

LOADLINE YA6 MCCB

Main Features

- Exceeds the requirements of EN 60947-2
- Thermal/Magnetic MCCB's have adjustable long time and instantaneous trip functions
- Long time overload adjusts to 1 x In, 0.8 x In and 0.63 x In for thermal/magnetic devices
- Electronic MCCBs have adjustable long time, short time and instantaneous trip functions
- Long time 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
- Ultimate breaking capacity available as 50kA and 70kA at 415VAC
- Maximum cable termination is 300mm² with reduced palm width cable lugs
- Rated operational voltage is 690V AC (Ue)
- Rated insulation voltage is 800V AC (Ui)
- Extension terminals should be ordered separately when not used with Dorman Smith enclosures

CATALOGUE NUMBERS

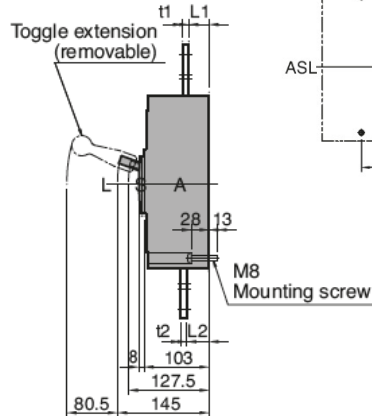
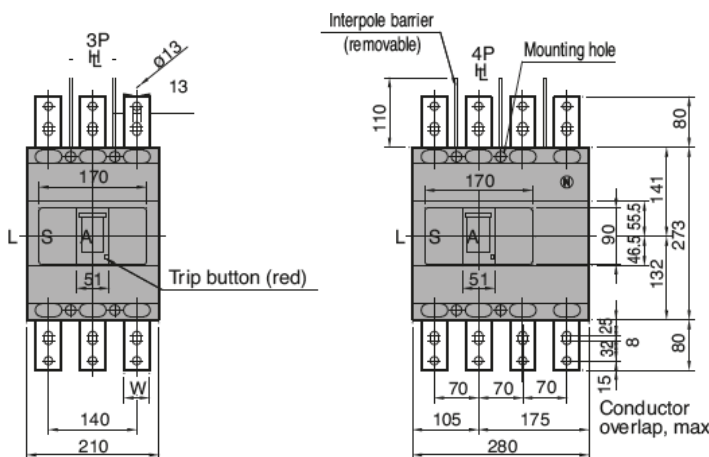
| CURRENT RATING | | Cat No (3 pole) | Cat No (4 pole) |
|--------------------------|---------|-----------------|-----------------|
| MAX (A) | MIN (A) | | |
| Switch Disconnect | | | |
| 400 | FIXED | YA6B3P400D | YA6B4P400D |
| 800 | FIXED | YA6B3P800D | YA6B4P800D |

| YA6 Frame MCCB Thermal / Magnetic - Icu 50kA | | | |
|---|-------|------------|------------|
| 400 | FIXED | YA6H3P400T | YA6H4P400T |
| 630 | 400 | YA6H3P630T | YA6H4P630T |
| 800 | 500 | YA6H3P800T | YA6H4P800T |

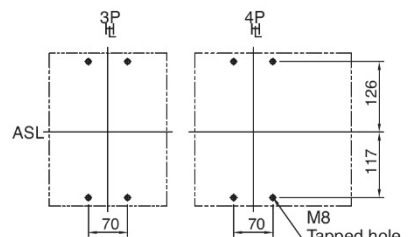
| YA6 Frame MCCB Thermal / Magnetic - Icu 70kA | | | |
|---|-----|------------|------------|
| 630 | 400 | YA6K3P630T | YA6K4P630T |
| 800 | 500 | YA6K3P800T | YA6K4P800T |

| YA6 Frame MCCB Electronic - Icu 50kA | | | |
|---|-----|------------|------------|
| 630 | 252 | YA6H3P630E | YA6H4P630E |
| 800 | 320 | YA6H3P800E | YA6H4P800E |

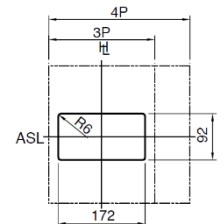
| YA6 Frame MCCB Electronic - Icu 70kA | | | |
|---|-----|------------|------------|
| 630 | 252 | YA6K3P630E | YA6K4P630E |
| 800 | 320 | YA6K3P800E | YA6K4P800E |



Drilling plan (front view)



Panel cutout (front view)



| Breaker Type | Rated Current | t1 | t2 | L1 | L2 | W |
|--------------------|---------------|----|----|----|----|----|
| Thermal / Magnetic | 630A | 8 | 8 | 32 | 34 | 40 |
| | 800A | 10 | 10 | 32 | 35 | 40 |
| Electronic | 630A | 8 | 8 | 32 | 36 | 40 |
| | 800A | 10 | 10 | 32 | 36 | 40 |

LOADLINE YA6 MCCB

YA6 MCCB ACCESSORIES

| DESCRIPTION | Cat No (3 pole) | Cat No (4 pole) |
|--|-----------------|-----------------|
| Extension Terminals | | |
| YA6 400/630A Flat extension terminals (Straight type) (1 set required for each end of MCCB) | YA6XT3P630 | YA6XT4P630 |
| YA6 800A Flat extension terminals (Straight type) (1 set required for each end of MCCB) | YA6XT3P800 | YA6XT4P800 |
| Rear Terminals | | |
| YA6 Rear terminals | YA6RT3P | YA6RT4P |
| Motors and Interlocks | | |
| YA6 Motor actuator 100-240V AC | YA6MA240 | YA6MA240 |
| YA6 Motor actuator 200-240V AC (with auto reset) | YA6MA240R | YA6MA240R |
| YA6 Mechanical interlock, link type for RHS MCCB | YA6MLR | YA6MLR |
| YA6 Mechanical interlock, link type for LHS MCCB | YA6ML3PL | YA6ML4PL |
| YA6 Mechanical interlock, manual slide type | YA6MS3P | YA6MS4P |
| YA6 Mechanical interlock, wire type mech (1 per MCCB)** | YA6MW | YA6MW |
| YA6 Wire interlock cable 1 metre long | YAMWC1 | YAMWC1 |
| YA6 Wire interlock cable 1.5 metre long | YAMWC2 | YAMWC2 |
| Rotary Handles | | |
| YA6 Panel mounted IP54 rotary handle for 456mm panel depth | YA6RH456 | YA6RH456 |
| Castell cam for panel mounted rotary handle | YABCLCAM | YABCLCAM |
| Terminal Protection | | |
| YA6 Terminal shroud for cable lugs | YA6TS3P | YA6TS4P |
| YA6 Interphase barrier (1 off) | YA5TB | YA5TB |
| YA6 Handle lock | YA5DL | YA5DL |
| Auxiliary and Alarm Switches | | |
| 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 |
| Shunt Trips | | |
| 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 |
| YA Shunt trip 48V DC | YAST48DC | YAST48DC |
| YA Shunt trip 100-120V DC | YAST120DC | YAST120DC |
| YA Shunt trip 200-240V DC | YAST240DC | YAST240DC |
| Under-voltage Release | | |
| YA6 Under-voltage release 100-110V AC | YA6UVR110AC | YA6UVR110AC |
| YA6 Under-voltage release 230-240V AC | YA6UVR240AC | YA6UVR240AC |
| YA6 Under-voltage release 380-415V AC | YA6UVR415AC | YA6UVR415AC |
| YA6 Under-voltage release 24V DC | YA6UVR24DC | YA6UVR24DC |
| Accessories | | |
| YA6 Neutral link | YA6NL | ----- |
| YA6 Handle extension | YA6HE | YA6HE |



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.

** YA6MW wire type interlock must be used with a YA6MA240 motor actuator

LOADLINE YA6 MCCB

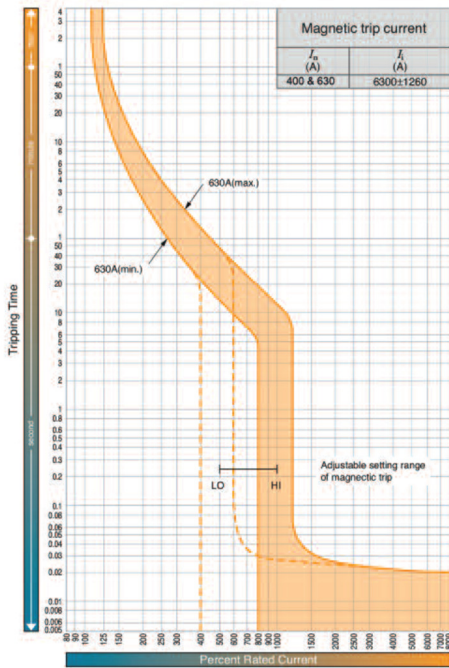
| Dorman Smith Frame Size | | YA6 | | | | |
|--|---------------------|-------------------|---------------|----------------------------|----------------------------|----------------------------|
| MCCB Type or Sw. Disconnecter | | ADJUSTABLE MCCB's | | | | SWITCH DISCONNECTOR |
| | | Thermal/mag | | Electronic | | |
| Terminal Type | | Front | Front | Front | Front | Front |
| Product Code | | YA6H----T | YA6K----T | YA6H----E | YA6K----E | YA6B----D |
| No of Poles | | 3, 4 | 3, 4 | 3, 4 | 3, 4 | 3, 4 |
| Nominal Current Ratings (In) (A) (50°C) | | 400, 630, 800 | 630, 800 | 630, 800 | 630, 800 | 400, 800 |
| Electrical Characteristics | | | | | | |
| Rated Operational Voltage (Ue) (V) | AC 50/60Hz | 690 | 690 | 690 | 690 | 690 |
| | DC | 250 | 250 | - | - | 250 |
| Rated Insulation Voltage (Ui) (V) | | 800 | 800 | 800 | 800 | 800 |
| Rates Impulse Withstand Voltage (Uimp) (kV) | | 8 | 8 | 8 | 8 | 8 |
| Ultimate breaking capacity (Icu) (kA) (IEC, JIS, AS/NZS) | 690V AC | 20 | 25 | 20 | 25 | - |
| | 525V AC | 30 | 45 | 30 | 35 | - |
| | 440V AC | 50 | 65 | 50 | 65 | - |
| | 400/415V AC | 50 | 70 | 50 | 70 | - |
| | 220/240V AC | 85 | 100 | 85 | 100 | - |
| | 250V DC | 50 | 50 | - | - | - |
| Service breaking capacity (Ics) (kA) | 690V AC | 20 | 20 | 20 | 20 | - |
| | 525V AC | 30 | 34 | 30 | 30 | - |
| | 440V AC | 50 | 50 | 50 | 50 | - |
| | 400/415V AC | 50 | 50 | 50 | 50 | - |
| | 220/240V AC | 85 | 75 | 85 | 75 | - |
| | 250V DC | 50 | 50 | - | - | - |
| Rated breaking Capacity (NEMA) (kA) | 480V AC | 30 | 45 | 30 | 35 | - |
| | 240V AC | 85 | 100 | 85 | 100 | - |
| Rated short-circuit making capacity (Icm) (kA) | Peak | - | - | - | - | 17 |
| Rated short-time withstand current (Icw) (kA) | rms | - | - | 10 | 10 | 10 |
| Rated Frequency | Hz | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 |
| Protection | | | | | | |
| Adjustable Thermal | | Yes | Yes | - | - | - |
| Adjustable Magnetic | | Yes | Yes | - | - | - |
| Microprocessor | | - | - | Yes | Yes | - |
| Utilisation Category | | A | A | B | B | AC-23A |
| IP Rating | Terminals | IP20 | IP20 | IP20 | IP20 | IP20 |
| | Toggle | IP30 | IP30 | IP30 | IP30 | IP30 |
| Installation | | | | | | |
| Front Connection | | Standard | Standard | Standard | Standard | Standard |
| Straight Extension Terminals | | Optional | Optional | Optional | Optional | Optional |
| Spread Extension Terminals | | - | - | - | - | - |
| Cable Clamps | | - | - | - | - | - |
| Rear Terminals | | Optional | Optional | Optional | Optional | Optional |
| DIN-rail Mounting | | Not available | Not available | Not available | Not available | Not available |
| Plug-in | | - | - | - | - | - |
| Draw-out | | Not available | Not available | Not available | Not available | Not available |
| Dimensions | | | | | | |
| Height (mm) | | 273 | 273 | 273 | 273 | 273 |
| 1 Pole Width (mm) | | - | - | - | - | - |
| 3 Pole Width (mm) | | 210 | 210 | 210 | 210 | 210 |
| 4 Pole Width (mm) | | 280 | 280 | 280 | 280 | 280 |
| Depth (mm) | | 103 | 103 | 103 | 103 | 103 |
| 1 Pole Weight (kg) | | - | - | - | - | - |
| 3 Pole Weight (kg) | | 8.5 | 8.5 | 8.7 (630A) 9.1 (800A) | 8.7 (630A) 9.1 (800A) | 8.0 (400A) 8.5 (800A) |
| 4 Pole Weight (kg) | | 11.5 | 11.5 | 11.9 (630A) 12.3 (800A) | 11.9 (630A) 12.3 (800A) | 11.0 (400A) 11.5 (800A) |
| Operation | | | | | | |
| Direct Opening Action | | Yes | Yes | Yes | Yes | Yes |
| Trip Button | | Yes | Yes | Yes | Yes | Yes |
| Suitable for Isolation | | Yes | Yes | Yes | Yes | Yes |
| Panel mounted rotary handle | | Optional | Optional | Optional | Optional | Optional |
| Direct mounted rotary handle | | - | - | - | - | - |
| Slide Interlock | | Optional | Optional | Optional | Optional | - |
| Link Interlock | | Optional | Optional | Optional | Optional | - |
| Wire Interlock | | Optional | Optional | Optional | Optional | - |
| Motor Actuator | | Optional | Optional | Optional | Optional | Optional |
| Endurance at 690V AC | Electrical (cycles) | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 |
| | Mechanical (cycles) | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 |
| Environment | | | | | | |
| Operating Ambient Temperature | °C | -5 to +50 | -5 to +50 | -5 to +50 | -5 to +50 | -5 to +50 |
| Relative Humidity | % | 85 | 85 | 85 | 85 | 85 |
| Altitude above Sea Level | Metres | Up to 2000 | Up to 2000 | Up to 2000 | Up to 2000 | Up to 2000 |
| Pollution Degree | | 3 | 3 | 3 | 3 | 3 |
| Approval Marks | | | | | | |
| CE, UKCA | | Yes | Yes | Yes | Yes | Yes |

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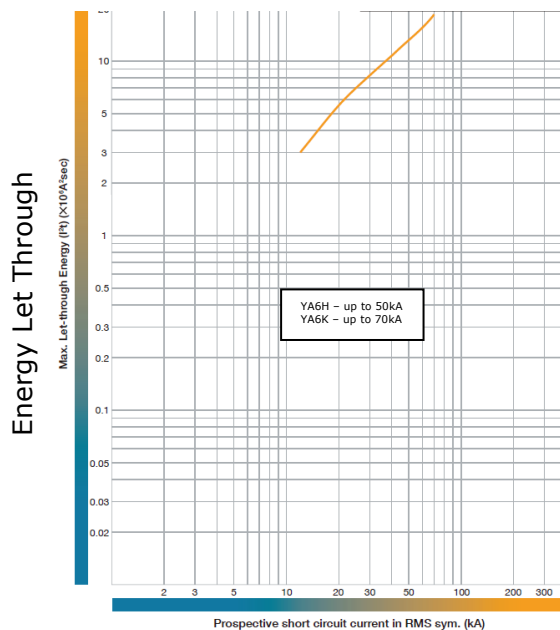
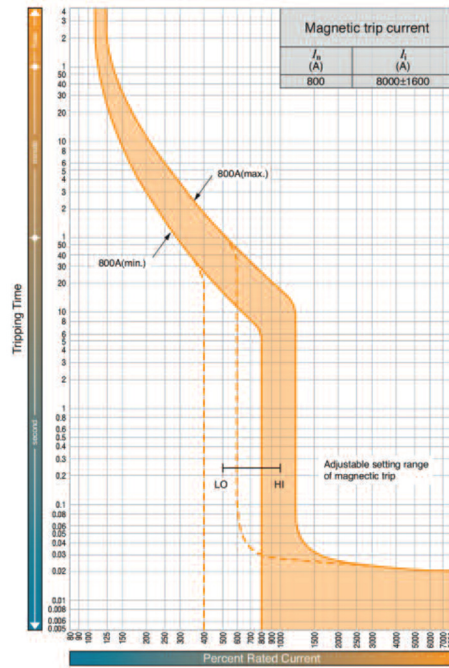
Zs VALUES

| MCCB REFERENCE | Instantaneous (Ii) Protection Setting | Maximum Zs values @ 230Vac | | |
|--|---------------------------------------|----------------------------|---------|-------|
| | | In | 0.4 sec | 5 sec |
| YA6 3P & 4P (thermal/mag) YA6H - 50kA YA6K - 70kA | MIN (YA6H only) | 400 | 0.058 | 0.058 |
| | MAX (YA6H only) | | 0.029 | 0.029 |
| | MIN | 630 | 0.058 | 0.058 |
| | MAX | | 0.029 | 0.029 |
| | MIN | 800 | 0.046 | 0.046 |
| | MAX | | 0.023 | 0.023 |
| MCCB REFERENCE | Short time (Isd) Protection Setting | Maximum Zs values @ 230Vac | | |
| | | In | 0.4 sec | 5 sec |
| YA6 3P & 4P (Electronic) YA6H-E - 50kA YA6K-E - 70kA | MIN | 630 | 0.121 | 0.121 |
| | MAX | | 0.030 | 0.030 |
| | MIN | 800 | 0.095 | 0.095 |
| | MAX | | 0.024 | 0.024 |

3 & 4 pole time/current characteristic
For 400 & 630A adjustable
thermal/adjustable magnetic

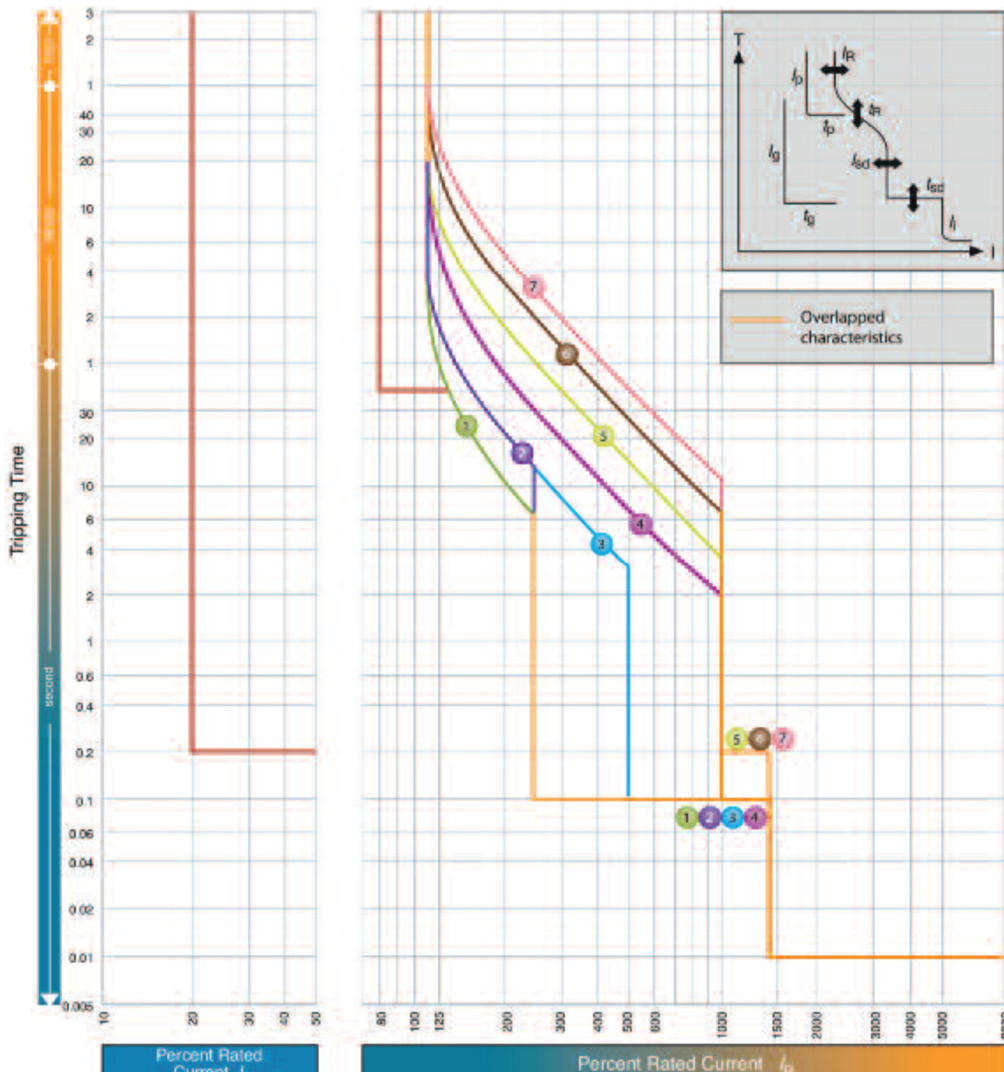


3 & 4 pole time/current characteristic
For 800A adjustable
thermal/adjustable magnetic



LOADLINE YA6 MCCB

3 & 4 pole time/current characteristic
For 630 & 800A electronic protection



$I_n = 800A; 630A$

| | | I_R (A) | | | | | | | | | |
|----------|---------------|---------------------|----------|-----------------|------------------------------------|-----|------|-----|-----|------|-----|
| | | LTD Pick-up current | I_{gr} | x/I_n | 0.4 | 0.5 | 0.63 | 0.8 | 0.9 | 0.95 | 1.0 |
| Standard | LT | I_R | (8) | | 11 | 21 | 21 | 5 | 10 | 19 | 29 |
| | ST | I_{gd} | x/I_n | | 2.5 | | | 5 | 10 | | |
| | | I_{gt} | (8) | | 0.1 | | | | 0.2 | | |
| | INST | I | x/I_n | | 14(Max: $12 \times I_n$) Note (1) | | | | | | |
| Option | PTA | I_p | x/I_n | | 0.8 | | | | | | |
| | | I_p | (8) | | 40 | | | | | | |
| | GF Note(3) | I_g | x/I_n | | 0.2 | | | | | | |
| | | I_g | (8) | | 0.2 | | | | | | |
| NP | I_n | x/I_n | | 1.0/0.5 Note(2) | | | | | | | |
| | I_n | (8) | | $I_n=I_n$ | | | | | | | |

Nota

(1) I max. = $12 \times I_n$, (2) $1.0 \times I_n$ or $0.5 \times I_n$ can be selected. Characteristic of neutral protection (I_n vs. I_n) is identical to characteristic of phase protection (I_n vs. I_n). (3) When you specify GF on MCCBs with 3 poles the terminal block is automatically fitted to connect with the external neutral CT for 3 phases 4 wires system. See terminal blocks in section 4.