

## LOADLINE YA3 MCCB

### Main Features

- Exceeds the requirements of EN 60947-2
- Single pole MCCBs have fixed thermal & 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 65kA 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)

### CATALOGUE NUMBERS

#### CURRENT RATING

MAX (A)      MIN (A)      Cat No (1 pole)      Cat No (3 pole)      Cat No (4 pole)

| YA3 Frame MCCB Thermal / Magnetic - Icu 25kA |    |            |       |       |
|--|----|------------|-------|-------|
| 16   | -- | YA3N1P16T  | ----- | ----- |
| 20   | -- | YA3N1P20T  | ----- | ----- |
| 32   | -- | YA3N1P32T  | ----- | ----- |
| 40   | -- | YA3N1P40T  | ----- | ----- |
| 50   | -- | YA3N1P50T  | ----- | ----- |
| 63   | -- | YA3N1P63T  | ----- | ----- |
| 80   | -- | YA3N1P80T  | ----- | ----- |
| 100  | -- | YA3N1P100T | ----- | ----- |
| 125  | -- | YA3N1P125T | ----- | ----- |
| 160  | -- | YA3N1P160T | ----- | ----- |

#### YA3 Frame MCCB Thermal / Magnetic - Icu 30kA

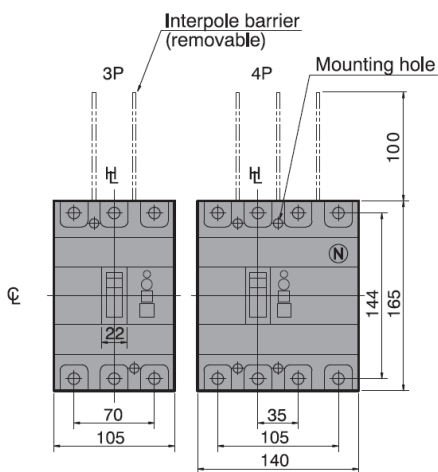
|    |    |       |           |       |
|----|----|-------|-----------|-------|
| 20 | 13 | ----- | YA3S3P20T | ----- |
| 32 | 20 | ----- | YA3S3P32T | ----- |

#### YA3 Frame MCCB Thermal / Magnetic - Icu 65kA

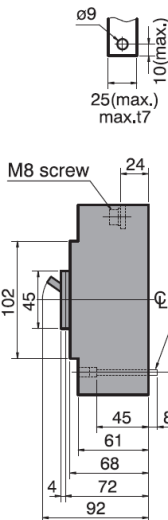
|     |     |       |            |            |
|-----|-----|-------|------------|------------|
| 50  | 32  | ----- | YA3J3P50T  | YA3J4P50T  |
| 63  | 40  | ----- | YA3J3P63T  | YA3J4P63T  |
| 100 | 63  | ----- | YA3J3P100T | YA3J4P100T |
| 125 | 80  | ----- | YA3J3P125T | YA3J4P125T |
| 160 | 100 | ----- | YA3J3P160T | YA3J4P160T |
| 200 | 125 | ----- | YA3J3P200T | YA3J4P200T |
| 250 | 160 | ----- | YA3J3P250T | YA3J4P250T |



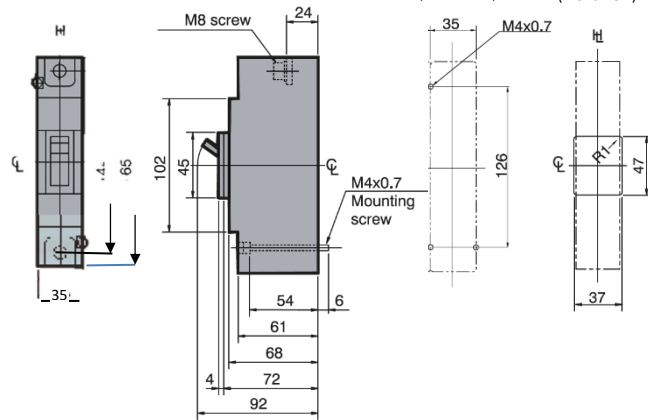
#### Front connected



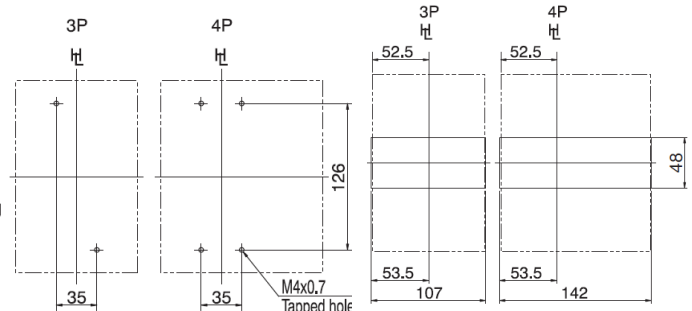
#### Preparation of conductor



#### 1 Pole



#### Panel cutout (Front view)



Panel cutout dimensions shown give an allowance of 1.0mm or more around the handle escutcheon.

## LOADLINE YA3 MCCB

### YA3 MCCB ACCESSORIES

| DESCRIPTION   | Cat No<br>(1 pole) | Cat No<br>(3 pole) | Cat No<br>(4 pole) |
|---|--------------------|--------------------|--------------------|
| <b>Cable Clamps</b>   |                    |                    |                    |
| YA3 Cable clamps set (120mm <sup>2</sup> cable)                         | -----              | YA3CC3P            | YA3CC4P            |
| <b>Extension Terminals</b>  |                    |                    |                    |
| YA3 Flat extension terminals (Straight type)                            | -----              | YA3XT3P            | YA3XT4P            |
| <b>Rear Terminals</b>   |                    |                    |                    |
| YA3 Rear terminals  | -----              | YA3RT3P            | YA3RT4P            |
| <b>Motors and Interlocks</b>  |                    |                    |                    |
| 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                             | -----              | YA3MS3P            | YA3MS4P            |
| YA3 Mechanical interlock, wire type mech (1 per MCCB)                   | -----              | YA3MW              | -----              |
| YA3 Wire interlock cable 1 metre long                                   | -----              | YAMWC1             | YAMWC1             |
| YA3 Wire interlock cable 1.5 metre long                                 | -----              | YAMWC2             | YAMWC2             |
| <b>Rotary Handles</b>   |                    |                    |                    |
| YA3 Panel mounted IP54 rotary handle for 453mm panel depth              | -----              | YA3RH453           | YA3RH453           |
| Castell cam for panel mounted rotary handle                             | -----              | YABCLCAM           | YABCLCAM           |
| <b>Terminal Protection</b>  |                    |                    |                    |
| YA3 Terminal shroud for cable lugs                                      | YA3TS1P            | YA3TS3P            | YA3TS4P            |
| YA3 Terminal shroud for cable clamps                                    | YA3TS1PS           | YA3TS3PS           | YA3TS4PS           |
| YA3 Interphase barrier (Set of 1)                                       | YA3TB              | YA3TB              | YA3TB              |
| YA3 Handle lock   | -----              | YADL1              | YADL1              |
| <b>Auxiliary and Alarm Switches</b>                                     |                    |                    |                    |
| YA Auxiliary changeover switch (AC 240V/3A and DC 125V/0.4A)            | -----              | YAAUX1             | YAAUX1             |
| YA Alarm trip indicator changeover switch (AC 240V/3A and DC 125V/0.4A) | -----              | YAAL               | YAAL               |
| <b>Shunt Trips</b>  |                    |                    |                    |
| YA Shunt trip 100-120V AC   | -----              | YAST115AC          | YAST115AC          |
| YA Shunt trip 200-240V AC   | -----              | YAST240AC          | YAST240AC          |
| YA Shunt trip 380-450V AC   | -----              | YAST450AC          | YAST450AC          |
| YA Shunt trip 24V DC  | -----              | YAST24DC           | YAST24DC           |
| <b>Under-voltage Release</b>  |                    |                    |                    |
| YA Under-voltage release 100-120V AC                                    | -----              | YAUVR120AC         | YAUVR120AC         |
| YA Under-voltage release 200-240V AC                                    | -----              | YAUVR240AC         | YAUVR240AC         |
| YA Under-voltage release 380-450V AC                                    | -----              | YAUVR450AC         | YAUVR450AC         |
| YA Under-voltage release 24V DC   | -----              | YAUVR24DC          | YAUVR24DC          |
| <b>Plug-in Units</b>  |                    |                    |                    |
| 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           |
| <b>Accessories</b>  |                    |                    |                    |
| YA3 Neutral link  | YB3NL              | YB3NL              | -----              |



## LOADLINE YA3 MCCB

**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.

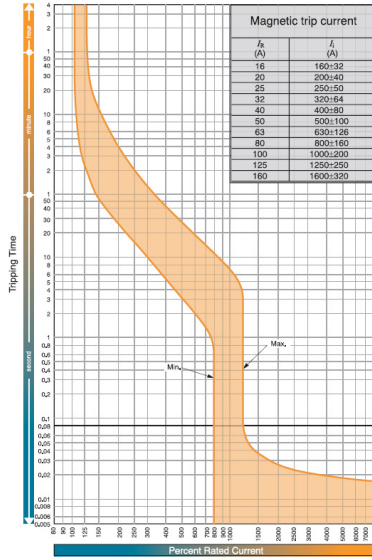
| Dorman Smith Frame Size                                  |                     | YA3                                       |                   |                                 |
|--|---------------------|---|-------------------|---------------------------------|
| MCCB Type or Sw. Disconnecter                            |                     | FIXED                                     | ADJUSTABLE MCCB's |                                 |
| Terminal Type  |                     | Front                                     | Front             | Front                           |
| Product Code   |                     | YA3N1P--T                                 | YA3S3P--T         | YA3J----T                       |
| No of Poles  |                     | 1   | 3                 | 3, 4                            |
| Nominal Current Ratings (In) (A) (50°C)                  |                     | 16, 20, 32, 40, 50, 63, 80, 100, 125, 160 | 20, 32            | 50, 63, 100, 125, 160, 200, 250 |
| <b>Electrical Characteristics</b>                        |                     |   |                   |                                 |
| Rated Operational Voltage (Ue) (V)                       | AC 50/60Hz          | 415                                       | 690               | 690                             |
|  | DC                  | 125                                       | 250               | 250                             |
| Rated Insulation Voltage (Ui) (V)                        |                     | 800                                       | 800               | 800                             |
| Rates Impulse Withstand Voltage (Uimp) (kV)              |                     | 8   | 8                 | 8                               |
| Ultimate breaking capacity (Icu) (kA) (IEC, JIS, AS/NZS) | 690V AC             | -   | 5                 | 7.5                             |
|  | 525V AC             | -   | 18                | 25                              |
|  | 440V AC             | -   | 18                | 50                              |
|  | 380/400/415V AC     | -   | 30                | 65                              |
|  | 240V AC             | 25  | 42                | 85                              |
|  | 250V DC             | -   | 30                | 40                              |
| Service breaking capacity (Ics) (kA)                     | 690V AC             | -   | 5                 | 7.5                             |
|  | 525V AC             | -   | 18                | 25                              |
|  | 440V AC             | -   | 18                | 25                              |
|  | 380/400/415V AC     | -   | 25                | 36                              |
|  | 240V AC             | 19  | 35                | 85                              |
|  | 250V DC             | -   | 25                | 40                              |
| Rated breaking Capacity (NEMA) (kA)                      |                     | 480V AC                                   | 18                | 25                              |
|  |                     | 240V AC                                   | 25                | 42                              |
| Rated Frequency  |                     | Hz  | 50/60             | 50/60                           |
| <b>Protection</b>  |                     |   |                   |                                 |
| Adjustable Thermal                                       |                     | No  | Yes               | Yes                             |
| Adjustable Magnetic                                      |                     | No  | Yes               | Yes                             |
| Microprocessor   |                     | No  | -                 | -                               |
| Utilisation Category                                     |                     | A   | A                 | A                               |
| IP Rating  |                     | Terminals                                 | IP20              | IP20                            |
| Utilisation Category                                     |                     | Toggle                                    | IP30              | IP30                            |
| <b>Installation</b>                                      |                     |   |                   |                                 |
| Front Connection   |                     | Standard                                  | Standard          | Standard                        |
| Straight Extension Terminals                             |                     | Optional                                  | Optional          | Optional                        |
| Spread Extension Terminals                               |                     | Not available                             | Not available     | Not available                   |
| Cable Clamps   |                     | Optional                                  | Optional          | Optional                        |
| Rear Terminals   |                     | Not available                             | Optional          | Optional                        |
| DIN-rail Mounting  |                     | Not available                             | Not available     | Not available                   |
| Plug-in  |                     | Not available                             | Not available     | Not available                   |
| Draw-out   |                     | Not available                             | Not available     | Not available                   |
| <b>Dimensions</b>  |                     |   |                   |                                 |
| Height (mm)  |                     | 165                                       | 165               | 165                             |
| 1 Pole Width (mm)  |                     | 35  | -                 | -                               |
| 3 Pole Width (mm)  |                     | -   | 105               | 105                             |
| 4 Pole Width (mm)  |                     | -   | 140               | 140                             |
| Depth (mm)   |                     | 68  | 68                | 68                              |
| 1 Pole Weight (kg)                                       |                     | 0.5                                       | -                 | -                               |
| 3 Pole Weight (kg)                                       |                     | -   | 1.5               | 1.5                             |
| 4 Pole Weight (kg)                                       |                     | -   | 1.9               | 1.9                             |
| <b>Operation</b>   |                     |   |                   |                                 |
| Direct Opening Action                                    |                     | Yes                                       | Yes               | Yes                             |
| Trip Button  |                     | Yes                                       | Yes               | Yes                             |
| Suitable for Isolation                                   |                     | Yes                                       | Yes               | Yes                             |
| Panel mounted rotary handle                              |                     | Not available                             | Optional          | Optional                        |
| Direct mounted rotary handle                             |                     | Not available                             | Optional          | Optional                        |
| Slide Interlock  |                     | Not available                             | Optional          | Optional                        |
| Link Interlock   |                     | Not available                             | Optional          | Optional                        |
| Wire Interlock   |                     | Not available                             | Optional          | Optional                        |
| Motor Actuator   |                     | Not available                             | Optional          | Optional                        |
| Endurance at 415V AC                                     | Electrical (cycles) | 20,000                                    | 10,000            | 10,000                          |
|  | Mechanical (cycles) | 30,000                                    | 30,000            | 30,000                          |
| <b>Environment</b>                                       |                     |   |                   |                                 |
| Operating Ambient Temperature                            |                     | °C  | -5 to +50         | -5 to +50                       |
| Relative Humidity  |                     | %   | 85                | 85                              |
| Altitude above Sea Level                                 |                     | Metres                                    | Up to 2000        | Up to 2000                      |
| Pollution Degree   |                     |   | 3                 | 3                               |
| <b>Approval Marks</b>                                    |                     |   |                   |                                 |
| CE, UKCA   |                     | Yes                                       | Yes               | Yes                             |
| Direct Opening Action                                    |                     | Yes                                       | Yes               | Yes                             |

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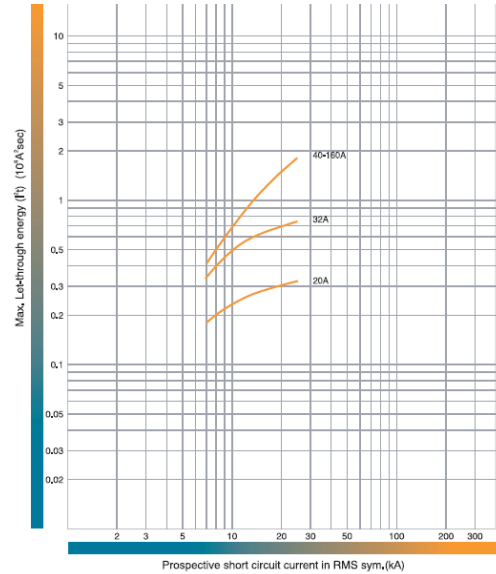
### Zs VALUES

| MCCB REFERENCE  | Instantaneous (Ii) Protection Setting | Maximum Zs values @ 230Vac |         |       |
|---|---------------------------------------|----------------------------|---------|-------|
|   |                                       | In                         | 0.4 sec | 5 sec |
| YA3 1P Thermal/Mag<br>YA3N – 25kA                     | FIXED                                 | 16                         | 1.138   | 1.181 |
|   |                                       | 20                         | 0.910   | 0.954 |
|   |                                       | 32                         | 0.569   | 0.600 |
|   |                                       | 40                         | 0.455   | 0.481 |
|   |                                       | 50                         | 0.364   | 0.383 |
|   |                                       | 63                         | 0.289   | 0.303 |
|   |                                       | 80                         | 0.228   | 0.238 |
|   |                                       | 100                        | 0.192   | 0.190 |
|   |                                       | 125                        | 0.147   | 0.153 |
| YA3 3P & 4P Thermal/Mag<br>YA3S – 30kA<br>YA3J – 65kA | MIN                                   | 20                         | 1.517   | 1.157 |
|   | MAX                                   |                            | 0.759   | 0.840 |
|   | MIN                                   | 32                         | 0.948   | 0.948 |
|   | MAX                                   |                            | 0.474   | 0.525 |
|   | MIN                                   | 50                         | 0.607   | 0.607 |
|   | MAX                                   |                            | 0.303   | 0.336 |
|   | MIN                                   | 63                         | 0.482   | 0.482 |
|   | MAX                                   |                            | 0.241   | 0.267 |
|   | MIN                                   | 100                        | 0.303   | 0.303 |
|   | MAX                                   |                            | 0.152   | 0.168 |
|   | MIN                                   | 125                        | 0.243   | 0.243 |
|   | MAX                                   |                            | 0.121   | 0.165 |
|   | MIN                                   | 160                        | 0.190   | 0.190 |
|   | MAX                                   |                            | 0.088   | 0.109 |
|   | MIN                                   | 200                        | 0.152   | 0.152 |
|   | MAX                                   |                            | 0.070   | 0.087 |
|   | MIN                                   | 250                        | 0.121   | 0.121 |
|   | MAX                                   |                            | 0.073   | 0.073 |

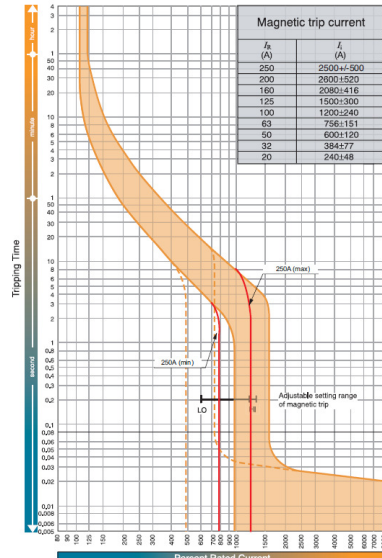
1 pole time/current characteristic For fixed thermal/adjustable magnetic



1 Pole Energy Let Through



3 & 4 pole time/current characteristic For adjustable thermal/adjustable magnetic



3 & 4 Pole Energy Let Through

