







# Dorman Smith Switchgear Limited

With over 130 years of experience in switchgear design and production Dorman Smith Switchgear Limited continues to provide high quality equipment for low-voltage electrical distribution and circuit protection.

Our product range begins with single-pole and neutral distribution board systems and continues up to custom designed, factory built low-voltage electrical switchboards for a broad range of commercial, industrial and retrofit applications.

We continue to build on our extensive technical knowledge and awareness of customer and market demands, operating conditions and current regulations.

This breadth of experience supports the development and manufacturing techniques of our electrical products to exceed the industry standards.



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# Circuit Protection & Modular Devices

# **Key Features**

### MCB, RCBO & RCCB

- 10/15kA Miniature Circuit breakers in B,C and D Type up to 63A
- 125A High current Miniature Circuit breaker in 3-pole C Type
- Wide range of accessories available for K Series MCBs including; shunt trip, dolly locks and auxiliary switches.
- 10kA Double module SP&SwN RCBOs up to 40A / 30mA
- 10kA Single-module RCBOs up to 45A / 30mA and 40A / 100mA
- RCCBs available in 2-pole and 4-pole versions with 100A / 100mA Time delay version

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- Type I and Type II Surge suppression devices available for all product board ranges
- Remote indication available with some models for connection to Business Management systems
- Replaceable plug-in modules available for the DSPM Series

PAGES 24-26







### **MCCB**

- MCCBs available from 16A 25kA to 1600A 85kA
- Wide range of frame sizes available to suit all applications
- Wide range of accessories available including; shunt trips, under-voltage release, shrouds, rotary handles and extension terminals
- General purpose enclosure available for each frame size MCCB

PAGES 7-23

### **METERING**

- Panel mount and DIN-rail mount multi-function meters available for single-phase and three-phase application
- Matching range of current transformers and wiring loom kits
- New range of MID approved meters now available

PAGES 28-36

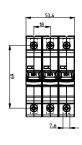


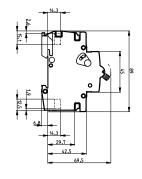






### **Dimensions**





# Loadlimiter 63 Miniature Circuit Breakers

### **Main features**

- Exceeds the requirements of EN 60898
- 10kA rated to the requirements of EN 60898
- 15kA rated to the requirements of EN 60947
- · Contact position indicator
- Maximum cable termination of 35mm<sup>2</sup>
- Standard MCB widths: Single Pole = 17.5mm, Double Pole = 35mm and Triple Pole = 54mm
- High Current MCB Width = 81mm

| Current Rating<br>(A) | B Type<br>Product Code | C Type<br>Product Code | D Type<br>Product Code |
|-----------------------|------------------------|------------------------|------------------------|
| Single-pole MCBs      |                        |                        |                        |
| 1                     | -                      | K1PC01                 | -                      |
| 6                     | K1PB06                 | K1PC06                 | K1PD06                 |
| 10                    | K1PB10                 | K1PC10                 | K1PD10                 |
| 16                    | K1PB16                 | K1PC16                 | K1PD16                 |
| 20                    | K1PB20                 | K1PC20                 | K1PD20                 |
| 25                    | K1PB25                 | K1PC25                 | K1PD25                 |
| 32                    | K1PB32                 | K1PC32                 | K1PD32                 |
| 40                    | K1PB40                 | K1PC40                 | T1PD40 *               |
| 50                    | K1PB50                 | K1PC50                 | T1PD50 *               |
| 63                    | K1PB63                 | K1PC63                 | T1PD63 *               |
| Double-pole MCBs      |                        |                        |                        |
| 6                     | K2PB06                 | K2PC06                 | K2PD06                 |
| 10                    | K2PB10                 | K2PC10                 | K2PD10                 |
| 16                    | K2PB16                 | K2PC16                 | K2PD16                 |
| 20                    | K2PB20                 | K2PC20                 | K2PD20                 |
| 25                    | K2PB25                 | K2PC25                 | K2PD25                 |
| 32                    | K2PB32                 | K2PC32                 | K2PD32                 |
| 40                    | K2PB40                 | K2PC40                 | T2PD40 *               |
| 50                    | K2PB50                 | K2PC50                 | T2PD50 *               |
| 63                    | K2PB63                 | K2PC63                 | T2PD63 *               |
| Triple-pole MCBs      |                        |                        |                        |
| 1                     | -                      | K3PC01                 | -                      |
| 6                     | K3PB06                 | K3PC06                 | K3PD06                 |
| 10                    | K3PB10                 | K3PC10                 | K3PD10                 |
| 16                    | K3PB16                 | K3PC16                 | K3PD16                 |
| 20                    | K3PB20                 | K3PC20                 | K3PD20                 |
| 25                    | K3PB25                 | K3PC25                 | K3PD25                 |
| 32                    | K3PB32                 | K3PC32                 | K3PD32                 |
| 40                    | K3PB40                 | K3PC40                 | T3PD40 *               |
| 50                    | K3PB50                 | K3PC50                 | T3PD50 *               |
| 63                    | K3PB63                 | K3PC63                 | T3PD63 *               |
| High Current MCB      | – 15kA                 |                        |                        |
| 125                   | -                      | K3PC125                | -                      |

### **Accessories for MCBs**

| Device Type                           | Product Code |
|---------------------------------------|--------------|
| Auxiliary Accessories                 |              |
| 240V AC Shunt Trip for MCB            | KST240       |
| Auxiliary / Switching contact for MCB | KAUX1        |
| Locking Devices                       |              |
| MCB Dolly locking device              | KDL          |
| Padlock for dolly locking device      | XPL          |

<sup>\* 6</sup>kA rated breaking capacity to EN 60898 and 10kA rated breaking capacity to EN 60947. Please be advised that the "T" series MCBs look physically different to the K series.

<sup>\*\*</sup> High current MCB needs to be mounted in service centre due to the module width.



## Loadlimiter 63 **RCBO**

### Single Module RCBOs

- Exceeds the requirements of EN 61009
- 10kA rated breaking capacity
- Type AC
- Single module width = 17.5mm
- Outgoing terminal capacity is 10mm<sup>2</sup>
- Busbar side terminal capacity is 35mm<sup>2</sup>

| Current Rating<br>(A) | Sensitivity<br>(mA) | B Type<br>Product Code | C Type<br>Product Code |
|-----------------------|---------------------|------------------------|------------------------|
| 6                     | 30                  | KR1PB0630              | KR1PC0630              |
| 10                    | 30                  | KR1PB1030              | KR1PC1030              |
| 16                    | 30                  | KR1PB1630              | KR1PC1630              |
| 20                    | 30                  | KR1PB2030              | KR1PC2030              |
| 32                    | 30                  | KR1PB3230              | KR1PC3230              |
| 40                    | 30                  | KR1PB4030              | KR1PC4030              |
| 45                    | 30                  | KR1PB4530              | KR1PC4530              |
| 6                     | 100                 | -                      | KR1PC06100             |
| 10                    | 100                 | -                      | KR1PC10100             |
| 16                    | 100                 | -                      | KR1PC16100             |
| 20                    | 100                 | -                      | KR1PC20100             |
| 32                    | 100                 | -                      | KR1PC32100             |
| 40                    | 100                 | -                      | KR1PC40100             |

#### **Double Module RCBOs**

- Exceeds the requirements of EN 61009
- 10kA rated breaking capacity
- SP&SwN configuration
- · Contact position indicator
- Rated voltage Ue 230V
- Rated frequency is 50Hz
- Energy limiting class 3
- Type AC
- Maximum cable termination is 35mm<sup>2</sup>

| Current Rating<br>(A) | Sensitivity<br>(mA) | B Type<br>Product Code | C Type<br>Product Code |
|-----------------------|---------------------|------------------------|------------------------|
| 6                     | 30                  | KR2PB0630              | KR2PC0630              |
| 10                    | 30                  | KR2PB1030              | KR2PC1030              |
| 16                    | 30                  | KR2PB1630              | KR2PC1630              |
| 20                    | 30                  | KR2PB2030              | KR2PC2030              |
| 32                    | 30                  | KR2PB3230              | KR2PC3230              |
| 40                    | 30                  | KR2PB4030              | KR2PC4030              |

Note: Please be advised that some double module RCBOs have a minimum order quantity. Please check availability with the Customer Service Team before ordering.

### **Accessories for Single Module RCBOs**

| Device Type                      | Product Code |
|----------------------------------|--------------|
| Locking Devices                  |              |
| RCBO Dolly locking device        | KDL          |
| Padlock for dolly locking device | XPL          |

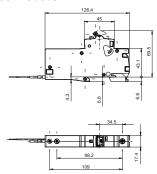
# Circuit Protection



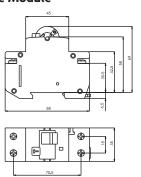


### **Dimensions**

### Single Module



### **Double Module**









# Loadlimiter 63 RCCB

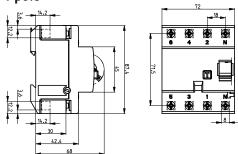
### **Main features**

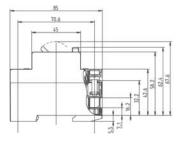
- Exceeds the requirements of EN 61008
- 230V and 400V rated
- Frequency 50 / 60Hz
- Type AC
- Double-pole width is 35mm and Four-pole width is 70mm
- 100A Time delay versions available
- Maximum cable termination for 40A to 63A is 25mm<sup>2</sup> and 100A is 35mm<sup>2</sup>

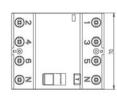
| Current Rating<br>(A) | Sensitivity<br>(mA) | Product Code |
|-----------------------|---------------------|--------------|
| Double-pole RCCBs     |                     | <u>'</u>     |
| 40                    | 30                  | EE40/30/2    |
| 40                    | 100                 | EE40/100/2   |
| 63                    | 30                  | EE63/30/2    |
| 63                    | 100                 | EE63/100/2   |
| 63                    | 300                 | EE63/300/2   |
| 80                    | 30                  | EE80/30/2    |
| 100                   | 30                  | EE100/30/2   |
| 100                   | 100                 | EE100/100/2  |
| 100 Time delay        | 100                 | EES100/100/2 |
| Four-pole RCCBs       |                     |              |
| 40                    | 30                  | EE40/30/4    |
| 40                    | 100                 | EE40/100/4   |
| 40                    | 300                 | EE40/300/4   |
| 63                    | 30                  | EE63/30/4    |
| 63                    | 100                 | EE63/100/4   |
| 63                    | 300                 | EE63/300/4   |
| 100                   | 30                  | EE100/30/4   |
| 100                   | 100                 | EE100/100/4  |
| 100                   | 300                 | EE100/300/4  |
| 100 Time delay        | 100                 | EES100/100/4 |

### **Dimensions**

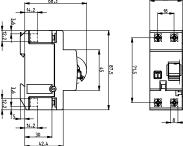
### 4-pole

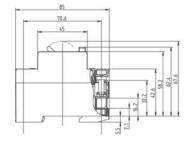






### 2-pole









### Loadline MCCB YB1 Frame

# Circuit Protection

### **Main Features**

- Exceeds the requirements of EN 60947-2
- Single-pole MCCBs have fixed thermal and magnetic overloads
- Three-pole and four-pole MCCBs have adjustable thermal and fixed magnetic overloads
- Thermal overload adjusts to 1 x In, 0.8 x In and 0.63 x In
- Ultimate breaking capacity is 25kA or 40kA at 415V AC
- Cable connection is via cable clamps and maximum cable termination is 70mm<sup>2</sup>
- Rated insulation voltage is 690V AC (Ui)

| Curre        | ent Rating (A)                      |                     |                        |                        |  |
|--------------|-------------------------------------|---------------------|------------------------|------------------------|--|
| Max (A)      | lax (A) Min (A) 1-pole Product Code |                     | 3-pole<br>Product Code | 4-pole<br>Product Code |  |
| Switch Disco | onnector                            |                     |                        |                        |  |
| 160          | -                                   | -                   | YB1B3P160DC            | YB1B4P160DC            |  |
| YB1 Frame M  | ICCB Thermal / M                    | lagnetic - Icu 25kA |                        |                        |  |
| 16           | 10                                  | YB1N1P16TC          | -                      | -                      |  |
| 20           | 13                                  | YB1N1P20TC          | -                      | -                      |  |
| 25           | 16                                  | YB1N1P25TC          | YB1N3P25TC             | YB1N4P25TC             |  |
| 32           | 20                                  | YB1N1P32TC          | YB1N3P32TC             | YB1N4P32TC             |  |
| 40           | 25                                  | YB1N1P40TC          | YB1N1P40TC             | YB1N4P40TC             |  |
| 50           | 32                                  | YB1N1P50TC          | -                      | -                      |  |
| 63           | 40                                  | YB1N1P63TC          | YB1N3P63TC             | YB1N4P63TC             |  |
| 80           | 50                                  | YB1N1P80TC          | YB1N3P80TC             | YB1N4P80TC             |  |
| 100          | 63                                  | YB1N1P100TC         | YB1N3P100TC            | YB1N4P100TC            |  |
| 125          | 80                                  | YB1N1P125TC         | YB1N3P125TC            | YB1N4P125TC            |  |
| 160          | 100                                 | YB1N1P160TC         | YB1N3P160TC            | YB1N4P160TC            |  |
| YB1 Frame M  | ICCB Thermal / M                    | lagnetic - Icu 40kA |                        |                        |  |
| 25           | 16                                  | -                   | YB1S3P25TC             | YB1S4P25TC             |  |
| 32           | 20                                  | -                   | YB1S3P32TC*            | YB1S4P32TC*            |  |
| 40           | 25                                  | -                   | YB1S3P40TC             | YB1S4P40TC             |  |
| 63           | 40                                  | -                   | YB1S3P63TC             | YB1S4P63TC             |  |
| 80           | 50                                  | -                   | YB1S3P80TC             | YB1S4P80TC             |  |
| 100          | 63                                  | -                   | YB1S3P100TC            | YB1S4P100TC            |  |
| 125          | 80                                  | -                   | YB1S3P125TC            | YB1S4P125TC            |  |
| 160          | 100                                 | -                   | YB1S3P160TC            | YB1S4P160TC            |  |



# Loadline MCCB YB1 Frame enclosure

#### **Main features**

- To house YB1 MCCB up to 150A
- Meets the requirements of EN 60947-2 and EN 61439-1
- IP3X Ingress protection
- Ideal for space restricted installations
- Neutral link YB1NL available if required

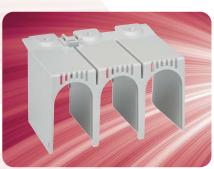
| Height (mm) | Width (mm) | Depth (mm) | Product Code |
|-------------|------------|------------|--------------|
| 435         | 200        | 100        | LLGPYB13     |



<sup>\*</sup>Breakers are rated at 30kA breaking capacity.









# Loadline MCCB YB1 Frame accessories

| Description  | 1 pole<br>Product<br>Code | 3 pole<br>Product<br>Code | 4 pole<br>Product<br>Code |
|--|---------------------------|---------------------------|---------------------------|
| Extension Terminals                                |                           |                           |                           |
| YB1 Flat extension terminals (Straight type)       | -                         | YB1XT3P                   | YB1XT4P                   |
| YB1 Flat extension terminals (Spread type)         | -                         | YB1XTS3P                  | YB1XTS4P                  |
| YB1 Rear terminals                                 | -                         | YB1RT3P                   | YB1RT4P                   |
| Rotary Handles                                     |                           |                           |                           |
| YB1 Panel mounted IP54 rotary handle for           | -                         | YB1RH453                  |                           |
| maximum 453mm panel depth (minimum 175mm)          |                           |                           |                           |
| Slide Interlocks                                   |                           |                           |                           |
| YB1 Slide interlock for front/rear connections     | -                         | YB1MS3P                   | YB1MS4P                   |
| Terminal Protection                                |                           |                           |                           |
| YB1 Terminal shroud for cable lugs                 | YB1TS1P                   | YB1TS3P                   | YB1TS4P                   |
| YB1 Terminal cover for rear terminals              | YB1TC1P                   | YB1TC3P                   | YB1TC4P                   |
| YB1 Interphase barrier (1 Off)                     | YB1TB                     | YB1TB                     | YB1TB                     |
| YB Terminal shroud cover lock *                    | YBTSCL                    | YBTSCL                    | YBTSCL                    |
| YB Handle lock – 1 pole YB1 and 3 pole YB1 / YB3 * | YBDL1                     | YBDL1                     | YBDL1                     |
| Auxiliary and Alarm Switches                       |                           |                           |                           |
| YB Auxiliary changeover switch                     | YBAUX1                    | YBAUX1                    | YBAUX1                    |
| (AC 250V / 0.1A, DC 125V / 0.4A) *                 | YBAL                      | YBAL                      | YBAL                      |
| Shunt Trips  |                           |                           |                           |
| YB Shunt trip 100-120V AC *                        | -                         | YBST120AC                 |                           |
| YB Shunt trip 200-240V AC *                        | -                         | YBST240AC                 |                           |
| YB Shunt trip 380-450V AC *                        | -                         | YBST450AC                 |                           |
| YB Shunt trip 24V DC *                             | -                         | YBST24DC                  |                           |
| YB Shunt trip 48V DC *                             | -                         | YBST48DC                  |                           |
| YB Shunt trip 100-120V DC *                        | -                         | YBST120DC                 |                           |
| YB Shunt trip 200-240V DC *                        | -                         | YBST240DC                 |                           |
| Under-voltage Release                              |                           |                           |                           |
| YB Under-voltage release 100-120V AC *             | -                         | YBUVR120AC                |                           |
| YB Under-voltage release 200-240V AC *             | -                         | YBUVR240AC                |                           |
| YB Under-voltage release 380-450V AC *             | -                         | YBUVR450AC                |                           |
| YB Under-voltage release 24V DC *                  | -                         | YBUVR24DC                 |                           |
| YB Under-voltage release 100-120V DC *             | -                         | YBUVR120DC                |                           |

**Note:** Please be advised that MCCBs can be fitted with either a shunt trip or an under-voltage release device; however the MCCB cannot house both of these together.



### Loadline MCCB YA2 Frame

# Circuit Protection

### **Main Features**

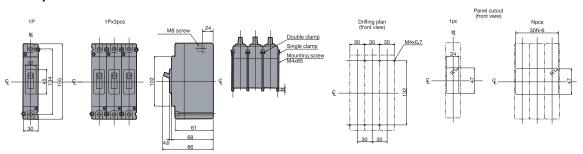
- Exceeds the requirements of EN 60947-2
- Single-pole MCCBs have fixed thermal and magnetic overloads
- Three-pole and four-pole MCCBs have adjustable thermal and magnetic overloads
- Thermal overload adjusts to 1 x In, 0.8 x In and 0.63 x In
- Ultimate breaking capacity available as 25kA, 36kA and 65kA at 415V AC
- Maximum cable termination is 50mm<sup>2</sup> with cable clamps (optional accessory)
- Maximum cable termination is 95mm<sup>2</sup> with M8 reduced palm width cable lugs
- Standard cable termination is 35mm<sup>2</sup> using M8 lugs
- Rated insulation voltage is 800V AC (Ui)

| Current Rating (A)  Max (A)  Min (A)  1-pole  Product Code |                  |                        |                        |            |
|--|------------------|------------------------|------------------------|------------|
|  |                  | 3-pole<br>Product Code | 4-pole<br>Product Code |            |
| YA2 Frame N  | ACCB Thermal / A | Aagnetic - Icu 25kA    |                        |            |
| 16   | 10               | YA2N1P16T              | -                      | -          |
| 20   | 13               | YA2N1P20T              | YA2N3P20T              | YA2N4P20T  |
| 32   | 20               | YA2N1P32T              | YA2N3P32T              | YA2N4P32T  |
| 50   | 32               | YA2N1P50T              | YA2N3P50T              | YA2N4P50T  |
| 63   | 40               | YA2N1P63T              | YA2N3P63T              | YA2N4P63T  |
| 80   | 50               | YA2N1P80T              | -                      | -          |
| 100  | 63               | YA2N1P100T             | YA2N3P100T             | YA2N4P100T |
| 125  | 80               | YA2N1P125T             | YA2N3P125T             | YA2N4P125T |
| YA2 Frame MCCB Thermal / Magnetic - Icu 36kA               |                  |                        |                        |            |
| 50   | 32               | -                      | YA2S3P50T              | YA2S4P50T  |
| 63   | 40               | -                      | YA2S3P63T              | YA2S4P63T  |
| 100  | 63               | -                      | YA2S3P100T             | YA2S4P100T |
| 125  | 80               | -                      | YA2S3P125T             | YA2S4P125T |
| YA2 Frame N  | ACCB Thermal / A | Aagnetic - Icu 65kA    |                        |            |
| 20   | 13               | -                      | YA2J3P2OT              | YA2J4P20T  |
| 32   | 20               | -                      | YA2J3P32T              | YA2J4P32T  |
| 50   | 32               | -                      | YA2J3P5OT              | YA2J4P50T  |
| 63   | 40               | -                      | YA2J3P63T              | YA2J4P63T  |
| 100  | 63               | -                      | YA2J3P100T             | YA2J4P100T |
| 125  | 80               | -                      | YA2J3P125T             | YA2J4P125T |

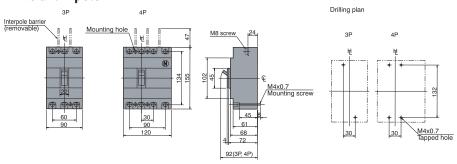


**Note:** Please be advised that the 25kA rated 3-pole and 4-pole YA2 frame MCCBs are due for phase out during 2014. The single-pole 25kA, three-pole and 4-pole in 36kA and 65kA rated devices will still be available as normal.

### Dimensions YA2 1-pole



### YA23 and 4-pole











# Loadline MCCB YA2 Frame accessories

| Description  | 1 pole<br>Product<br>Code | 3 pole<br>Product<br>Code | 4 pole<br>Product<br>Code |
|--|---------------------------|---------------------------|---------------------------|
| Cable Clamps   |                           |                           |                           |
| YA2 Cable clamps set   | -                         | YA2CC3P                   | YA2CC4P                   |
| Terminals and Protection   |                           |                           |                           |
| YA2 Terminal shroud for cable lugs                                     | YA2TS1P                   | YA2TS3P                   | YA2TS4P                   |
| YA2 Interphase barrier (1 Off)   | YA2TB                     | YA2TB                     | YA2TB                     |
| YA2 Terminal shroud for cable clamps                                   | YA2TS1P                   | YA2TS3P                   | YA2TS4P                   |
| YA2 Rear terminals   | -                         | YA2RT3P                   | YA2RT4P                   |
| YA2 Extension terminals  | -                         | YA2XT3P                   | YA2XT4P                   |
| Plug-in Units  |                           |                           |                           |
| YA2 Plug-in MCCB conversion  | -                         | YA2PT3P                   | YA2PT4P                   |
| YA2 Plug-in base   | -                         | YA2PB3P                   | YA2PB4P                   |
| YA2 Plug-in base extension terminals                                   | -                         | YA2PXT3P                  | YA2PXT4P                  |
| YA2 Plug-in base right angle terminals                                 | -                         | YA2PRA3P                  | YA2PRA4P                  |
| Accessories  |                           |                           |                           |
| YA2 Handle lock (3 and 4 pole only)                                    | -                         | YADL1                     | YADL1                     |
| YA2 Neutral link   | YA2NL                     | YA2NL                     | YA2NL                     |
| YA2 Panel mounted rotary handle for maximum 453mm panel depth          | -                         | YA2RH453                  | YA2RH453                  |
| Shunt Trips  |                           |                           |                           |
| YA Frame 100-120V AC *   | -                         | YAST115AC                 | YAST115AC                 |
| YA Frame 200-240V AC *   | -                         | YAST240AC                 | YAST240AC                 |
| YA Frame 380-450V AC *   | -                         | YAST450AC                 | YAST450AC                 |
| YA Frame 24V DC *  | -                         | YAST24DC                  | YAST24DC                  |
| Auxiliary and Alarm Switches   |                           |                           |                           |
| YA Auxiliary changeover switch (AC 240V/3A, DC 125V/0.4A) *            | -                         | YAAUX1                    | YAAUX1                    |
| YA Alarm trip indicator changeover switch (AC 240V/3A, DC 125V/0.4A) * | -                         | YAAL                      | YAAL                      |
| Under-voltage Release  |                           |                           |                           |
| YA Frame Under-voltage release 100-120V AC *                           | -                         | YAUVR120AC                | YAUVR120AC                |
| YA Frame Under-voltage release 200-240V AC *                           | -                         | YAUVR240AC                | YAUVR240AC                |
| YA Frame Under-voltage release 380-450V AC *                           | -                         | YAUVR450AC                | YAUVR450AC                |
| YA Frame Under-voltage release 24V DC *                                | -                         | YAUVR24DC                 | YAUVR24DC                 |
| Motors and Interlocks  |                           |                           |                           |
| YA2 Motor actuator 100-110V AC   | -                         | YA2MA110                  | YA2MA110                  |
| YA2 Motor actuator 200-240V AC   | -                         | YA2MA240                  | YA2MA240                  |
| YA2 Mechanical interlock, link type for RHS MCCB                       | -                         | YA2MLR                    | YA2MLR                    |
| YA2 Mechanical interlock, link type for LHS MCCB                       | -                         | YA2ML3PL                  | YA2ML4P                   |
| YA2 Mechanical interlock, manual slide type (3 Pole or 4 Pole)         | -                         | YA2MS3P                   | YA2MS4P                   |
| YA2 Mechanical interlock, wire type mechanism (1 per MCCB required)    | -                         | YA2MW                     |                           |

**Note:** Please be advised that MCCBs can be fitted with either a shunt trip or an under-voltage release device; however the MCCB cannot house both of these together.

<sup>\*</sup> Common accessories for YA2, YA3 and YA5 frame MCCBs.



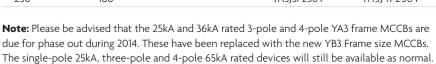
### Loadline MCCB YA3 Frame

# Circuit Protection

### **Main Features**

- Exceeds the requirements of EN 60947-2
- Single-pole MCCBs have fixed thermal and magnetic overloads
- Three-pole and four-pole MCCBs have adjustable thermal and magnetic overloads
- Thermal overload adjusts to 1 x In, 0.8 x In and 0.63 x In
- Ultimate breaking capacity available as 25kA, 36kA and 65kA at 415V AC
- Maximum cable termination is 120mm<sup>2</sup> with cable clamps (optional accessory)
- Maximum cable termination is 150mm<sup>2</sup> with M8 reduced palm width cable lugs
- Standard cable terminations is 95mm<sup>2</sup> using M8 lugs
- Rated insulation voltage is 800V AC (Ui)

| Curre        | ent Rating (A)   |                        |                        |                        |
|--------------|------------------|------------------------|------------------------|------------------------|
| Max (A)      | Min (A)          | 1-pole<br>Product Code | 3-pole<br>Product Code | 4-pole<br>Product Code |
| Switch Disco | nnector          |                        |                        |                        |
| 250          | -                | -                      | YA3B3P250D             | YA3B4P250D             |
| YA3 Frame M  | ACCB Thermal / N | Magnetic - Icu 25kA    |                        |                        |
| 16           | 16               | YA3N1P16T              | -                      | -                      |
| 20           | 13               | YA3N1P20T              | YA3N3P20T              | YA3N4P20T              |
| 32           | 20               | YA3N1P32T              | YA3N3P32T              | YA3N4P32T              |
| 40           | 25               | YA3N1P40T              | -                      | -                      |
| 50           | 32               | YA3N1P50T              | YA3N3P50T              | YA3N4P50T              |
| 63           | 40               | YA3N1P63T              | YA3N3P63T              | YA3N4P63T              |
| 80           | 50               | YA3N1P80T              | -                      | -                      |
| 100          | 63               | YA3N1P100T             | YA3N3P100T             | YA3N4P100T             |
| 125          | 80               | YA3N1P125T             | YA3N3P125T             | YA3N4P125T             |
| 160          | 100              | YA3N1P160T             | YA3N3P160T             | YA3N4P160T             |
| 200          | 125              | -                      | YA3N3P200T             | YA3N4P200T             |
| 250          | 160              | -                      | YA3N3P250T             | YA3N4P250T             |
| YA3 Frame M  | ACCB Thermal / N | Magnetic - Icu 36kA    |                        |                        |
| 50           | 32               | -                      | YA3S3P50T              | YA3S4P50T              |
| 63           | 40               | -                      | YA3S3P63T              | YA3S4P63T              |
| 100          | 63               | -                      | YA3S3P100T             | YA3S4P100T             |
| 125          | 80               | -                      | YA3S3P125T             | YA3S4P125T             |
| 160          | 100              | -                      | YA3S3P160T             | YA3S4P160T             |
| 200          | 125              | -                      | YA3S3P200T             | YA3S4P200T             |
| 250          | 160              | -                      | YA3S3P250T             | YA3S4P250T             |
| YA3 Frame M  | ACCB Thermal / N | Magnetic - Icu 65kA    |                        |                        |
| 50           | 32               | -                      | YA3J3P50T              | YA3J4P50T              |
| 63           | 40               | -                      | YA3J3P63T              | YA3J4P63T              |
| 100          | 63               | -                      | YA3J3P100T             | YA3J4P100T             |
| 125          | 80               | -                      | YA3J3P125T             | YA3J4P125T             |
| 160          | 100              | -                      | YA3J3P160T             | YA3J4P160T             |
| 200          | 125              | -                      | YA3J3P200T             | YA3J4P200T             |
| 250          | 160              | -                      | YA3J3P250T             | YA3J4P250T             |















# Loadline MCCB YA3 Frame accessories

| Description  | 1 pole<br>Product<br>Code | 3 pole<br>Product<br>Code | 4 pole<br>Product<br>Code |
|--|---------------------------|---------------------------|---------------------------|
| Cable Clamps   |                           |                           |                           |
| YA3 Cable clamps set   | -                         | YA3CC3P                   | YA3CC4P                   |
| Terminals and Protection   |                           |                           |                           |
| YA3 Terminal shroud for cable lugs                                     | YA3TS1P                   | YA3TS3P                   | YA3TS4P                   |
| YA3 Interphase barrier (1 Off)   | YA3TB                     |                           |                           |
| YA3 Terminal shroud for cable clamps                                   | YA3TS1P                   | YA3TS3P                   | YA3TS4P                   |
| YA3 Rear terminals   | -                         | YA3RT3P                   | YA3RT4P                   |
| YA3 Extension terminals  | -                         | YA3XT3P                   | YA3XT4P                   |
| Plug-in Units  |                           |                           |                           |
| YA3 Plug-in MCCB conversion  | -                         | YA3PT3P                   | YA3PT4P                   |
| YA3 Plug-in base   | -                         | YA3PB3P                   | YA3PB4P                   |
| YA3 Plug-in base extension terminals                                   | -                         | YA3PXT3P                  | YA3PXT4P                  |
| YA3 Plug-in base right angle terminals                                 | -                         | YA3PRA3P                  | YA3PRA4P                  |
| Accessories  |                           |                           |                           |
| YA3 Handle lock (3 and 4 pole only)                                    | -                         | YADL1                     |                           |
| YA3 Neutral link   | -                         | YA3NL                     |                           |
| YA3 Panel mounted rotary handle for maximum 453mm panel depth          | -                         | YA3RH453                  |                           |
| Shunt Trips  |                           |                           |                           |
| YA Frame 100-120V AC *   | -                         | YAST115AC                 |                           |
| YA Frame 200-240V AC *   | -                         | YAST240AC                 |                           |
| YA Frame 380-450V AC *   | -                         | YAST450AC                 |                           |
| YA Frame 24V DC *  | -                         | YAST24DC                  |                           |
| Auxiliary and Alarm Switches   |                           |                           |                           |
| YA Auxiliary changeover switch (AC 240V/3A, DC 125V/0.4A) *            | -                         | YAAUX1                    |                           |
| YA Alarm trip indicator changeover switch (AC 240V/3A, DC 125V/0.4A) * | -                         | YAAL                      |                           |
| Under-voltage Release  |                           |                           |                           |
| YA Frame Under-voltage release 100-120V AC *                           | -                         | YAUVR120AC                |                           |
| YA Frame Under-voltage release 200-240V AC *                           | -                         | YAUVR240AC                |                           |
| YA Frame Under-voltage release 380-450V AC *                           | -                         | YAUVR450AC                |                           |
| YA Frame Under-voltage release 24V DC *                                | -                         | YAUVR24DC                 |                           |
| Motors and Interlocks  |                           |                           |                           |
| YA3 Motor actuator 100-110V AC   | -                         | YA3MA110                  |                           |
| YA3 Motor actuator 200-240V AC   | -                         | YA3MA240                  |                           |
| YA3 Mechanical interlock, link type for RHS MCCB                       | -                         | YA3MLR                    |                           |
| YA3 Mechanical interlock, link type for LHS MCCB                       | -                         | YA3ML3PL                  | YA3ML4P                   |
| YA3 Mechanical interlock, manual slide type (3 Pole or 4 Pole)         | -                         | YA3MS3P                   | YA3MS4P                   |
| YA3 Mechanical interlock, wire type mechanism (1 per MCCB required)    | -                         | YA3MW                     |                           |

**Note:** Please be advised that MCCBs can be fitted with either a shunt trip or an under-voltage release device; however the MCCB cannot house both of these together.

<sup>\*</sup> Common accessories for YA2, YA3 and YA5 frame MCCBs.



### Loadline MCCB YB3 Frame

# Circuit Protection

### **Main Features**

- Exceeds the requirements of EN 60947-2
- Single-pole MCCBs have fixed thermal and magnetic overloads
- Three-pole and four-pole MCCBs have adjustable thermal and magnetic overloads
- Thermal overload adjusts to 1 x In, 0.8 x In and 0.63 x In
- Ultimate breaking capacity available as 25kA and 40kA at 415VAC
- Maximum cable termination is 120mm<sup>2</sup> with cable clamps (optional accessory)
- Maximum cable termination is 150mm<sup>2</sup> with M8 reduced palm width cable lugs
- Standard cable termination is 95mm<sup>2</sup> using M8 lugs
- Rated insulation voltage is 800V AC (Ui)

| C             | urrent Rating (A)    |                        |                        |
|---------------|----------------------|------------------------|------------------------|
| Max (A)       | Min (A)              | 3-pole<br>Product Code | 4-pole<br>Product Code |
| Switch Discon | nector               |                        |                        |
| 250           | -                    | YB3B3P250D             | YB3B4P250D             |
| YB1 Frame MC  | CB Thermal / Magnet  | ic - Icu 25kA          |                        |
| 20            | 13                   | YB3N3P20T              | YB3N4P20T              |
| 32            | 20                   | YB3N3P32T              | YB3N4P32T              |
| 40            | 25                   | -                      | -                      |
| 50            | 32                   | YB3N3P50T*             | YB3N4P50T*             |
| 63            | 40                   | YB3N3P63T*             | YB3N4P63T*             |
| 80            | 50                   | -                      | -                      |
| 100           | 63                   | YB3N3P100T             | YB3N4P100T             |
| 125           | 80                   | YB3N3P125T             | YB3N4P125T             |
| 160           | 100                  | YB3N3P160T             | YB3N4P160T             |
| 200           | 125                  | YB3N3P200T             | YB3N4P200T             |
| 250           | 160                  | YB3N3P250T             | YB3N4P250T             |
| YA3 Frame MO  | CCB Thermal / Magnet | ic - Icu 40kA          |                        |
| 50            | 32                   | YB3S3P50T*             | YB3S4P50T*             |
| 63            | 40                   | YB3S3P63T*             | YB3S4P63T*             |
| 100           | 63                   | YB3S3P100T             | YB3S4P100T             |
| 125           | 80                   | YB3S3P125T             | YB3S4P125T             |
| 160           | 100                  | YB3S3P16OT             | YB3S4P160T             |
| 200           | 125                  | YB3S3P200T             | YB3S4P200T             |
| 250           | 160                  | YB3S3P250T             | YB3S4P250T             |



# Loadline MCCB YB3 Frame enclosure

#### **Main features**

- To house YB3 MCCB up to 250A with metering facility
- Enclosure allows for DIN-rail multi-function meter and/or earth leakage device (ELR1)
- 3-in-1 and core balanced current transformers integrally housed.
- Meets the requirements of EN 60947-2 and EN 61439-1
- IP3X Ingress protection
- Height = 597mm, Width = 300mm and Depth = 115mm
- Meter mounting plate LLGPMP required for DIN-rail meter installation

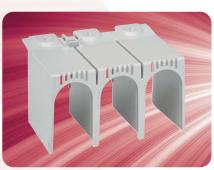
| Description   | Product<br>Code | Matching CT   |
|---|-----------------|---------------|
| YB3 MCCB enclosure                                  | LLGPYB3         | N/A           |
| Meter mounting plate                                | LLGPMP          | N/A           |
| DIN-rail multi-function meter with pulse and Modbus | Ri3-01          | M3N1-35 range |
| Earth Leakage Relay Device                          | ELR1            | CBT-94F-035   |
| Neutral Link (if required)                          | YA3NL           | N/A           |



<sup>\* 50</sup>A and 63A YB3 Frame MCCBs have fixed magnetic overload.











# Loadline MCCB YB3 Frame accessories

| 5   |                        |                        |  |
|---|------------------------|------------------------|--|
| Description   | 3 pole<br>Product Code | 4 pole<br>Product Code |  |
| Cable Clamps  |                        |                        |  |
| YB3 Cable clamps (120mm² cable)                     | YB3CC3P                | YB3CC4P                |  |
| Extension Terminals                                 |                        |                        |  |
| YB3 Flat extension terminals (Straight type)        | YB3XT3P                | YB3XT4P                |  |
| YB3 Flat extension terminals (Spread type)          | YB3XTS3P               | YB3XTS4P               |  |
| Rear Terminals                                      |                        |                        |  |
| YB3 Rear terminals                                  | YB3RT3P                | YB3RT4P                |  |
| Motors and Interlocks                               | Standard               | With Auto Reset        |  |
| YB3 Motor actuator 100-110V AC                      | YB3MA110               | YB3MA110R              |  |
| YB3 Motor actuator 200-220V AC                      | YB3MA220               | YB3MA220R              |  |
| YB3 Motor actuator 230-240V AC                      | YB3MA240               | YB3MA240R              |  |
| YB3 Motor actuator 24V DC                           | YB3MA24DC              | YB3MA24DCR             |  |
| YB3 Motor actuator 48V DC                           | YB3MA48DC              | YB3MA48DCR             |  |
| YB3 Motor actuator 100-110V DC                      | YB3MA110DC             | YB3MA110DCR            |  |
| Slide Interlock                                     |                        |                        |  |
| YB3 Slide interlock for front/rear connections      | YB3MS3P                | YB3MS4P                |  |
| Rotary Handles                                      |                        |                        |  |
| YB3 Panel mounted IP54 rotary handle for            | YB3RH453               | YB3RH453               |  |
| 453mm panel depth                                   |                        |                        |  |
| Terminal Protection                                 |                        |                        |  |
| YB3 Terminal shroud for cable lugs                  | YB3TS3P                | YB3TS4P                |  |
| YB3 Terminal cover for rear terminals               | YB3TC3P                | YB3TC4P                |  |
| YB3 Terminal shroud for cable clamps                | YB3TS3PS               | YB3TS4PS               |  |
| YB3 Interphase barrier (Set of 1)                   | YB3TB                  | YB3TB                  |  |
| YB Terminal shroud cover lock *                     | YBTSCL                 | YBTSCL                 |  |
| YB3 Handle lock – 1 pole YB1 and 3 pole YB1 / YB3 * | YBDL1                  | YBDL1                  |  |
| Auxiliary and Alarm Switches                        |                        |                        |  |
| YB Auxiliary changeover switch                      | YBAUX1                 | YBAUX1                 |  |
| (AC 250/0.1A and DC 125V/0.4A) *                    |                        |                        |  |
| YB Alarm trip indicator changeover switch           | YBAL                   | YBAL                   |  |
| (AC 250/0.1A and DC 125V/0.4A) *                    | . 57.12                | . 57 12                |  |
| Shunt Trips   |                        |                        |  |
| YB Shunt trip 100-120V AC *                         | YBST120AC              | YBST120AC              |  |
| YB Shunt trip 200-240V AC *                         | YBST240AC              | YBST240AC              |  |
| YB Shunt trip 380-450V AC *                         | YBST450AC              | YBST450AC              |  |
| YB Shunt trip 24V DC *                              | YBST24DC               | YBST24DC               |  |
| YB Shunt trip 48V DC *                              | YBST48DC               | YBST48DC               |  |
| YB Shunt trip 100-120V DC *                         | YBST120DC              | YBST120DC              |  |
| YB Shunt trip 200-240V DC *                         | YBST240DC              | YBST240DC              |  |
| Under-voltage Release                               | . 55121050             | 100121000              |  |
| YB Under-voltage release 100-120V AC *              | YBUVR120AC             | YBUVR120AC             |  |
| YB Under-voltage release 200-240V AC *              | YBUVR240AC             | YBUVR240AC             |  |
| YB Under-voltage release 380-450V AC *              | YBUVR450AC             | YBUVR450AC             |  |
| YB Under-voltage release 24V DC *                   | YBUVR24DC              | YBUVR24DC              |  |
| YB Under-voltage release 100-120V DC *              | YBUVR120DC             | YBUVR120DC             |  |
|   |                        |                        |  |
| YB Under-voltage release 200-240V DC *              | YBUVR240DC             | YBUVR240DC             |  |

**Note:** Please be advised that MCCBs can be fitted with either a shunt trip or an under-voltage release device; however the MCCB cannot house both of these together.

<sup>\*</sup> Common accessories for YB1 and YB3 frame MCCBs.



### Loadline MCCB YA5 Frame

# Circuit Protection

### **Main Features**

- Exceeds the requirements of EN 60947-2
- MCCBs have adjustable thermal and magnetic overloads
- Thermal overload adjusts to 1 x In, 0.8 x In and 0.63 x In for thermal / magnetic devices
- Thermal overload adjusts between 1 x In and 0.4 x In for electronic devices
- Electronic MCCBs are utilisation category B and are specifically intended for discrimination and have long time, short time and instantaneous trips
- Ultimate breaking capacity available as 25kA, 50kA, 65kA and 70kA electronic at 415V AC
- Maximum cable termination is 240mm<sup>2</sup> with cable clamps (optional accessory)
- Maximum cable termination is 185mm<sup>2</sup> with M10 reduced palm width cable lugs
- Rated insulation voltage is 800V AC (Ui)
- Extension terminals should be ordered separately if required
- Standard cable termination is 95mm<sup>2</sup> with M10 lugs

| Cu             | rrent Rating (A)       |                        |                        |
|----------------|------------------------|------------------------|------------------------|
| Max (A)        | Min (A)                | 3-pole<br>Product Code | 4-pole<br>Product Code |
| Switch Disconr | nector                 |                        |                        |
| 400            | -                      | YA5B3P400D             | YA5B4P400D             |
| YA5 Frame MC   | CB Thermal / Magneti   | ic - Icu 25kA          |                        |
| 250            | 157                    | YA5N3P250T             | YA5N4P250T             |
| 400            | 252                    | YA5N3P400T             | YA5N4P400T             |
| YA5 Frame MC   | CB Thermal / Magneti   | ic - Icu 50kA          |                        |
| 250            | 157                    | YA5H3P250T             | YA5H4P250T             |
| 400            | 252                    | YA5H3P400T             | YA5H4P400T             |
| YA5 Frame MC   | CB Thermal / Magneti   | ic - Icu 65kA          |                        |
| 250            | 157                    | YA5J3P250T             | YA5J4P250T             |
| 400            | 252                    | YA5J3P400T             | YA5J4P400T             |
| YA5 Frame MC   | CB Electronic - Icu 70 | kA                     |                        |
| 250            | 125                    | YA5K3P250E             | YA5K4P250E             |
| 400            | 200                    | YA5K3P400E             | YA5K4P400E             |
|                |                        |                        |                        |



# Loadline MCCB YA5 Frame enclosure

### **Main features**

- To house YA5 MCCB up to 400A with metering facility
- Enclosure allows for DIN-rail multi-function meter and/or earth leakage device (ELR1)
- 3-in-1 and core balanced current transformers integrally housed.
- Meets the requirements of EN 60947-2 and EN 61439-1
- IP3X Ingress protection
- Height = 750mm, Width = 360mm and Depth = 157.50mm
- · Metering achieved via meter mounting plate LLGPMP

| Description   | Product<br>Code | Matching CT   |
|---|-----------------|---------------|
| YA5 MCCB enclosure                                  | LLGPYA5         | N/A           |
| Meter mounting plate                                | LLGPMP          | N/A           |
| DIN-rail multi-function meter with pulse and Modbus | Ri3-01          | M3N1-35 range |
| Earth Leakage Relay Device                          | ELR1            | CBT-94F-070   |
| Neutral Link (if required)                          | YA5NL           | N/A           |











# Loadline MCCB YA5 Frame accessories

| Description   | 3 pole<br>Product Code | 4 pole<br>Product Code |
|---|------------------------|------------------------|
| Cable Clamps  |                        |                        |
| YA5 Cable clamps set  | YA5CC3P                | YA5CC4P                |
| Terminals and Protection  |                        |                        |
| YA5 Terminal shroud for cable lugs                                  | YA5TS3P                | YA5TS4P                |
| YA5 Interphase barrier (1 off)                                      | YA5TB                  | YA5TB                  |
| YA5 Terminal cover for cable clamps                                 | YA5TC3P                | YA5TC4P                |
| YA5 Rear terminals  | YA5RT3P                | YA5RT4P                |
| YA5 Extension terminals   | YA5XT3P                | YA5XT4P                |
| Plug-in Units   |                        |                        |
| YA5 Plug-in MCCB conversion   | YA5PT3P                | YA5PT4P                |
| YA5 Plug-in base  | YA5PB3P                | YA5PB4P                |
| YA5 Plug-in base extension terminals                                | YA5PXT3P               | YA5PXT4P               |
| YA5 Plug-in base right angle terminals                              | YA5PRA3P               | YA5PRA4P               |
| Accessories   |                        |                        |
| YA5 Dolly lock  | YA5DL                  | YA5DL                  |
| YA5 Neutral link  | YA5NL                  | YA5NL                  |
| YA5 Panel mounted rotary handle for                                 | YA5RH456               | YA5RH456               |
| maximum 456mm panel depth   |                        |                        |
| Shunt Trips   |                        |                        |
| YA Frame 100-120V AC *  | YAST115AC              | YAST115AC              |
| YA Frame 200-240V AC *  | YAST240AC              | YAST240AC              |
| YA Frame 380-450V AC *  | YAST450AC              | YAST450AC              |
| YA Frame 24V DC *   | YAST24DC               | YAST24DC               |
| Auxiliary and Alarm Switches  |                        |                        |
| YA Auxiliary changeover switch                                      | YAAUX1                 | YAAUX1                 |
| (AC 240V/3A, DC 125V/0.4A) *  |                        |                        |
| YA Alarm trip indicator changeover switch                           | YAAL                   | YAAL                   |
| (AC 240V/3A, DC 125V/0.4A) *  |                        |                        |
| Under-voltage Release   |                        |                        |
| YA Frame Under-voltage release 100-120V AC *                        | YAUVR120AC             | YAUVR120AC             |
| YA Frame Under-voltage release 200-240V AC *                        | YAUVR240AC             | YAUVR240AC             |
| YA Frame Under-voltage release 380-450V AC *                        | YAUVR450AC             | YAUVR450AC             |
| YA Frame Under-voltage release 24V DC *                             | YAUVR24DC              | YAUVR24DC              |
| Motors and Interlocks   |                        |                        |
| YA5 Motor actuator 100-110V AC                                      | YA5MA110               | YA5MA110               |
| YA5 Motor actuator 200-240V AC                                      | YA5MA240               | YA5MA240               |
| YA5 Mechanical interlock, link type for RHS MCCB                    | YA5MLR                 | YA5MLR                 |
| YA5 Mechanical interlock, link type for LHS MCCB                    | YA5ML3PL               | YA5ML4PL               |
| YA5 Mechanical interlock, manual slide type                         | YA5MS3P                | YA5MS4P                |
| YA5 Mechanical interlock, wire type mechanism (1 required per MCCB) | YA5MW                  | YA5MW                  |

**Note:** Please be advised that MCCBs can be fitted with either a shunt trip or an under-voltage release device; however the MCCB cannot house both of these together.

<sup>\*</sup> Common accessories for YA2, YA3 and YA5 frame MCCBs



Protection

Circuit

### Loadline MCCB Y6 Frame

### **Main Features**

- Exceeds the requirements of EN 60947-2
- MCCBs have adjustable thermal and magnetic overloads
- Thermal overload adjusts to 1 x In, 0.8 x In and 0.63 x In for thermal / magnetic devices
- Thermal overload adjusts between 1 x In and 0.4 x In for electronic devices
- Electronic MCCBs are utilisation category B and are specifically intended for discrimination and have long time, short time and instantaneous trips
- Ultimate breaking capacity available are 50kA and 85kA thermal magnetic at 415V AC
- Ultimate breaking capacity available are 50kA and 65kA electronic at 415V AC
- Maximum cable termination is 240mm<sup>2</sup> with cable clamps (optional accessory)
- Maximum cable termination is 300mm<sup>2</sup> with reduced palm width cable lugs
- Rated insulation voltage is 690V AC (Ui)
- Extension terminal bars to be ordered separately when not used with Dorman Smith enclosures. Part Code: Y6XT4P (2 required per MCCB)

| Cu             | rrent Rating (A)      |                        |                        |
|----------------|-----------------------|------------------------|------------------------|
| Max (A)        | Min (A)               | 3-pole<br>Product Code | 4-pole<br>Product Code |
| Switch Disconr | nector                |                        |                        |
| 630            | -                     | Y6B3P630D              | Y6B4P630D              |
| 800            | -                     | Y6B3P800D              | Y6B4P800D              |
| Y6 Frame MCC   | B Thermal / Magneti   | ic - Icu 50kA          |                        |
| 400            | 250                   | Y6H3P400T5             | Y6H4P400T5             |
| 630            | 400                   | Y6H3P630T5             | Y6H4P630T5             |
| 800            | 500                   | Y6H3P800T5             | Y6H4P800T5             |
| Y6 Frame MCC   | B Thermal / Magneti   | ic - Icu 85kA          |                        |
| 400            | 250                   | Y6K3P400T5             | Y6K4P400T5             |
| 630            | 400                   | Y6K3P630T5             | Y6K4P630T5             |
| 800            | 500                   | Y6K3P800T5             | Y6K4P800T5             |
| Y6 Frame MCC   | B Electronic - Icu 50 | kA                     |                        |
| 630            | 315                   | Y6H3P630E              | Y6H4P630E              |
| 800            | 400                   | Y6H3P800E              | Y6H4P800E              |
| Y6 Frame MCC   | B Electronic - Icu 65 | kA                     |                        |
| 630            | 315                   | Y6J3P630E              | Y6J4P630E              |
| 800            | 400                   | Y6J3P800E              | Y6J4P800E              |



# Loadline MCCB Y6/YA6 Frame enclosure

### Main features

- To house Y6/YA6 MCCB up to 800A with metering facility
- Enclosure allows for DIN-rail multi-function meter and/or earth leakage device (ELR1)
- 3-in-1 and core balanced current transformers integrally housed.
- Meets the requirements of EN 60947-2 and EN 61439-1
- IP3X Ingress protection
- Height = 1075mm, Width = 460mm and Depth = 157.50mm
- Metering achieved via meter mounting plate LLGPMP

| Description   | Product<br>Code | Matching CT             |
|---|-----------------|-------------------------|
| Y6/YA6 MCCB enclosure                               | LLGPYA6         | N/A                     |
| Meter mounting plate                                | LLGPMP          | N/A                     |
| DIN-rail multi-function meter with pulse and Modbus | Ri3-01          | M93L single<br>CT range |
| Earth Leakage Relay Device                          | ELR1            | CBT-94F-105             |
| Neutral Link (if required)                          | Y6NL            | N/A                     |











# Loadline MCCB Y6 Frame accessories

| Description  | 3 pole<br>Product Code | 4 pole<br>Product Code |
|--|------------------------|------------------------|
| Cable Clamps   |                        |                        |
| Y6 Cable clamps set  | Y6CC3P                 | Y6CC4P                 |
| Terminals and Protection   |                        |                        |
| Y6 Terminal shroud for cable lugs  | Y6TS3P                 | Y6TS4P                 |
| Y6 Interphase barrier (1 Off)  | YA5TB                  |                        |
| Y6 Rear terminals  | Y6RT3P                 | Y6RT4P                 |
| Y6 Extension terminals (1 set required for each end of MCCB)                           | Y6XT4P                 | Y6XT4P                 |
| Accessories  |                        |                        |
| Y6 Handle lock   | Y6DL                   | Y6DL                   |
| Y6 Direct mounting Castell * lock kit (including lock, DS1 symbol)lock, DS1 symbol)    | Y6CLDS1                | Y6CLDS1                |
| Y6 Direct mounting Castell * lock kit (including lock, DS2 symbol)                     | Y6CLDS2                | Y6CLDS2                |
| Y6 Castell * locking cam for panel mounted rotary handle                               | Y5DCLCAM               | Y5DCLCAM               |
| Y6 Neutral link  | Y6NL                   | Y6NL                   |
| Y6 Panel mounted rotary handle for 483mm panel depth                                   | Y6RH483                | Y6RH483                |
| Y6 Handle extension  | Y6HE                   | Y6HE                   |
| Y6 Cover flange  | Y5CF                   | Y5CF                   |
| Shunt Trips  |                        |                        |
| Y6 Frame 100-115V AC   | Y6ST115AC              | Y6ST115AC              |
| Y6 Frame 200-480V AC   | Y6ST480AC              | Y6ST480AC              |
| Y6 Frame 24V DC  | Y6ST24DC               | Y6ST24DC               |
| Auxiliary and Alarm Switches   |                        |                        |
| Y6 Single auxiliary changeover switch AC 250V/5A, DC 125V/0.6A)                        | Y6AUX1                 | Y6AUX1                 |
| Y6 Double auxiliary changeover switch (AC 250V/5A, DC 125V/0.6A)                       | Y6AUX2                 | Y6AUX2                 |
| Y6 Alarm trip indicator changeover switch and 1 x auxiliary (AC 250V/5A, DC 125V/0.6A) | Y6AUXAL                | Y6AUXAL                |
| Under-voltage Release  |                        |                        |
| Y6 Frame Under-voltage release 100-120V AC   | Y6UVR120AC             | Y6UVR120AC             |
| Y6 Frame Under-voltage release 200-240V AC   | Y6UVR240AC             | Y6UVR240AC             |
| Y6 Frame Under-voltage release 380-450V AC   | Y6UVR450AC             | Y6UVR450AC             |
| Y6 Frame Under-voltage release 24V DC  | Y6UVR24DC              | Y6UVR24DC              |
| Motors and Interlocks  |                        |                        |
| Y6 Motor actuator 100-110V AC  | Y6MA110                | Y6MA110                |
| Y6 Motor actuator 200-240V AC  | Y6MA240                | Y6MA240                |
| Y6 Mechanical interlock, manual slide type   | Y6MS3P                 | Y6MS4P                 |
| Y6 Mechanical interlock, rear rocker type  | Y6MR3P                 | Y6MR4P                 |

Please contact Dorman Smith Product Management for the range of factory fitted accessories for the Y6 frame MCCBs.

**Note:** Please be advised that MCCBs can be fitted with either a shunt trip or an under-voltage release device; however the MCCB cannot house both of these together.

<sup>\*</sup> Castell is a trademark of Castell Safety International limited.



### Loadline MCCB Y7 Frame

# Circuit Protection

### **Main Features**

- Exceeds the requirements of EN 60947-2
- Electronic MCCBs have adjustable long, short and instantaneous trip functions
- Thermal overload adjusts between 1 x In and 0.4 x In for electronic devices
- Electronic MCCBs are utilisation category B and are specifically intended for discrimination a and have long time, short time and instantaneous trips
- Ultimate breaking capacity is 65kA at 415V AC
- Maximum cable termination is 300mm<sup>2</sup>
- Rated insulation voltage is 690V AC (Ui)

| rrent Rating (A)       |  |  |
|------------------------|--|--|
| Min (A)                | 3-pole<br>Product Code                       | 4-pole<br>Product Code   |
| nector                 |  | <u>'</u>   |
| -                      | Y7B3P1250D                                   | Y7B4P1250D   |
| B Electronic - Icu 65k | A  |  |
| 500                    | Y7J3P1000E                                   | Y7J4P1000E   |
| 630                    | Y7J3P1250E                                   | Y7J4P1250E   |
|                        | nector<br>-<br>B Electronic - Icu 65k<br>500 | Min (A) 3-pole Product Code  nector - Y7B3P1250D  B Electronic - Icu 65kA 500 Y7J3P1000E |



### Loadline MCCB Y8 Frame

### **Main features**

- Exceeds the requirements of EN 60947-2
- Electronic MCCBs have adjustable long, short and instantaneous trip functions
- Thermal overload adjusts between 1 x In and 0.4 x In for electronic devices
- Electronic MCCBs are utilisation category B and are specifically intended for discrimination and have long time, short time and instantaneous trips
- Ultimate breaking capacity is 85kA at 415V AC
- Maximum cable termination is 300mm<sup>2</sup>
- Rated insulation voltage is 690V AC (Ui)

| Current Rating<br>(A) | Туре                 | 3 pole<br>Product Code | 4 pole<br>Product Code |
|-----------------------|----------------------|------------------------|------------------------|
| Switch Disconnect     | tor                  |                        |                        |
| 1600                  | Front Terminals      | Y8B3P1600D             | Y6B4P1600D             |
| 1600                  | Rear Terminals       | Y8B3P1600DR            | -                      |
| 1600                  | Draw out             | Y8B3P1600DDO           | -                      |
| Y8 Frame MCCB E       | lectronic - Icu 85kA |                        |                        |
| 1600                  | Front Terminals      | Y8K3P1600E             | Y8K4P1600E             |
| 1600                  | Rear Terminals       | Y8K3P1600ER            | -                      |
| 1600                  | Ground fault         | Y8K3P1600EG            | -                      |











# Loadline MCCB Y7 and Y8 Frame accessories

| Description  | 3 pole<br>Product Code | 4 pole<br>Product Code |
|--|------------------------|------------------------|
| Terminals and Protection   |                        |                        |
| Y7 / Y8 Terminal shroud for cable lugs   | Y7TS3P                 | Y7TS4P                 |
| Y7 / Y8 Interphase barrier (1 off)   | YA5TB                  | YA5TB                  |
| Accessories  |                        |                        |
| Y7 / Y8 Handle lock  | Y7DL                   | Y7DL                   |
| Y7 / Y8 Handle extension   | Y6HE                   | Y6HE                   |
| Y7 Direct mounting Castell * lock kit (including lock, DS1 symbol)                           | Y7CLDS1                | Y7CLDS1                |
| Y7 Direct mounting Castell * lock kit (including lock, DS2 symbol)                           | Y7CLDS2                | Y7CLDS2                |
| Y7 Castell * locking cam for panel mounted rotary handle                                     | Y5DCLCAM               | Y5DCLCAM               |
| Neutral link   | Y7NL                   | Y7NL                   |
| Y7 Cover flange  | Y7CF                   | Y7CF                   |
| Y7 Panel mounted rotary handle for 512mm panel depth   | Y7RH512                | Y7RH512                |
| Y8 Panel mounted rotary handle for 532mm panel depth   | Y8RH532                | Y8RH532                |
| Shunt Trips  |                        |                        |
| Y7 / Y8 Frame 100-120V AC  | Y7ST115AC              | Y7ST115AC              |
| Y7 / Y8 Frame 200-480V AC  | Y7ST480AC              | Y7ST480AC              |
| Y7 / Y8 Frame 24V DC   | Y7ST24DC               | Y7ST24DC               |
| Auxiliary and Alarm Switches   |                        |                        |
| Y7 / Y8 Single auxiliary changeover switch (AC 250V/5A, DC 125V/0.6A)                        | Y7AUX3P1               | Y7AUX4P1               |
| Y7 / Y8 Double auxiliary changeover switch (AC 250V/5A, DC 125V/0.6A)                        | Y7AUX3P2               | Y7AUX4P2               |
| Y7 / Y8 Alarm trip indicator changeover switch plus 1 x auxiliary (AC 250V/5A, DC 125V/0.6A) | Y7AUX3PAL              | Y7AUX4PAL              |
| Under-voltage Release  |                        |                        |
| Y7 / Y8 Under-voltage release 100-120V AC  | Y7UVR120AC             | Y7UVR120AC             |
| Y7 / Y8 Under-voltage release 200-240V AC  | Y7UVR240AC             | Y7UVR240AC             |
| Y7 / Y8 Under-voltage release 380-450V AC  | Y7UVR450AC             | Y7UVR450AC             |
| Y7 / Y8 Under-voltage release 24V DC   | Y7UVR24DC              | Y7UVR24DC              |
| Motors and Interlocks  |                        |                        |
| Y7 / Y8 Motor actuator 100-110V AC   | Y7MA110                | Y7MA110                |
| Y7 / Y8 Motor actuator 200-240V AC   | Y7MA240                | Y7MA240                |

# Loadline MCCB Y7/YA7 Frame enclosure

### Main features

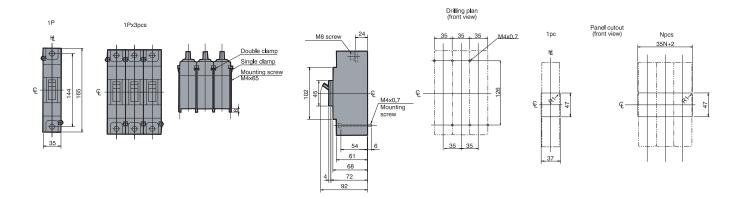
- To house Y7/YA7 MCCB up to 1000A with metering facility
- Enclosure allows for DIN-rail multi-function meter and/or earth leakage device (ELR1)
- Single and core balanced current transformers integrally housed.
- Meets the requirements of EN 60947-2 and EN 61439-1
- IP3X Ingress protection
- Height = 1165mm, Width = 500mm and Depth = 210mm
- Metering achieved via meter mounting plate LLGPMP

| Description   | Product<br>Code | Matching CT           |
|---|-----------------|-----------------------|
| Y7/YA7 MCCB enclosure                               | LLGPYA7         | N/A                   |
| Meter mounting plate                                | LLGPMP          | N/A                   |
| DIN-rail multi-function meter with pulse and Modbus | Ri3-01          | MR-85 single CT range |
| Earth Leakage Relay Device                          | ELR1            | CBT-94F-140           |
| Neutral Link (if required)                          | Y7NL            | N/A                   |

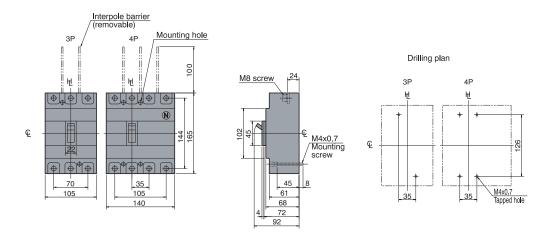




### Dimensions YA3 1-pole



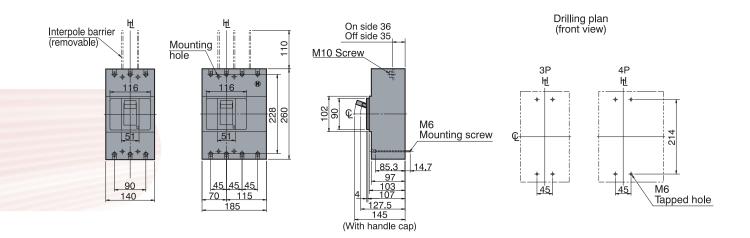
### YA3 3 and 4-pole



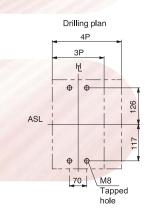


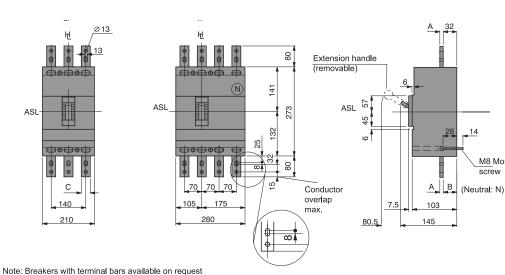
# Loadline MCCB YA5 3 and 4 pole and Y6 dimensions

**Dimensions** YA5 3 and 4-pole



### Dimensions Y63 and 4 pole



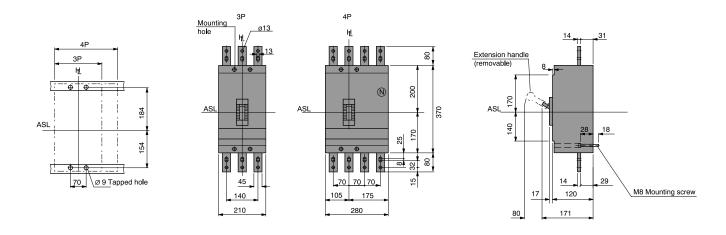


M8 Mounting

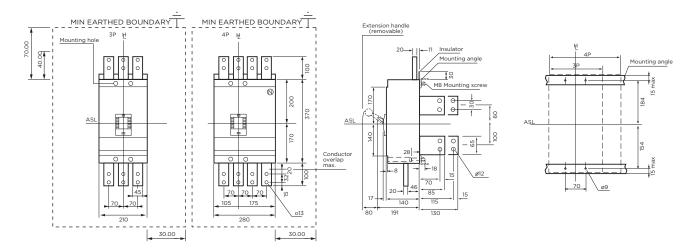




### Dimensions Y7 3 and 4 pole



### Dimensions Y8 3 and 4 pole





# Type II, Class II Surge Protection DSPM Range

### **Main Features**

- Type II Class II surge suppression device
- Meets the requirements of EN 62305-4:2006 and EN 61643-11/12
- DIN-rail mountable to EN 50022
- Replacement plug-in modules available
- Protection status indication
- Ingress protection rating of IP20
- Remote indication option available

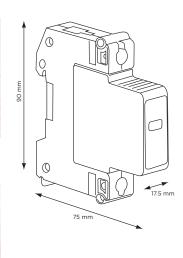
| Description  | Width<br>(mm) | Product Code |
|--|---------------|--------------|
| 40kA 1-phase with neutral/earth module                       | 35            | DSPM1PN      |
| 40kA 1-phase with neutral/earth module and remote indication | 35            | DSPM1PNR     |
| 40kA 3-phase with neutral/earth module                       | 70            | DSPM3PN      |
| 40kA 3-phase with neutral/earth module and remote indication | 70            | DSPM3PNR     |
| 40kA 1-phase (no neutral/earth module)                       | 17.5          | DSPM1P       |
| 40kA 3-phase (no neutral/earth module)                       | 52.5          | DSPM3P       |
| MOV replacement plug-in for phase module                     | 17.5          | DSPML        |
| MOV replacement plug-in for neutral/earth module             | 17.5          | DSPMNE       |

### **Specification**

| Description                                   | Product Code                                   |
|---|--|
| Surge handling capability (8/20ms)            | 40kA   |
| Surge protection technology                   | MOV  |
| Nominal voltage rating                        | 1-phase at 230V rms<br>3-phase at 415V rms     |
| Maximum continuous operating voltage          | 1-phase is 200-300V<br>3-phase is 380-515V     |
| Frequency                                     | 48-62 Hz                                       |
| Maximum current rating                        | Not applicable as parallel connection          |
| Nominal discharge current, In (8/20ms)        | 40kA   |
| Maximum surge current handling, Imax (8/20ms) | 40kA   |
| Response time                                 | <10ns  |
| Short-circuit withstand capability            | 40kA with maximum backup fuse (100A gL/gG)     |
| Thermal overload protection                   | 120°C  |
| Nominal power consumption                     | <10MA  |
| Operating temperature                         | -40°C to +70°C                                 |
| Protection at 5kA, Up (8/20ms)                | <1100V peak                                    |
| Protection at Imax (8/20ms)                   | <1600V peak                                    |
| Replaceable modules                           | 2 pin plug-in modules available                |
| Protection status indication                  | Mechanical flag mechanism:                     |
|   | Green = Full protection                        |
|   | Red = No protection                            |
| Remote status indication option               | Hard wired                                     |
| Remote indication connections                 | Volt free N/O or N/C contacts                  |
| Terminals                                     | Base = 16-35mm <sup>2</sup>                    |
|   | Remote indicator = 2.5mm <sup>2</sup> maximum  |
| Remote signalling terminals                   | 230V rms 1A; 30V DC 2A                         |
| Module and base material                      | Flame retardant ABS                            |
| Device style                                  | 35mm <sup>2</sup> Din-rail mounted to EN 50022 |
| Category classification EN 61643-11           | SPD Type 2                                     |
| Ingress Protection rating                     | IP20   |

**Note:** It is recommended that this surge suppression device be installed on the load side of a 63A Type C MCB for protection.







# Type II, Class II Surge Protection DSPE Range

# Modular Devices

### **Main Features**

- Type II Class II surge suppression device
- Meets the requirements of EN 62305-4:2006 and EN 61643-11/12
- Low "let through" voltage of 600V
- Two stage (redundant) protection with pre-failure indication
- Full protection status with remote signalling
- Remote monitoring version available with 1 metre cable
- Easy installation and field serviceability
- Compact size and footprint

| Description  | Product Code |
|--|--------------|
| 30kA 2-Stage, 3-pole surge protector   | DSPE600      |
| 30kA 2-Stage, 3-pole surge protector with remote terminals and monitoring unit | DSPE600R     |
| 30kA 2-Stage, 3-pole surge protector with auxiliary contact                    | DSPE600N     |
| Enclosure for DSPM units   | 2IP-7-0244   |

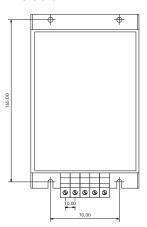


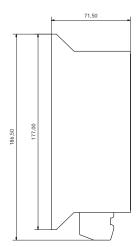
### **Specification**

| Description                              | Product Code                              |
|--|---|
| Voltage rating (Nominal), Un             | 400V rms                                  |
| Maximum continuous operating voltage, Uc | L-N 200-300V rms                          |
|  | L-L 350-500V rms                          |
| Maximum load current rating              | Unlimited (parallel connection)           |
| Maximum surge current (8/20ms)           | 30kA per phase                            |
| Response time                            | <10ns                                     |
| Power consumption (nominal)              | 18mA per phase                            |
| Leakage current to earth                 | 600mA                                     |
| Terminals                                | Line, neutral & earth is 16mm² (maximum)  |
|  | Remote signalling is 2.5mm² (maximum)     |
| Remote signalling terminals              | Rated at 230V rms, 0.2A or 30V DC 2A      |
| Operating temperature                    | -40°C to +70°C                            |
| LED status indication                    | Green = Full protection                   |
|  | Red & Green = Reduced protection          |
|  | Red = No protection                       |
| Site fault condition indicator           | Red – Lit or flashing means check Neutral |
|  | / Earth supply                            |
| Case                                     | Steel – Epoxy paint                       |
| Type according to BS EN 61643-11         | SPD Type 2                                |
| Dimensions                               | Height = 176mm                            |
|  | Width = 110mm                             |
|  | Depth = 72mm                              |
| Weight                                   | 1.11 kgs                                  |
|  |   |

**Note:** It is recommended that this surge suppression device be installed on the load side of a 63A Type C MCB for protection.

 $\label{eq:maximum_backup} \mbox{Maximum backup fuse 100A gL/gG.} \\ \mbox{Maximum backup fuse 50A gL/gG.}$ 







# Type I, Class I or Type II, Class II Surge Protection, DSPT Range

### **Main features**

- Type I Class I surge suppression device
- Meets the requirements of EN 62305 and EN 61643-1
- Remote terminals fitted as standard

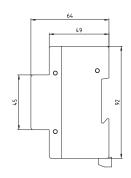
| Description  | Product Code |
|--|--------------|
| 1-phase & neutral, 25kA L-N, 25kA surge protector  | DSPT1PN      |
| 3-phase & neutral, 25kA L-N, 100kA surge protector | DSPT3PN      |

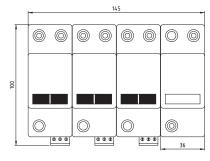


### **Specification**

| Parameter  | 1-phase & neutral                              | 3-phase & neutral                               |
|--|--|---|
| Maximum continuous operating voltage (Uc)  | 275V AC rms                                    | 275V AC rms                                     |
| Temporary overvoltage (Ut), L-N  | 335V / 5 seconds                               | 335V / 5 seconds                                |
| Temporary overvoltage (Ut), N-PE   | 1200V / 0.2<br>seconds                         | 1200V / 0.2<br>seconds                          |
| Response time L-N  | <25ns  | <25ns   |
| Response time N-PE   | <100ns   | <100ns  |
| Maximum backup fuse  | 315A gL/gG                                     | 315A gL/gG                                      |
| Maximum backup fuse when 'V' connected   | 63A gL/gG                                      | 63A gL/gG                                       |
| Short-circuit withstand capability at maximum backup fuse (Ip)                         | 80kA rms                                       | 80kA rms  |
| Lightning impulse current 10/350ms, L-N (limp)  • Charge (Q)  • Specific energy (W/R)  | 12.5kA<br>6As<br>36kJ∕Ω                        | 25kA<br>12.5As<br>156kJ/ <b>Ω</b>               |
| Lightning impulse current 10/350ms, N-PE (limp)  • Charge (Q)  • Specific energy (W/R) | 25kA<br>12.5As<br>156kJ/Ω                      | 100kA<br>50As<br>2500kJ/Ω                       |
| Total lightning current, 10/350ms (Itotal), L1, L2, L3, N-PE                           | 25kA   | 100kA   |
| Maximum discharge current, 8/20ms, (Imax), L-N   | 90kA   | 120kA   |
| Maximum discharge current, 8/20ms, (Imax), N-PE  | 50kA   | 120kA   |
| Nominal discharge current, 8/20ms (In)   | 25kA   | 50kA  |
| Voltage protection level at Iimp (Up)  | <1.2kA   | <1.2kV  |
| Dimensions   | Height = 100mm<br>Depth = 64mm<br>Width = 72mm | Height = 100mm<br>Depth = 64mm<br>Width = 145mm |

**Note:** It is recommended that this surge suppression device be installed on the load side of a 63A Type C MCB for protection.







### Switch Disconnectors, Timers and Contactors

# Modular Devices

### **Main Features**

- Exceeds the requirements of EN 60947-3
- Maximum cable termination is 50mm<sup>2</sup>
- Duty category of AC22
- For installation of a 4-pole device as an incoming device for a Loadlimiter 63 TP&N distribution board then an additional connection kit is required with product code DBXCKR.

| Current Rating (A) | No of Poles | Product Code |
|--------------------|-------------|--------------|
| 100                | 2           | AV2100       |
| 100                | 3           | AV3100       |
| 100                | 4           | AV4100       |
| 125                | 2           | AV2125       |
| 125                | 3           | AV3125       |
| 125                | 4           | AV4125       |



### Modular Programmable Timer

### **Main Features**

- 1 or 2 Channel
- Daily / Weekly programming options of up to 30 events per channel
- Maximum rating at 16A
- Backlit LCD easy read display
- Terminal ratings at IP20

| Current Rating (A) | Width (mm) | Product Code |
|--------------------|------------|--------------|
| 16A (AC7A)         | 35         | DRT-DW2      |

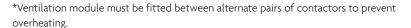


### **Modular Contactors**

### **Main Features**

- Exceeds the requirements of EN 61095
- May require de-rating when used with inductive loads please see Contactor de-rating table in the Technical Data catalogue for further information.

| Current<br>Rating (A) | No. of Poles | Width<br>(mm) | Contact Status  | Product Code |
|-----------------------|--------------|---------------|-----------------|--------------|
| 20                    | 2            | 17.5          | Normally Open   | EE2P20CO     |
| 20                    | 2            | 17.5          | Normally Closed | EE2P2OCC     |
| 25                    | 4            | 54            | Normally Open   | EE4P25CO     |
| 25                    | 4            | 54            | Normally Closed | EE4P25CC     |
| 40                    | 4            | 54            | Normally Open   | EE4P40CO     |
| 40                    | 4            | 54            | Normally Closed | EE4P40CC     |
| 63                    | 4            | 54            | Normally Open   | EE4P63CO     |
| 63                    | 4            | 54            | Normally Closed | EE4P63CC     |
| Ventilation Kit       | -            | 9             | -               | LLMV *       |







# **Single Current Transformers**

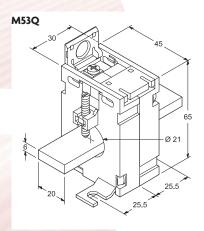
### **Main features**

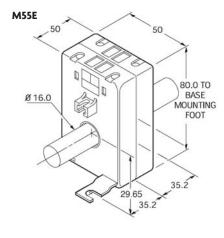
- Meets the requirements of EN 60044-1
- Provided with plug-in metal feet for wall or base mounting as standard.
- DIN-clip versions available
- Up to Class 0.5 accuracy
- System voltage up to 720V
- Secondary output of 5A
- Operating temperature range from -20°C to +70°C

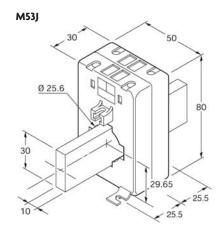


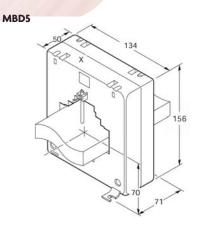
Additional DIN-clips are available as below: For M53Q, M53J, M63N and M93L CTs please order M30-DINCLIP (1 set required per CT). For M55E and MBD5 CTs please order M50-DINCLIP (1 set required per CT).

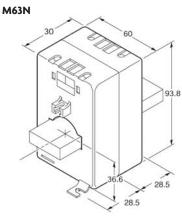
| Current<br>Rating<br>(A) | Cable<br>Aper-<br>ture<br>(mm) | Copper<br>Aperture<br>(mm) | Mounting                      | Product Code |
|--------------------------|--------------------------------|----------------------------|-------------------------------|--------------|
| 100                      | 21                             | Max 20 x 6                 | Metal plug-in feet            | M53Q-100/5   |
| 125                      | 21                             | Max 20 x 6                 | Metal plug-in feet            | M53Q-125/5   |
| 30                       | 16                             | Max 15 x 5                 | Metal plug-in feet            | M55E-30/5    |
| 60                       | 16                             | Max 15 x 5                 | Metal plug-in feet            | M55E-60/5    |
| 60                       | 16                             | Max 15 x 5                 | DIN-clip & metal plug-in feet | M55E-60/5D   |
| 100                      | 25.6                           | Max 30 x 10                | DIN-clip & metal plug-in feet | M53J-100/5D  |
| 125                      | 25.6                           | Max 30 x 10                | DIN-clip & metal plug-in feet | M53J-125/5D  |
| 200                      | 25.6                           | Max 30 x 10                | DIN-clip & metal plug-in feet | M53J-200/5D  |
| 250                      | 25.6                           | Max 30 x 10                | DIN-clip & metal plug-in feet | M53J-250/5D  |
| 400                      | 32                             | Max 40 x 10                | DIN-clip & metal plug-in feet | M63N-400/5D  |
| 600                      | 32                             | Max 40 x 10                | DIN-clip & metal plug-in feet | M63N-630/5D  |
| 800                      | 32                             | Max 40 x 10                | DIN-clip & metal plug-in feet | M63N-800/5D  |
| 400                      | 42                             | Max 50 x 10 or 40 x 30     | DIN-clip & metal plug-in feet | M93L-400/5D  |
| 600                      | 42                             | Max 50 x 10 or 40 x 30     | DIN-clip & metal plug-in feet | M93L-600/5D  |
| 800                      | 42                             | Max 50 x 10 or 40 x 30     | DIN-clip & metal plug-in feet | M93L-800/5D  |
|                          |                                |                            |                               |              |

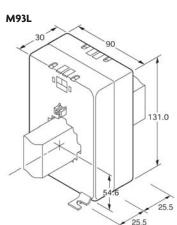














### 3-in-1 Current Transformers

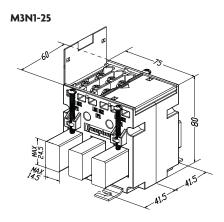
### **Main Features**

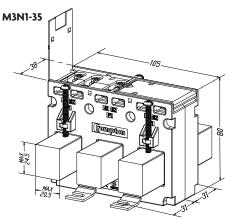
- Meets the requirements of EN 60044-1
- Provided with plug-in metal feet, DIN-rail clips and busbar mounting option as standard.
- Up to Class 0.5 accuracy
- System voltage up to 720V
- Secondary output of 5A
- Operating temperature range from  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$

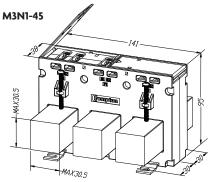
| Current Rating<br>(A) | Cable<br>Aperture<br>(mm) | Copper<br>Aperture<br>(mm) | Product Code  |
|-----------------------|---------------------------|----------------------------|---------------|
| 25mm Core 3-in-       | 1 Current Transfo         | rmers                      |               |
| 60                    | 50                        | Max 24 x 14                | M3N1-25-60/5  |
| 100                   | 50                        | Max 24 x 14                | M3N1-25-100/5 |
| 125                   | 50                        | Max 24 x 14                | M3N1-25-125/5 |
| 160                   | 50                        | Max 24 x 14                | M3N1-25-160/5 |
| 35mm Core 3-in-       | 1 Current Transfo         | rmers                      |               |
| 100                   | 95                        | Max 24 x 20                | M3N1-35-100/5 |
| 125                   | 95                        | Max 24 x 20                | M3N1-35-125/5 |
| 160                   | 95                        | Max 24 x 20                | M3N1-35-160/5 |
| 200                   | 95                        | Max 24 x 20                | M3N1-35-200/5 |
| 250                   | 95                        | Max 24 x 20                | M3N1-35-250/5 |
| 45mm Core 3-in-       | 1 Current Transfo         | rmers                      |               |
| 250                   | 150                       | Max 30 x 30                | M3N1-45-250/5 |
| 300                   | 150                       | Max 30 x 30                | M3N1-45-300/5 |
| 400                   | 150                       | Max 30 x 30                | M3N1-45-400/5 |
| 500                   | 150                       | Max 30 x 30                | M3N1-45-500/5 |
| 630                   | 150                       | Max 30 x 30                | M3N1-45-630/5 |











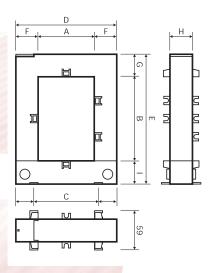


# **Split Core Current Transformers**

### **Main features**

- Meets the requirements of EN 60044-1
- Provided with plug-in metal feet and busbar mounting as standard.
- Up to Class 0.5 accuracy
- System voltage up to 720V
- Secondary output of 5A
- Operating temperature range from  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$





|                      |                       | Burde<br>index | n VA aga | inst class |              |
|----------------------|-----------------------|----------------|----------|------------|--------------|
| Case Size            | Current<br>Rating (A) | 0.5            | 1        | 3          | Product Code |
| Case size 1          | 100                   | -              | -        | 1.5        | SC1-100/5A   |
| Aperture 20 x 30 mm  | 150                   | -              | -        | 2          | SC1-150/5A   |
|                      | 200                   | -              | 1.5      | 2.5        | SC1-200/5A   |
|                      | 250                   | -              | 2        | 4          | SC1-250/5A   |
|                      | 300                   | 1.5            | 4        | 6          | SC1-300/5A   |
|                      | 400                   | 2.5            | 6        | 10         | SC1-400/5A   |
| Case Size 2          | 250                   | 1              | 2        | 4          | SC2-250/5A   |
| Aperture 50 x 80 mm  | 300                   | 1.5            | 3        | 6          | SC2-300/5A   |
|                      | 400                   | 1.5            | 3        | 10         | SC2-400/5A   |
| Case Size 3          | 250                   | 1              | 2        | 4          | SC3-250/5A   |
| Aperture 80 x 80 mm  | 300                   | 1.5            | 3        | 6          | SC3-300/5A   |
|                      | 400                   | 1.5            | 3        | 10         | SC3-400/5A   |
|                      | 500                   | 2.5            | 5        | 15         | SC3-500/5A   |
|                      | 600                   | 2.5            | 5        | 15         | SC3-600/5A   |
|                      | 750                   | 3              | 6        | 20         | SC3-750/5A   |
|                      | 800                   | 3              | 7.5      | 20         | SC3-800/5A   |
|                      | 1000                  | 5              | 10       | 20         | SC3-1000/5A  |
| Case Size 4          | 500                   | -              | 4        | 12.5       | SC4-500/5A   |
| Aperture 80 x 120 mm | 600                   | -              | 5        | 15         | SC4-600/5A   |
|                      | 750                   | 2.5            | 6        | 17.5       | SC4-750/5A   |
|                      | 800                   | 3              | 7.5      | 20         | SC4-800/5A   |
|                      | 1000                  | 5              | 10       | 20         | SC4-1000/5A  |
|                      | 1200                  | 6              | 12.5     | 25         | SC4-1200/5A  |
|                      | 1250                  | 7.5            | 15       | 30         | SC4-1250/5A  |
|                      | 1500                  | 8              | 17       | 30         | SC4-1500/5A  |
|                      | 1600                  | 8              | 17       | 30         | SC4-1600/5A  |

| Measurement* | Case Size 1 | Case Size 4 | Case Size 3 | Case Size 4 |
|--------------|-------------|-------------|-------------|-------------|
| A            | 20          | 50          | 80          | 80          |
| В            | 30          | 80          | 80          | 120         |
| С            | 51          | 78          | 108         | 108         |
| D            | 89          | 114         | 144         | 144         |
| E            | 111         | 145         | 145         | 185         |
| F            | 34          | 32          | 32          | 32          |
| G            | 47          | 32          | 32          | 32          |
| Н            | 40          | 32          | 32          | 32          |
| I            | 32          | 33          | 33          | 33          |
| Weight (kgs) | 0.75        | 0.9         | 1.05        | 1.25        |

<sup>\*</sup>All measurements are in mm.



### Integra Cil Energy Meter

The Integra Ci1 energy meter is specially designed and developed as a cost effective Watt hour and VAr hour meter to complement the current Integra Ci digital metering system (dms). The Integra Ci1 self-contained 96mm DIN panel mounted Watt hour, VAr hour meter measures the real consumption of active and reactive energy to Class 1.0 accuracy.

The backlit LCD screen displays 8 character counter indicating Watt hour or VAr hour units. The optional modules enables transfer of energy measurements to building management systems (BMS) via pulsed or digital communication options.

### **Programmable Functions**

Integra Cil meter provides simple programming to suit single phase 2-wire, three-phase three wire and three-phase four-wire un-balanced system configurations, CT ratio settings and configuration of selected communication options. To prevent unauthorised access to the product configuration settings, all set-up screens offer password protection.

Direct access to display the programmed set CT ratio, Watt hours import and export, VAr hours import and export and the phase sequence test routine for both voltage and current phases. During the accumulation of the Wh or VArh the running icon will flash at a rate dependant on the displayed parameter.

### **Plug-in Modules**

Plug-in modules allow to fit either maximum of two isolated pulsed output relays or a RS485 communication module and one isolated pulsed output relay. The communication output module can be programmed internally to respond either to Modbus® RTU or Johnson Controls protocols.

### **Panel Mounting**

Integral retention clips allow fast, safe and secure panel mounting in various material thicknesses without the need for external screws or clips.

### **Product Code**

| Description                          | Part Number |
|--------------------------------------|-------------|
| Integra Ci1 base unit                | Ci1-01      |
| Options                              |             |
| Optional plug-in pulse output module | PUL-01      |
| Optional RS485 Modbus plug-in module | MOD-01      |
| Accessories                          |             |
| IP65 protective cover                | 3G36502     |
| IP54 panel gasket                    | 3C34501     |

#### **Parameters**

| Button | Screen | Parameters     |
|--------|--------|----------------|
| CT     | 1      | CT ratio       |
| Wh     | 2      | IMPORT Wh      |
|        | 3      | Export Wh      |
| VArh   | 4      | IMPORT VArh    |
|        | 5      | EXPORT VArh    |
| TEST   | 6      | Phase sequence |
|        |        | diagnostics    |

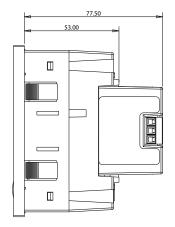


## Modular Devices





#### **Dimensions**





Running icon indicates Wh and VAhr accumulation.







#### **Parameters**

| Button | Screen | Parameters  |
|--------|--------|---|
| V/Hz   | 1      | Volts L1 - N<br>Volts L2 - N<br>Volts L3 - N<br>Volts L1 - L2                             |
|        | 3<br>4 | Volts L2 - L3<br>Frequency<br>Volts L1 - N THD%<br>Volts L2 - N THD%<br>Volts L3 - N THD% |
|        | 5      | Volts L1 - L2 THD%<br>Volts L2 - L3 THD%<br>Volts L3 - L1 THD%                            |
| А      | 1      | Current L1<br>Current L2<br>Current L3  |
|        | 2 3    | Neutral current<br>L1 Current max<br>Demand<br>L3 Current max<br>Demand                   |
|        | 4      | Neutral current max<br>Demand   |
|        | 5      | Current L1 THD%<br>Current L2 THD%<br>Current L3 THD%                                     |
| P/PF   | 1      | kW<br>kVAr<br>kVA   |
|        | 2<br>3 | kW Max demand<br>Power factor   |
| E      | 1 2    | kWh<br>kVArh  |

### Integra Ci3 Energy Meter

The Integra Ci3 digital metering system (dms) represents the first model of a new generation of digital metering systems designed to complement the current Crompton Instruments Integra series.

The Integra Ci3 meter is an accurate and cost effective solution for measurement and display of all major electrical and power quality parameters.

Designed, developed and manufactured in the UK, the Integra Ci3 dms builds on Crompton Instruments' long established reputation for metering product quality.

The product features a DIN 96 panel mounted enclosure, backlit LCD screen and user programmable CT ratios, all accessible via an intuitive user interface. Integra Ci3 dms measures 17 electrical parameters including total harmonic distortion (THD) up to the 31st harmonic.

### **Programmable Functions**

Integra Ci3 dms is programmable to suit single-phase two-wire, three-phase three-wire and three-phase four-wire system configurations. Programmable CT ratios enable to display any current range.

#### **Display**

The parameters can be viewed on a backlit LCD screen. The 15 screens are accessible via four buttons on the front panel allowing to scroll between various screens making the navigation very user-friendly, intuitive and above all – simple.

### **Plug-in Modules**

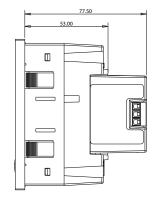
Integra Ci3 dms offers two output ports at the rear of the product, to allow the fitting of either two isolated pulsed output relays or a RS485 communication module such as Modbus® or Johnson Controls communication output. These are configurable via internal settings.

### **Panel Mounting**

Integral retention clips allow fast, safe and secure panel mounting in various material thicknesses without the need for external screws or clips.

### **Product Code**

| Description                          | Part Number |
|--------------------------------------|-------------|
| Integra Ci3 base unit                | Ci3-01      |
| Options                              |             |
| Optional plug-in pulse output module | PUL-01      |
| Optional RS485 Modbus plug-in module | MOD-01      |
| Accessories                          |             |
| IP65 protective cover                | 3G36502     |
| IP54 panel gasket                    | 3C34501     |
|                                      |             |





### Integra 1630 Digital Metering System

Multi-function Integra 1630 digital metering system provides high accuracy 0.2% measurement, display and communication of all major electrical and power quality parameters including total harmonic distortion (THD) up to the 31st harmonic. To suit user requirements, the range includes single-phase, three-phase three-wire and three-phase four-wire capability, all selectable at the point of installation.

# Modular Devices

### **Main features**

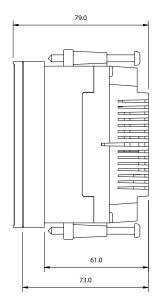
- Auxiliaries: 100/250V ac/dc (12/48V dc optional)
- Options: ProfibusTM, Modbus® TCP, Bacnet IP, RS485, Pulsed output

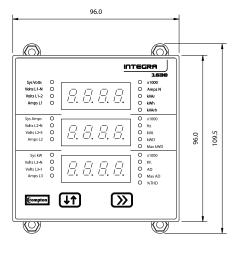
### **Product Code**

| Description   | Product Code          |
|---|-----------------------|
| 1-phase, 3-phase 3/4-wire, 241-480V L-L, 5A CT input, Aux. 100-250V ac/dc | INT-1630-M-5-M-option |
| Options   |                       |
| No options  | 000                   |
| RS485 interface Modbus®+ 1kWhr pulsed output                              | 110                   |
| Extended collar   | OPT-1630-collar       |

# | Integra | Labo | Labo

#### **Dimensions**





### **Measured Parameters**

- System (average) volts
   System (average) current
   System (total) kW
- System volts (average) THD%
   System current (average) THD%
- Phase neutral Voltage (VL-N) (4 wire only)
   Phase – phase Voltage (L-L) (3 wire only)
- Voltage THD% (4 wire only)
- Phase current
- Current THD %
- Neutral current (4 wire only) requency
   Power factor (overall)
- kVAr kVA kW
- kWh import (7-digit resolution)
- kVArh import (7-digit resolution)
- kWh export (7-digit resolution)
- kVArh export (7-digit resolution)
- kW demand
   Current demand
- Maximum kW demand
   Maximum current demand
- Hours run



## Integra Ri3 Digital Metering System

The product features a DIN-rail enclosure, backlit LCD display and user programmable CT ratios, all accessible via an intuitive user interface. Integra Ri3 dms measures 17 electrical parameters including total harmonic distortion (THD) measurement up to the 31st harmonic.

### **Specifications**

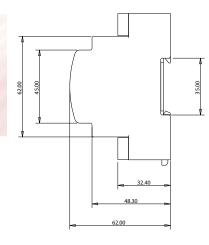


### **Features**

- DIN-rail enclosure DIN 43880
- Backlit LCD screen
- Programmable CT ratio
- True rms measurement
- User programmable system configuration
- Pulsed output and Modbus as standard

### **Benefits**

- Cost effective
- Simple navigation
- Crompton renowned quality
- UK manufactured



| Nominal input voltage   100-289V AC L-N (173-500V AC L-L)  | Specifications                          |   |
|--|---|---|
| Nominal input voltage  Max. continuous input overload voltage  Max. short duration input voltage  Max. short duration input voltage burden  Nominal input voltage burden  Nominal input current  Max. continuous input overload voltage  Max. short duration input current  Max. continuous input overload current  Max. short duration input current  S A C rms  10 x nominal (i) second application repeated 5 times at 5 minute intervals)  Nominal input current burden  Frequency  45-66Hz  System CT primary values  1 to 9999  Auxiliary  Operating range  10-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Accuracy  Voltage (V)  0.5%  Current (A)  Neutral current calculated (A)  4%  Frequency (Hz)  O.1 Hz  Power factor (FF)  1% of unity  Active power (W)  +/-1% of range  Apparent power (VA)  Active power (WA)  Active power (WA)  Active energy (RVAr)  Freactive energy (RVAr)  Fre | Input                                   |   |
| Max. continuous input overload voltage  Max short duration input voltage burden  Nominal input voltage burden  Nominal input voltage burden  Nominal input current  5A AC rms  Max. continuous input overload current  Max. short duration input current  Nominal input current burden  Nominal input current calculated  Nominal input current burden  Nominal input current sominal  Nominal input current  Nominal input curren |   | 100-289V AC L-N (173-500V AC L-L)                 |
| voltage repeated 5 times at 5 minute intervals) Nominal input current  | Max. continuous input                   |   |
| Nominal input current  Max. continuous input overload current  Max. short duration input current  Nominal input current burden Frequency  Nominal input current burden Frequency  System CT primary values  Auxiliary  Operating range  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  100-50-4-400V AC nominal +/-10% (99-440V AC absolute limits)  100-50-4-400V AC nominal +/-10% (99-440V AC absolute limits)  100-50-4-400V AC nominal +/-10% (99-440V AC absolute limits)  100-60-4-400V AC nominal +/-10% (99-40V AC absolute limits)  100-60-4-400V AC nominal +/-10% (96-420V DC absolute limits)  100-60-4-400V AC nominal +/-10% (96-420V DC absolute limits)  100-60-4-400V AC nominal +/-10% (96-42 |   | 0 11  |
| Max. continuous input overload current voreload current  Max. short duration input current to the street of times at 5 minute intervals)  Nominal input current burden trequency  System CT primary values  45-66Hz  System CT primary values  10 × 00/40 per phase  45-66Hz  System CT primary values  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  410-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  410-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  410-40-40-40-40-40-40-40-40-40-40-40-40-40  | Nominal input voltage burden            | < 0.2VA per phase                                 |
| overload current  Max. short duration input current  Stimes at 5 minute intervals)  Nominal input current burden Frequency  45-66Hz System CT primary values  1 to 9999  Auxiliary  Operating range  100-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Accuracy  Voltage (V)  Current (A)  Neutral current calculated (A) Frequency (Hz)  O.1 Hz Power factor (PF)  Active power (VA)  Apparent power (VA)  Active energy (kWh)  Class 1 (IEC 62053-21)  Reactive energy (kVArh)  ThD  1% of range  THD  1% of range  THD  1% up to 31st harmonic  Response time  Output  Pulse output relay  Contact rating  50mA max at 250V AC  Type  Solid state relay  SA85 Modbus output module  Type  2-wire half duplex  Baud rate  Enclosure  Enclosure  Enclosure style  DIN-rail  Dimensions  72x90mm (width x height) as per DIN 43880  Front protection rating  Esponse time  DIN-rail  Polycarbonate to UL94V0  Weight  300g  Terminals  Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature  -10°C to +55°C  Storage temperature  -10°C to +50°C  -10°C  -10 | Nominal input current                   | 5A AC rms   |
| S times at 5 minute intervals) <ul> <li>Co.6VA per phase</li> <li>Frequency</li> <li>System CT primary values</li> <li>1 to 9999</li> </ul> Auxiliary  Operating range  I10-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits) <li>Burden  <ul> <li>10-400V AC nominal +/-10% (99-440V AC absolute limits)</li> <li>or 120-350V DC +/-20% (96-420V DC absolute limits)</li> </ul>  Burden  <ul> <li>10-400V AC nominal +/-10% (99-440V AC absolute limits)</li> <li>or 120-350V DC +/-20% (96-420V DC absolute limits)</li> </ul>  Purpose of the proper of 10-400V AC nominal +/-10% (99-440V AC absolute limits)</li> <li>or 120-350V DC +/-20% (96-420V DC absolute limits)</li> <li>or 120-350V DC +/-20% (96-420V DC absolute limits)</li> Purpose of 120-350V DC +/-20% (96-420V DC absolute limits)  Observations of 120-420V DC absolute limits)  Power factor (P)  Intervations of 120-420V DC absolute limits)  Observations of 120-420V DC absolute limits, on 120-420V AC absolute limits, on 120-               | •                                       | 120% of nominal                                   |
| Frequency System CT primary values  Auxiliary Operating range  II 0-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden  * 10VA/5W  Accuracy Voltage (V) O.5% Current (A) Neutral current calculated (A) Frequency (Hz) Power factor (PF) 1% of unity Active power (Wr) Active power (Wr) Apparent power (VAr) Apparent power (VAr) Apparent power (VAr) Apparent power (VAr) H/- 1% of range Active energy (kWh) Class 1 (IEC 62053-21) Reactive energy (kWh) H/- 1% of range THD 1% up to 31st harmonic Response time  Output Pulse output relay Contact rating Soma max at 250V AC Type Solid state relay RS485 Modbus output module Type Solid state rel | Max. short duration input current       |   |
| Auxiliary  Operating range   110-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden   | Nominal input current burden            | < 0.6VA per phase                                 |
| Auxiliary  Operating range  110-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)  Accuracy  Voltage (V)  O.5%  Current (A)  Neutral current calculated (A)  Frequency (Hz)  Power factor (PF)  1% of unity  Active power (W)  +/- 1% of range  Reactive power (VA)  Apparent power (VA)  Apparent power (VA)  Active energy (kVAr)  THD  1% up to 31st harmonic  Response time  Output  Pulse output relay  Contact rating  50mA max at 250V AC  Type  Solid state relay  1 Modbus channel  Type  2-wire half duplex  Baud rate  Enclosure  Enclosure  Enclosure style  Dimensions  72x90mm (width x height) as per DIN 43880  Front protection rating  IP30  Material  Polycarbonate to UL94V0  Weight  300g  Terminals  Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature  -10°C to +55°C  Storage temperature  -10°C to +50°C  Relative humidity  0-90% non-condensing  Shock  Vibration  IDHz to 50Hz riminute between comms and measuring inputs, comm and aux, aux and   | Frequency                               | 45-66Hz   |
| Operating range    110-400V AC nominal +/-10% (99-440V AC absolute limits) or 120-350V DC +/-20% (96-420V DC absolute limits)   Accuracy   | System CT primary values                | 1 to 9999   |
| or 120-350V DC +/-20% (96-420V DC absolute limits)  Burden   | Auxiliary                               |   |
| Voltage (V) Current (A) O.5%  Neutral current calculated (A) Prequency (Hz) O.1 Hz Power factor (PF) Active power (W) Active power (W) Active power (VAr) Apparent power (VAr) Active energy (kWh) Class 1 (IEC 62053-21) Reactive energy (kVArh) ThD 1% up to 31st harmonic Response time Isec  Output Pulse output relay Contact rating SomA max at 250V AC Type Solid state relay RS485 Modbus output module Type Solid state relay Enclosure Enclosure Enclosure Enclosure style DIN-rail Dimensions Front protection rating Dimensions Front protection rating Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +75°C Relative humidity O-90% non-condensing Shock Wibration Unity Virbation Virbat | Operating range                         | ,   |
| Voltage (V)  Current (A)  Current (A)  Neutral current calculated (A)  Frequency (Hz)  Power factor (PF)  Active power (W)  Active power (VAr)  Active energy (kWh)  Reactive energy (kVArh)  Frequency (Hz)  Reactive energy (kVArh)  Active energy (kVArh)  Frequency (W)  Reactive energy (kVArh)  Frequency (W)  Reactive energy (kVArh)  Frequency (W)  Reactive energy (kVArh)  Frequency  Reactive energy (kVArh)  Frequency  Response time  Isec  Output  Pulse output relay  Contact rating  SomA max at 250V AC  Type  Solid state relay  RS485 Modbus output module  Type  Solid state relay  RS485 Modbus output module  Type  2-wire half duplex  Baud rate  2-wire half duplex  Baud rate  Enclosure  Enclosure  Enclosure  Enclosure  Enclosure  Enclosure style  DIN-rail  Dimensions  Front protection rating  IP52  Case protection rating  IP52  Case protection rating  IP30  Material  Polycarbonate to UL94VO  Weight  300g  Terminals  Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature  -10°C to +55°C  Storage temperature  -10°C to +55°C  Storage temperature  -20°C to +70°C  Relative humidity  O-90% non-condensing  Shock  30g in 3 planes  Vibration  Dielectric voltage  Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | Burden                                  | < 10VA/5W   |
| Current (A)  Neutral current calculated (A)  Frequency (Hz)  Power factor (PF)  1% of unity  Active power (WAr)  Apparent power (VA)  Reactive energy (kWh)  Reactive energy (kWh)  Response time  Output  Pulse output relay  Contact rating  Type  Solid state relay  RS485 Modbus output module  Type  Baud rate  2400, 4800, 9600, 19200, 38400  Enclosure  Enclosure  Enclosure style  DIN-rail  Dimensions  Tont protection rating  Material  Polycarbonate to UL94V0  Weight  300g  Terminals  Environment  Operating temperature  -10°C to +55°C  Storage temperature  -20°C to +70°C  Relative humidity  On Hz  Vibration  Dielectric voltage  Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | Accuracy                                |   |
| Neutral current calculated (A) Frequency (Hz) Power factor (PF) Active power (W) Active power (WAr) Apparent power (VAr) Apparent power (VAr) Apparent power (VAr) Active energy (kWh) Class 1 (IEC 62053-21) Reactive energy (kVArh) H-1% of range Active energy (kVArh) Reactive energy (kVArh) H-1% of range THD Nu p to 31st harmonic Response time Sec Output Pulse output relay Contact rating SomA max at 250V AC Type Solid state relay RS485 Modbus output module Type Solid state relay RS485 Modbus output module Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400 Enclosure Enclosure Enclosure style DIN-rail Dimensions T2x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity O-90% non-condensing Shock 30g in 3 planes Vibration Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | Voltage (V)                             |   |
| Frequency (Hz)  Power factor (PF)  Active power (W)  Active power (VAr)  Apparent power (VAr)  Active energy (kWh)  Reactive energy (kVh)  Reactive energy (kVArh)  THD  1% up to 31st harmonic  Response time  Isec  Output  Pulse output relay  Contact rating  Type  Solid state relay  RS485 Modbus output module  Type  Solid state relay  RS485 Modbus output module  Type  2-wire half duplex  Baud rate  Enclosure  Enclosure  Enclosure style  DIN-rail  Dimensions  T2x90mm (width x height) as per DIN 43880  Front protection rating  IP52  Case protection rating  Material  Polycarbonate to UL94V0  Weight  300g  Terminals  Environment  Operating temperature  -10°C to +55°C  Storage temperature  -20°C to +70°C  Relative humidity  O-90% non-condensing  Shock  30g in 3 planes  Vibration  Dielectric voltage  Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | . ,                                     | 1.1111  |
| Power factor (PF) 1% of unity  Active power (W) +/- 1% of range  Reactive power (VAr) +/- 1% of range  Apparent power (VA) +/- 1% of range  Active energy (kWh) Class 1 (IEC 62053-21)  Reactive energy (kVArh) +/- 1% of range  THD 1% up to 31st harmonic  Response time 1sec  Output  Pulse output relay 1 Contact rating 50mA max at 250V AC  Type Solid state relay  RS485 Modbus output module 1 Modbus channel  Type 2-wire half duplex  Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure  Enclosure style DIN-rail  Dimensions 72x90mm (width x height) as per DIN 43880  Front protection rating IP52  Case protection rating IP30  Material Polycarbonate to UL94V0  Weight 300g  Terminals Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature -10°C to +55°C  Storage temperature -20°C to +70°C  Relative humidity 0-90% non-condensing  Shock 30g in 3 planes  Vibration 10Hz to 50Hz  Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | • |   |
| Active power (W) +/- 1% of range Reactive power (VAr) +/- 1% of range Apparent power (VA) +/- 1% of range Active energy (kWh) Class 1 (IEC 62053-21) Reactive energy (kVArh) +/- 1% of range THD 1% up to 31st harmonic Response time lsec  Output Pulse output relay 1 Contact rating 50mA max at 250V AC Type Solid state relay RS485 Modbus output module 1 Modbus channel Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72×90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   |   |   |
| Reactive power (VAr) +/- 1% of range Apparent power (VA) +/- 1% of range Active energy (kWh) Class 1 (IEC 62053-21) Reactive energy (kVArh) +/- 1% of range THD 1% up to 31st harmonic Response time 1sec  Output Pulse output relay 1 Contact rating 50mA max at 250V AC Type Solid state relay RS485 Modbus output module 1 Modbus channel Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP50 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  |   | ·   |
| Apparent power (VA) +/- 1% of range Active energy (kWh) Class 1 (IEC 62053-21) Reactive energy (kVArh) +/- 1% of range THD 1% up to 31st harmonic Response time 1sec  Output Pulse output relay 1 Contact rating 50mA max at 250V AC Type Solid state relay RS485 Modbus output module 1 Modbus channel Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   |   |   |
| Active energy (kWh)  Reactive energy (kVArh)  THD  1% up to 31st harmonic  Response time  1sec  Output  Pulse output relay  Contact rating  SomA max at 250V AC  Type  Solid state relay  RS485 Modbus output module  Type  2-wire half duplex  Baud rate  2400, 4800, 9600, 19200, 38400  Enclosure  Enclosure style  DIN-rail  Dimensions  T2x90mm (width x height) as per DIN 43880  Front protection rating  IP52  Case protection rating  IP30  Material  Polycarbonate to UL94V0  Weight  300g  Terminals  Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature  -10°C to +70°C  Relative humidity  0-90% non-condensing  Shock  30g in 3 planes  Vibration  Dielectric voltage  Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   |   | S   |
| Reactive energy (kVArh) +/- 1% of range THD 1% up to 31st harmonic Response time 1sec  Output Pulse output relay 1 Contact rating 50mA max at 250V AC Type Solid state relay R5485 Modbus output module 1 Modbus channel Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  |   | -   |
| THD 1% up to 31st harmonic Response time 1sec  Output  Pulse output relay 1 Contact rating 50mA max at 250V AC Type Solid state relay RS485 Modbus output module 1 Modbus channel Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | O, ( ,                                  | ,   |
| Response time  Output  Pulse output relay Contact rating SomA max at 250V AC  Type Solid state relay RS485 Modbus output module Type Baud rate 2-wire half duplex Baud rate Enclosure Enclosure style DIN-rail Dimensions T2x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity O-90% non-condensing Shock Vibration Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | 9, ( ,                                  | <u> </u>  |
| Pulse output relay Pulse output relay Contact rating SomA max at 250V AC Type Solid state relay RS485 Modbus output module Type Baud rate 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880  Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity O-90% non-condensing Shock 30g in 3 planes Vibration Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | =                                       | ·   |
| Pulse output relay Contact rating SomA max at 250V AC Type Solid state relay RS485 Modbus output module Type Baud rate 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880  Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity O-90% non-condensing Shock Vibration Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   |   | ISEC  |
| Contact rating 50mA max at 250V AC Type Solid state relay RS485 Modbus output module 1 Modbus channel Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | •                                       | 1   |
| Type Solid state relay  RS485 Modbus output module Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | 1 /                                     |   |
| RS485 Modbus output module Type 2-wire half duplex Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | <u> </u>                                |   |
| Type Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880  Front protection rating IP52 Case protection rating Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature Storage temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  |   | ,   |
| Baud rate 2400, 4800, 9600, 19200, 38400  Enclosure  Enclosure style DIN-rail  Dimensions 72x90mm (width x height) as per DIN 43880  Front protection rating IP52  Case protection rating IP30  Material Polycarbonate to UL94V0  Weight 300g  Terminals Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature -10°C to +55°C  Storage temperature -20°C to +70°C  Relative humidity 0-90% non-condensing  Shock 30g in 3 planes  Vibration 10Hz to 50Hz  Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | •                                       |   |
| Enclosure Enclosure style DIN-rail Dimensions 72x90mm (width x height) as per DIN 43880 Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | 71                                      | •   |
| Enclosure style  Dimensions  72x90mm (width x height) as per DIN 43880  Front protection rating  IP52  Case protection rating  Material  Polycarbonate to UL94V0  Weight  300g  Terminals  Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature  -10°C to +55°C  Storage temperature  -20°C to +70°C  Relative humidity  0-90% non-condensing  Shock  30g in 3 planes  Vibration  Dielectric voltage  Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | Enclosure                               |   |
| Front protection rating IP52 Case protection rating IP30 Material Polycarbonate to UL94V0 Weight 300g Terminals Shrouded screw-clamp 0.05-4mm wire  Environment Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | Enclosure style                         | DIN-rail  |
| Case protection rating IP30  Material Polycarbonate to UL94V0  Weight 300g  Terminals Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature -10°C to +55°C  Storage temperature -20°C to +70°C  Relative humidity 0-90% non-condensing  Shock 30g in 3 planes  Vibration 10Hz to 50Hz  Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | ·                                       | 72x90mm (width x height) as per DIN 43880         |
| Material Polycarbonate to UL94V0  Weight 300g  Terminals Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature -10°C to +55°C  Storage temperature -20°C to +70°C  Relative humidity 0-90% non-condensing  Shock 30g in 3 planes  Vibration 10Hz to 50Hz  Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  | Front protection rating                 | IP52  |
| Weight 300g  Terminals Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature -10°C to +55°C  Storage temperature -20°C to +70°C  Relative humidity 0-90% non-condensing  Shock 30g in 3 planes  Vibration 10Hz to 50Hz  Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  |   | IP30  |
| Terminals Shrouded screw-clamp 0.05-4mm wire  Environment  Operating temperature -10°C to +55°C  Storage temperature -20°C to +70°C  Relative humidity 0-90% non-condensing  Shock 30g in 3 planes  Vibration 10Hz to 50Hz  Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | Material                                | Polycarbonate to UL94V0                           |
| Environment  Operating temperature -10°C to +55°C  Storage temperature -20°C to +70°C  Relative humidity 0-90% non-condensing  Shock 30g in 3 planes  Vibration 10Hz to 50Hz  Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | Weight                                  | 300g  |
| Operating temperature -10°C to +55°C Storage temperature -20°C to +70°C Relative humidity 0-90% non-condensing Shock 30g in 3 planes Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   | Terminals                               | Shrouded screw-clamp 0.05-4mm wire                |
| Storage temperature  -20°C to +70°C  Relative humidity  0-90% non-condensing  Shock  30g in 3 planes  Vibration  10Hz to 50Hz  Dielectric voltage  Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   |   |   |
| Relative humidity  O-90% non-condensing  Shock  30g in 3 planes  Vibration  10Hz to 50Hz  Dielectric voltage  Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  |   |   |
| Shock 30g in 3 planes  Vibration 10Hz to 50Hz  Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  |   |   |
| Vibration 10Hz to 50Hz Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and  |   | <u> </u>  |
| Dielectric voltage Withstand test 3.25kV rms 50Hz for 1 minute between comms and measuring inputs, comm and aux, aux and   |   |   |
| comms and measuring inputs, comm and aux, aux and  |   |   |
|  | Dielectric voltage                      | comms and measuring inputs, comm and aux, aux and |



## Earth Leakage Relay

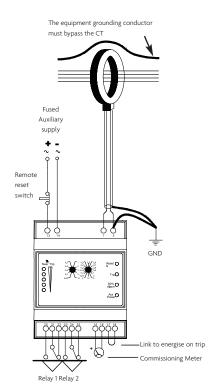
- Precision digital protection relay
- Adjustable sensitivity of 30mA to 10A
- Adjustable time delay from 0 to 10 seconds
- Double-pole relay contacts 8A, 250V
- Supply voltage 100-250V AC/DC (50/100Hz)

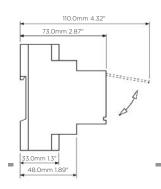
| Frequency (Hz) | Auxiliary supply (v) | Product Code |
|----------------|----------------------|--------------|
| 50             | 100-250 AC/DC        | ELR1         |

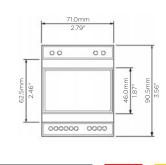
### **Specifications**

| Measuring input       | Core Balanced CT  |
|-----------------------|---|
| Overload              | 20 x nominal for 1 second   |
| Frequency             | 50Hz or 60Hz +/-10%   |
| Auxiliary voltage     | 100-250V ac and dc  |
| Auxiliary burden      | Less than 1.5 Watts   |
| Trip current settings | Selectable 30mA, 100mA, 200mA, 300mA, 500mA, 1A, 2A, 3A, 5A, 10A  |
| Trip accuracy         | 50% <trip 1543<="" <100%="" accordance="" current="" iec="" in="" point="" td="" with=""></trip>  |
| Trip response time    | <40ms (at 5 x rated trip current, ignoring the selected time delay)   |
| Time delay set points | Selectable Oms, 50ms, 100ms, 150ms, 200ms, 300ms, 400ms, 500ms, 600ms, 700ms, 800ms, 900ms, 1 second, seconds, 5 seconds, 10 seconds. When 30mA leakage is selected, the time delay is disabled |
| Indication            | 5 yellow LED bar graph for leakage levels<br>Red LED indicated trip function<br>Green LED indicated auxiliary power presence<br>Red LED pre-alarm indication (SPCO version only)                |
| Relay contacts        | Standard: 2-pole change over<br>Option: 2 1-pole change over (pre-alarm and main alarm)   |
| Relay contact rating  | 8 amps at 250V ac<br>8 amps at 30V dc resistive   |
| Relay mechanical life | >100,000 operations   |
| Analogue output       | 0 to 1mA = 0 to 100% of selected tripping level.<br>Compliance 1V, accuracy 10%   |
| Enclosure style       | DIN 43880, rail width 70mm  |
| Compliant with        | EMC and LVD, UL 3111-1 File No: E203000, CSA 22.2/1010.1-92 BSEN 50081-1, BSEN 50082-2, IEC 60255-22-1 (BS5992), IEC 60255-11, BSEN 61543 (IEC 1543), BSEN 61010 (IEC 1010), EN 60068 (IEC 68)  |
| Material              | Flame retardant UL94V0  |
| Terminals             | 1 to 4mm2 solid or stranded conductors.<br>IP20 protection  |
| Operating temperature | -10°C to +60°C  |
| Storage temperature   | −20°C to +70°C  |
| Relative humidity     | <95% non condensing   |
| Weight                | <250g   |
| Dimensions            | 71mm wide x 90.5mm high x 73mm deep 2.79" wide x 3.56" high x 2.87" deep  |

### **Connections**









### **Core Balance Current Transformers**

### **Core Balanced Current Transformers**

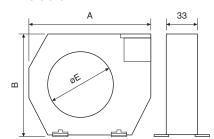
- For use with ELR1 earth leakage protection relay
- Leakage measurement range 0 to 10A
- Integral wire-sealable terminal cover
- Flame retardant, high impact moulded case



| Current rating (A) | Dim E<br>Aperture<br>(mm) | Dim A<br>Width<br>(mm) | Dim B<br>Height<br>(mm) | Dim C<br>Depth<br>(mm) | Product<br>Code |
|--------------------|---------------------------|------------------------|-------------------------|------------------------|-----------------|
| 250                | 35                        | 100                    | 79                      | 26                     | CBT-94F-035     |
| 630                | 70                        | 130                    | 110                     | 32                     | CBT-94F-070     |
| 1000               | 105                       | 170                    | 146                     | 38                     | CBT-94F-105     |
| 1000               | 140                       | 220                    | 196                     | 49                     | CBT-94F-140     |

### **Specifications**

| Input                 |   |  |  |
|-----------------------|---|--|--|
| System voltage        | 720V maximum                                  |  |  |
| Test voltage          | 3kV ac for 1 minute                           |  |  |
| System frequency      | 50Hz or 60Hz                                  |  |  |
| Primary ratings       | From 30mA to 10A                              |  |  |
| Secondary terminals   | Protected to IP20                             |  |  |
| Operating temperature | -10°C to +50°C                                |  |  |
| Enclosure             | UL94V0 flame retardant plastic                |  |  |
| Compliant with        | IEC185, VDE 0414                              |  |  |
| Mounting hardware     | Steel mounting feet for wall or base mounting |  |  |











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