

LOADLINE YA5 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 $1 \times I_n$, $0.8 \times I_n$ and $0.63 \times I_n$ for thermal/magnetic devices
- Electronic MCCBs have adjustable long time, short time and instantaneous trip functions
- Long time overload adjusts between $1 \times I_n$, and $0.4 \times I_n$ for electronic devices
- Electronic MCCBs are utilisation category B and are specifically intended for discrimination
- Ultimate breaking capacity available as 25kA, 50kA, 65kA and 70kA electronic at 415VAC
- Maximum cable termination is 240mm² with cable clamps (optional accessory)
- Maximum cable termination is 185mm² with M10 reduced palm width cable lugs
- Standard cable termination is 95mm² using M10 lugs
- Rated insulation voltage is 800V AC (Ui)
- Extension terminals should be ordered separately if required

CATALOGUE NUMBERS

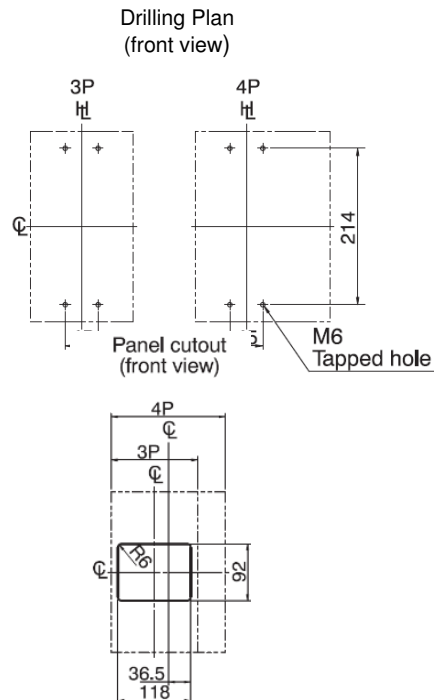
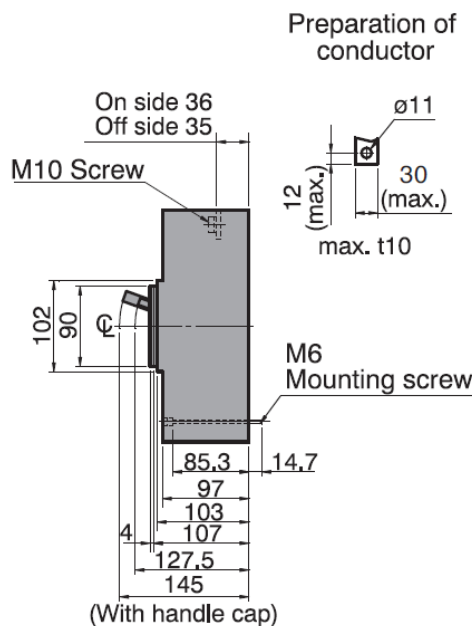
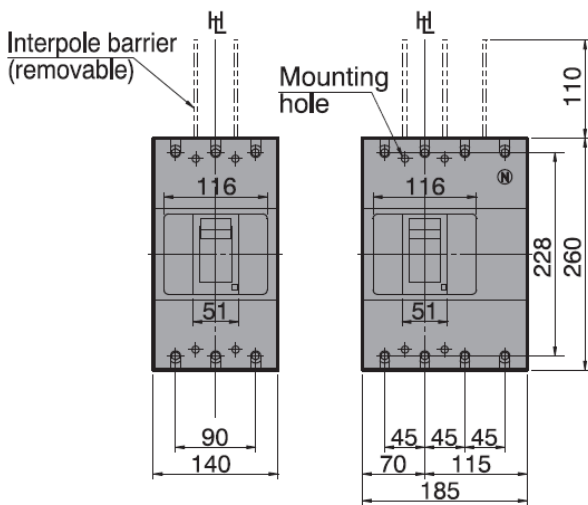
CURRENT RATING		Cat No (3 pole)	Cat No (4 pole)
MAX (A)	MIN (A)		
Switch Disconnector			
400	-	YA5B3P400D	YA5B4P400D

YA5 Frame MCCB Thermal / Magnetic - Icu 25kA			
250	157	YA5N3P250T	YA5N4P250T
400	252	YA5N3P400T	YA5N4P400T

YA5 Frame MCCB Thermal / Magnetic - Icu 50kA			
250	157	YA5H3P250T	YA5H4P250T
400	252	YA5H3P400T	YA5H4P400T

YA5 Frame MCCB Thermal / Magnetic - Icu 65kA			
250	157	YA5J3P250T	YA5J4P250T
400	252	YA5J3P400T	YA5J4P400T

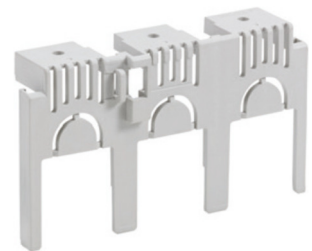
YA5 Frame MCCB Electronic - Icu 70kA			
250	100	YA5K3P250E	YA5K4P250E
400	160	YA5K3P400E	YA5K4P400E



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YA5 MCCB ACCESSORIES

DESCRIPTION	Cat No (3 pole)	Cat No (4 pole)
Cable Clamps		
YA5 Cable clamps (240mm ² cable)	YA5CC3P	YA5CC4P
Extension Terminals		
YA5 Flat extension terminals (Spread type)	YA5XT3P	YA5XT4P
Rear Terminals		
YA5 Rear terminals	YA5RT3P	YA5RT4P
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 mech (1 per MCCB)	YA5MW	YA5MW
YA5 Wire interlock cable 1 metre long	YAMWC1	YAMWC1
YA5 Wire interlock cable 1.5 metre long	YAMWC2	YAMWC2
Rotary Handles		
YA5 Panel mounted IP54 rotary handle for 456mm panel depth	YA5RH456	YA5RH456
Castell cam for panel mounted rotary handle	YABCLCAM	YABCLCAM
Terminal Protection		
YA5 Terminal shroud for cable lugs and spread ext.	YA5TS3P	YA5TS4P
YA5 Terminal cover for cable clamps	YA5TC3P	YA5TC4P
YA5 Interphase barrier (Set of 1)	YA5TB	YA5TB
YA5 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
Under-voltage Release		
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
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 Neutral link	YA5NL	-----



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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.

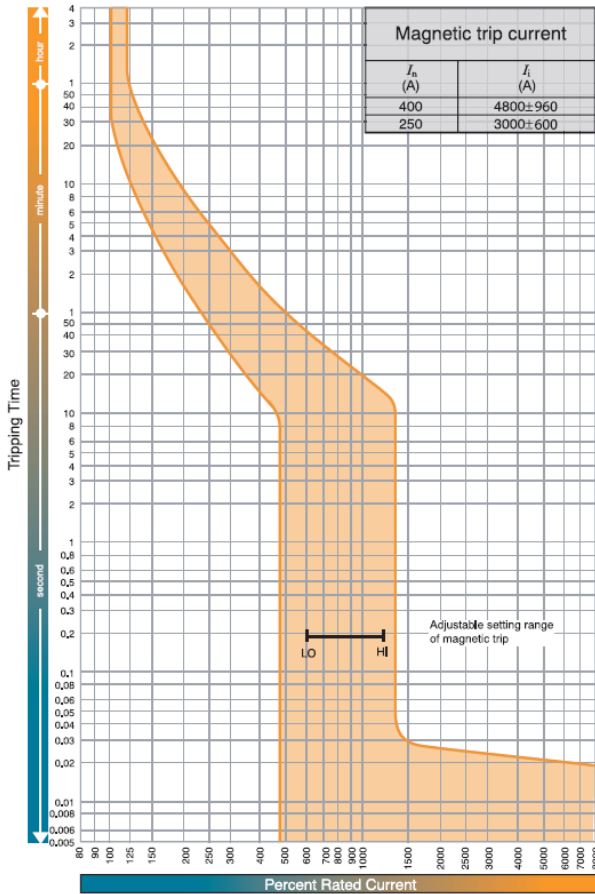
Dorman Smith Frame Size		YA5				
MCCB Type or Sw. Disconnecter		ADJUSTABLE MCCB's				SWITCH DISCONNECTOR
Terminal Type		Front	Front	Front	Front	Front
Product Code		YA5N----T	YA5H----T	YA5J----T	YA5K----E	YA5B----D
No of Poles		3, 4	3, 4	3, 4	3, 4	3, 4
Nominal Current Ratings (In) (A) (50°C)		250, 400	250, 400	250, 400	250, 400	400
Electrical Characteristics						
Rated Operational Voltage (Ue) (V)	AC 50/60Hz	525	690	690	690	690
	DC	250	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	20	20	-
	525V AC	15	30	30	30	-
	440V AC	22	45	65	65	-
	380/400/415V AC	25	50	70	70	-
	240V AC	35	85	100	100	-
	250V DC	25	40	40	-	-
Service breaking capacity (Ics) (kA)	690V AC	-	15	15	15	-
	525V AC	15	30	30	30	-
	440V AC	22	45	50	50	-
	380/400/415V AC	25	50	50	50	-
	240V AC	35	85	85	85	-
	250V DC	19	40	40	-	-
Rated breaking Capacity (NEMA) (kA)		480V AC	15	25	30	-
		240V AC	35	85	100	-
Rated short-circuit making capacity (Icm) (kA)		Peak	-	-	-	9
Rated short-time withstand current (Icw) (kA)		rms	-	-	5	5
Rated Frequency		Hz	50/60	50/60	50/60	50/60
Protection						
Adjustable Thermal		Yes	Yes	Yes	-	-
Adjustable Magnetic		Yes	Yes	Yes	-	-
Microprocessor		-	-	-	Yes	-
Utilisation Category		A	A	A	B	AC-23A
IP Rating		Terminals	IP20	IP20	IP20	IP20
		Toggle	IP30	IP30	IP30	IP30
Installation						
Front Connection		Standard	Standard	Standard	Standard	Standard
Straight Extension Terminals		-	-	-	-	-
Spread Extension Terminals		Optional	Optional	Optional	Optional	Optional
Cable Clamps		Optional	Optional	Optional	Optional	Optional
Rear Terminals		Optional	Optional	Optional	Optional	Optional
DIN-rail Mounting		Not available	Not available	Not available	Not available	Not available
Plug-in		Optional	Optional	Optional	Optional	Optional
Draw-out		Not available	Not available	Not available	Not available	Not available
Dimensions						
Height (mm)		260	260	260	260	260
1 Pole Width (mm)		-	-	-	-	-
3 Pole Width (mm)		140	140	140	140	140
4 Pole Width (mm)		185	185	185	185	185
Depth (mm)		103	103	103	103	103
1 Pole Weight (kg)		-	-	-	-	-
3 Pole Weight (kg)		4.2	4.2	4.2	4.3	4.2
4 Pole Weight (kg)		5.6	5.6	5.6	5.7	5.6
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		Optional	Optional	Optional	Optional	Optional
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 415V AC		Electrical (cycles)	4,500	4,500	4,500	4,500
		Mechanical (cycles)	15,000	15,000	15,000	15,000
Environment						
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
Approval Marks						
CE, UKCA		Yes	Yes	Yes	Yes	Yes

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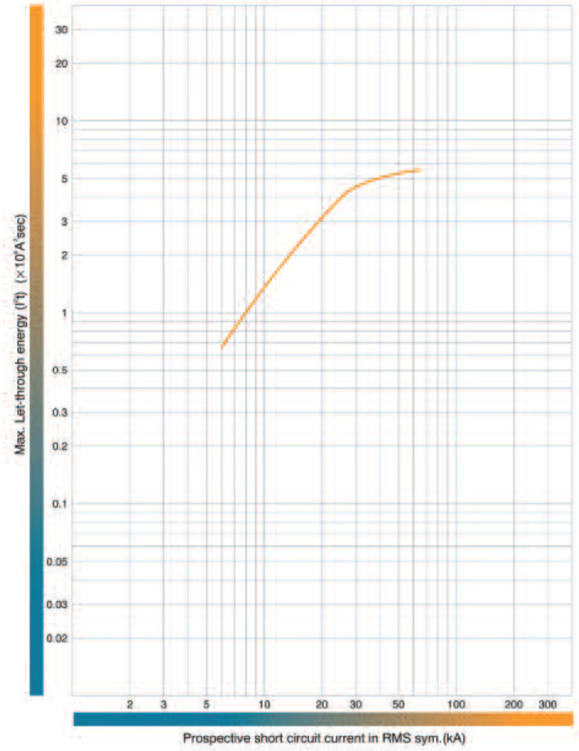
Zs VALUES

MCCB REFERENCE	Instantaneous (Ii) Protection Setting	Maximum Zs values @ 230Vac		
		In	0.4 sec	5 sec
YA5 3P & 4P	MIN	250	0.121	0.121
	MAX		0.061	0.061
YA5N - 25kA	MIN	400	0.076	0.076
	MAX		0.038	0.038
YA5H - 50kA	MIN	400	0.304	0.304
	MAX		0.076	0.076
YA5J - 65kA	MIN	400	0.190	0.190
	MAX		0.048	0.048

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

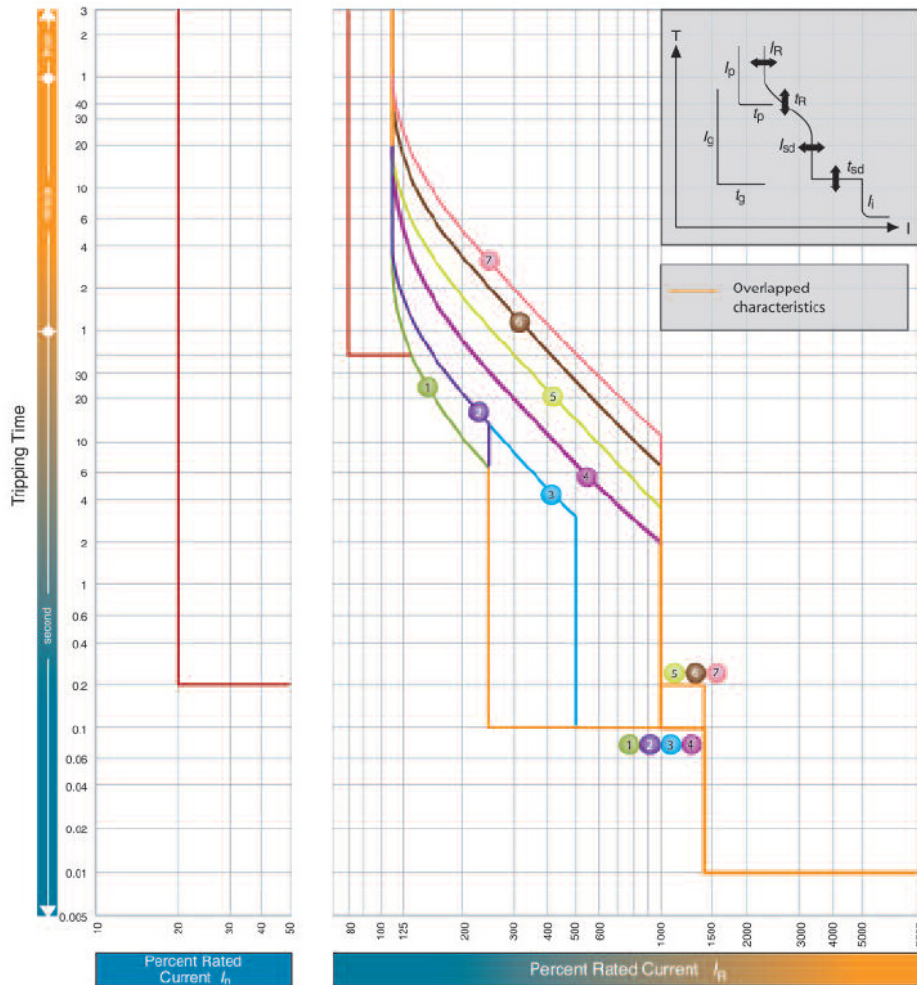


Energy Let Through



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3 & 4 pole time/current characteristic
For electronic protection



$I_n = 400A$; 250A Note (1)

		I_R (A)										
		LTD Pick-up current	I_R	x/I_n	0.4	0.5	0.63	0.8	0.9	0.95	1.0	
Standard	LT	t_R	(s)		11	21	21	5	10	19	29	
	ST	I_{sd}	x/I_R		2.5			5			10	
		t_{sd}	(s)		0.1				0.2			
	INST	I_i	x/I_R		14(Max: 13 x I_n)						Note (2)	
Option	PTA	I_p	x/I_R		0.8							
		t_p	(s)		40							
	GF Note(4)	I_g	x/I_n		0.2							
		t_g	(s)		0.2							
NP	I_N	x/I_R		1.0/0.5						Note (3)		
	t_N	(s)								$t_N = t_R$		

Note
(1) GF is not available when I_n is 250A. (2) I_i max. = 13 x I_n . (3) 1.0 x I_R or 0.5 x I_R can be selected. Characteristic of neutral protection (t_N vs. I_N) is identical to characteristic of phase protection (t_R vs. I_R). (4) 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.