity – currently 5 minutes – the meter will revert to the main screen – but the backlight dims after 1 minute.

3. Menu structures

The meter's menu is activated by pressing the OK button. This level of menu includes the main headings of the document (Billing, Security, Info, and Message). Pressing OK on each of these headings on the User Interface (UI) will open up the submenus denoted by subheadings under each section. Pressing the left and right buttons, navigates between menu headings.

Default main screen

The main screen will display the most prominent information at-a-glance. The second row will auto cycle through 3 screens with a 5 second delay between each. The display will revert back to this default main screen when you haven't pressed any buttons for 5 minutes.

The main screen will display the meter registers as 5 digits, in kWh. The display digits will be rounded down and leading zeros will be required to pad to the full number of digits. If the register value is greater than 5 digits the most significant digits are dropped for display purposes.

The data displayed will be **Active Import Register (IMPRT)**, **Active Export Register (EXPRT)**. The display of the registers may have leading zeros dependent upon the configuration and **Meter Balance (BILL)**.

```

I M P R T
  3 4 5 6 7 kWh
    
```

```

E X P R T
  0 0 1 2 3 kWh
    
```

```

B I L L
  1 1 0. 4 5 £
    
```

The other sub-screens present are not relevant for customer operation

Left/Right	Manually scroll through information
OK	Go to menu
Return	No effect

Supplier details and Meter Point Administration Numbers (MPANs) are under the info main menu option.

3.1 Billing menu screens

The Main Billing screen provides access to:

- MyBills, which displays your energy usage in kWh or £.
- Tariffs, which enables you to view the current tariff and standing charge
- Advanced billing information (Time Of Use (TOU) Register Matrix, TOU Block Register Matrix, and TOU Block Counter Matrix)

3.1.1 MyBills

The MyBills menu displays kWh and £ usage for the current billing period (CURNT), and allows you to scroll through previous periods (PREV1).

When in this menu, the UI buttons perform the following actions:

Left/Right	Scroll up and down the table through periods
OK	Switch between kWh and Cost
Return	Returns to parent menu

Current usage in kWh

```

C U R N T
0 0 0 0 2 3 1 kWh
    
```

Current usage in £

```

C U R N T
  2 3. 3 1 £
    
```

Previous period in kWh

```

P R E V 1
0 0 0 1 8 7 6 kWh
    
```

Previous period in £

```

P R E V 1
0 0 1 0 3. 2 1 £
    
```

3.1.2 Tariffs

The Tariffs menu provides access to:

- Display of current tariff
- Display of current standing charge

3.1.2.1 Tariff Now

The **Now** menu displays the currently active tariff price (**PRICE**). For example:

```
P R I C E
1 2 . 3 4 5 £
```

When in this menu, the UI buttons perform the following actions:

Left/Right	No effect
OK	No effect
Return	Returns to parent menu

3.1.2.2 StdChrg

The **standing charge** menu displays the amount (in £) and charge period (e.g. 'DAY'). This value is added to the meter balance at the start of each period (i.e. at midnight each day).

```
/ D A Y
0 0 . 1 2 3 4 £
```

When in this menu, the UI buttons perform the following actions:

Left/Right	No effect
OK	No effect
Return	Returns to parent menu

3.1.3 Advanced

The advanced menu shows you the kWhs used, as per the rate in the current billing period:

- Time of Use (TOU) Register Matrix
- TOU Block Register Matrix
- TOU Block Counter Matrix

3.1.3.1 Time of Use (TOU) matrix

The **TOU matrix** menu item displays the TOU Register Matrix. Pressing the left and right UI buttons allows you to scroll through the list of rates (e.g. "RATE1", "RATE2") and associated kWh values. For example:

```
R A T E 1
0 1 2 1 8 7 6 kWh
```

```
R A T E 2
0 0 0 0 8 7 6 kWh
```

When in this menu, the UI buttons perform the following actions:

Left/Right	Scroll up or down the table
OK	No effect
Return	Returns to parent menu

3.1.4 Supplier information

The **Supplier** menu provides the name and telephone number of your supplier in case you need to get in touch.

The **Name** menu item displays the supplier's name. For example:

```
N A M E
S U P P L I E
```

3.1.4.1 Tel

The Tel menu displays the supplier's telephone number. For example:

```
T E L
0 8 0 0 1 2 3
```

3.1.5 Meter Point Administration Numbers (MPAN)

The MPAN menu options display the Import and Export MPANs.

Customer support

For help with your meter's functions, please contact us



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