

## LOADLINE YB1 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 fixed 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
- Cable connection is via cable clamps and maximum cable termination is 70mm<sup>2</sup>
- Rated insulation voltage is 690V AC (Ui)

### CATALOGUE NUMBERS

CURRENT RATING		Cat No (1 pole)	Cat No (3 pole)	Cat No (4 pole)
MAX (A)	MIN (A)			
<b>Switch Disconnector</b>				
160	--	-----	YB1B3P160DC	YB1B4P160DC

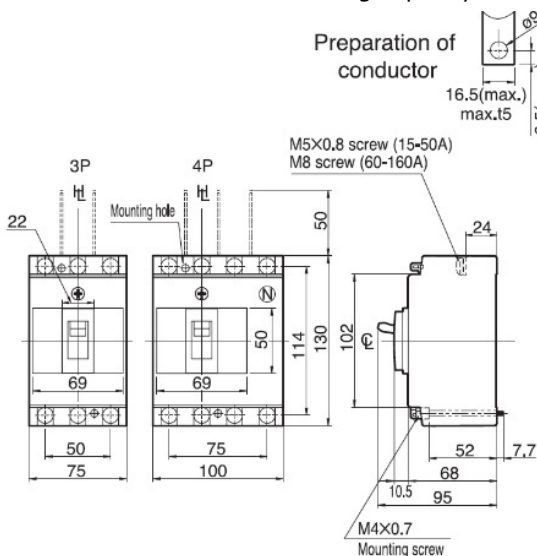
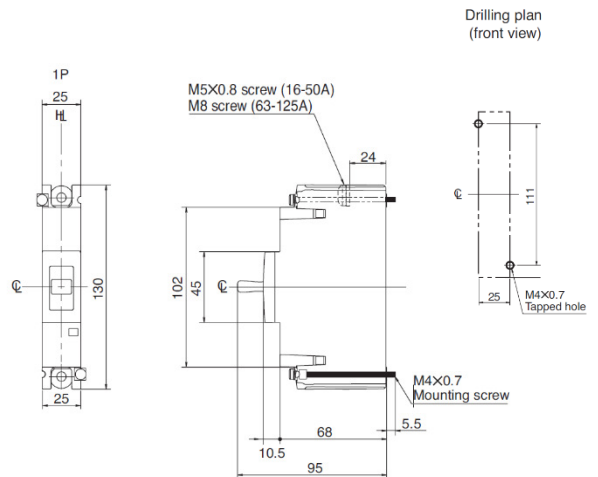
### YB1 Frame MCCB Thermal / Magnetic - Icu 25kA

16	--	-----	YB1N1P16TC	-----	-----
20	--	-----	YB1N1P20TC	-----	-----
25	16	-----	YB1N1P25TC	YB1N3P25TC	YB1N4P25TC
32	20	-----	YB1N1P32TC	YB1N3P32TC	YB1N4P32TC
40	25	-----	YB1N1P40TC	YB1N3P40TC	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	-----	YB1N3P160TC	YB1N4P160TC	-----

### YB1 Frame MCCB Thermal / Magnetic - 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

\* Breakers are rated at 30kA breaking capacity.



Drilling plan (front view)

Panel cutout (front view)

## LOADLINE YB1 MCCB

### YB1 MCCB ACCESSORIES

DESCRIPTION	Cat No (1 pole)	Cat No (3 pole)	Cat No (4 pole)
<b>Slide Interlock</b> YB1 Slide interlock (one between two MCCBs)	-----	YB1MS3P	YB1MS4P
<b>Rotary Handles</b> YB1 Panel mounted IP54 rotary handle for 453mm panel depth (minimum 175mm)	-----	YB1RH453	YB1RH453
<b>Terminal Protection</b> YB1 Terminal shroud for cable lugs (long) YB1 Terminal cover for cable clamps (short) YB1 Interphase barrier (Set of 1) YB1 (1, 3 and 4-pole) & YB3 (3 & 4-pole) Handle lock *	YB1TS1P YB1TC1P YB1TB YBDL1	YB1TS3P YB1TC3P YB1TB YBDL1	YB1TS4P YB1TC4P YB1TB YBDL1
<b>Auxiliary and Alarm Switches</b> YB Auxiliary changeover switch (AC 250V/0.1A and DC 125V/0.4A) * YB Alarm trip indicator changeover switch (AC 250V/0.1A and DC 125V/0.4A) *	----- -----	YBAUX1 YBAL	YBAUX1 YBAL
<b>Shunt Trips</b> YB Shunt trip 100-120V AC * YB Shunt trip 200-240V AC * YB Shunt trip 380-450V AC * YB Shunt trip 24V DC * YB Shunt trip 48V DC * YB Shunt trip 100-120V DC * YB Shunt trip 200-240V DC *	----- ----- ----- ----- ----- ----- -----	YBST120AC YBST240AC YBST450AC YBST24DC YBST48DC YBST120DC YBST240DC	YBST120AC YBST240AC YBST450AC YBST24DC YBST48DC YBST120DC YBST240DC
<b>Under-voltage Release</b> YB Under-voltage release 100-120V AC * YB Under-voltage release 200-240V AC * YB Under-voltage release 380-450V AC * YB Under-voltage release 24V DC * YB Under-voltage release 100-120V DC * YB Under-voltage release 200-240V DC *	----- ----- ----- ----- ----- -----	YBUVR120AC YBUVR240AC YBUVR450AC YBUVR24DC YBUVR120DC YBUVR240DC	YBUVR120AC YBUVR240AC YBUVR450AC YBUVR24DC YBUVR120DC YBUVR240DC
<b>Accessories</b> YB1 Neutral link	YB1NL	YB1NL	-----



**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.

\* Common accessories for YB1 and YB3 frame MCCBs.

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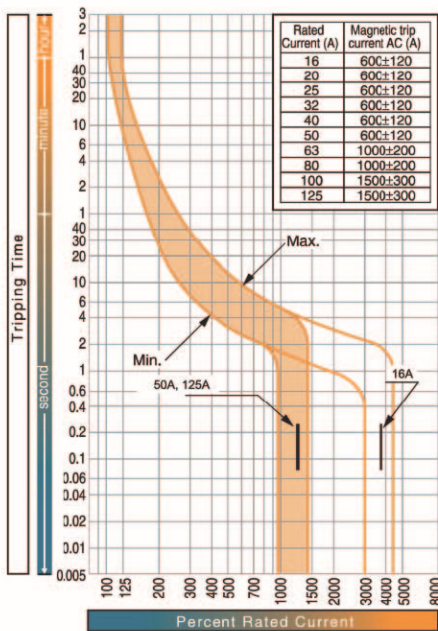
Dorman Smith Frame Size		YB1			
MCCB Type or Sw. Disconnecter		FIXED MCCB'S	ADJUSTABLE MCCB'S		SW. DISC.
Terminal Type		Clamp	Clamp	Clamp	Clamp
Product Code		YB1N1P--TC	YB1N----TC	YB1S----TC	YB1B----DC
No of Poles		1	3, 4	3, 4	3, 4
Nominal Current Ratings (In) (A) (50°C)		16, 20, 25, 32, 40, 50, 63, 80, 100, 125	25, 32, 40, 63, 80, 100, 125, 160	25, 32, 40, 63, 80, 100, 125, 160	160
<b>Electrical Characteristics</b>					
Rated Operational Voltage (Ue) (V)	AC 50/60Hz	240	525	690	690
	DC	-	250	250	250
Rated Insulation Voltage (Ui) (V)		690	690	690	690
Rates Impulse Withstand Voltage (Uimp) (kV)		8	8	8	8
Ultimate breaking capacity (Icu) (kA) (IEC, JIS, AS/NZS)	690V AC	-	-	6	-
	525V AC	-	7.5	10	-
	440V AC	-	15	25	-
	380/400/415V AC	-	25	40 (30kA for 32A)	-
	240V AC	25	35	50	-
	250V DC	-	20	25	-
Service breaking capacity (Ics) (kA)	690V AC	-	-	3	-
	525V AC	-	4	7.5	-
	440V AC	-	7.5	13	-
	380/400/415V AC	-	13	20	-
	240V AC	13	18	25	-
	250V DC	-	10	13	-
	480V AC	-	7.5	10	-
	240V AC	25	35	50	-
Rated breaking Capacity (NEMA) (kA)					
Rated short-circuit making capacity (Icm) (kA)	Peak	-	-	-	2.8
Rated short-time withstand current (Icw) (kA)	rms	-	-	-	2 (0.3 sec)
Rated Frequency	Hz	50/60	50/60	50/60	50/60
<b>Protection</b>					
Adjustable Thermal		No	Yes	Yes	-
Adjustable Magnetic		No	No	No	-
Microprocessor		-	-	-	-
Utilisation Category		A	A	A	AC-23A
IP Rating	Terminals	IP20	IP20	IP20	IP20
	Toggle	IP30	IP30	IP30	IP30
<b>Installation</b>					
Front Connection		Not available	Not available	Not available	Not available
Straight Extension Terminals		Not available	Not available	Not available	Not available
Spread Extension Terminals		Not available	Not available	Not available	Not available
Cable Clamps		Standard	Standard	Standard	Standard
Rear Terminals		Not available	Not available	Not available	Not available
DIN-rail Mounting		Not available	Not available	Not available	Not available
Plug-in		Not available	Not available	Not available	Not available
Draw-out		Not available	Not available	Not available	Not available
<b>Dimensions</b>					
Height (mm)		130	130	130	130
1 Pole Width (mm)		25	-	-	-
3 Pole Width (mm)		-	75	75	75
4 Pole Width (mm)		-	100	100	100
Depth (mm)		68	68	68	68
1 Pole Weight (kg)		0.3	-	-	-
3 Pole Weight (kg)		-	0.8	0.8	0.7
4 Pole Weight (kg)		-	1	1	0.9
<b>Operation</b>					
Direct Opening Action		Yes	Yes	Yes	Yes
Trip Button		Yes	Yes	Yes	Yes
Suitable for Isolation		Yes	Yes	Yes	Yes
Panel mounted rotary handle		Not available	Optional	Optional	Optional
Direct mounted rotary handle		Not available	Optional	Optional	Optional
Slide Interlock		Not available	Optional	Optional	Optional
Link Interlock		Not available	Not available	Not available	Not available
Wire Interlock		Not available	Not available	Not available	Not available
Motor Actuator		Not available	Not available	Not available	Not available
Endurance at 415V AC	Electrical (cycles)	10,000	10,000	10,000	10,000
	Mechanical (cycles)	20,000	20,000	20,000	20,000
<b>Environment</b>					
Operating Ambient Temperature	°C	-5 to +50	-5 to +50	-5 to +50	-5 to +50
Relative Humidity	%	85	85	85	85
Altitude above Sea Level	Metres	Up to 2000	Up to 2000	Up to 2000	Up to 2000
Pollution Degree		3	3	3	3
<b>Approval Marks</b>					
CE, UKCA		Yes	Yes	Yes	Yes
Direct Opening Action		Yes	Yes	Yes	Yes

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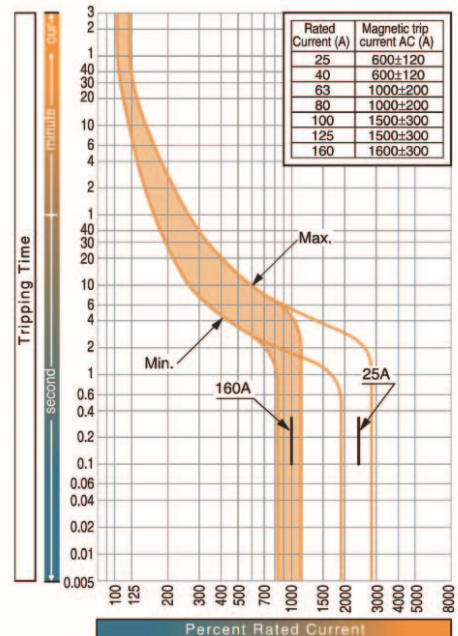
### Zs VALUES

MCCB REFERENCE	Instantaneous (Ii) Protection Setting	Maximum Zs values @ 230Vac		
		In	0.4 sec	5 sec
YB1 1P Thermal/Mag YB1N - 25kA	FIXED	16	0.303	1.316
		20	0.303	1.056
		25	0.303	0.840
		32	0.303	0.658
		40	0.303	0.528
		50	0.303	0.420
		63	0.182	0.337
		80	0.182	0.264
		100	0.121	0.211
		125	0.121	0.168
YB1 3P & 4P Thermal/Mag YB1N - 25kA YB1S - 40kA	FIXED	25	0.303	0.797
		32	0.303	0.627
		40	0.303	0.499
		63	0.182	0.320
		80	0.182	0.251
		100	0.121	0.201
		125	0.121	0.160
		160	0.114	0.125

1 pole time/current characteristic  
 For 16A to 125A fixed thermal/fixed magnetic



3 & 4 pole time/current characteristic  
 For 25A to 160A adjustable thermal/fixed magnetic



Energy Let Through

