

ETIBREAK

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MOULDED CASE CIRCUIT BREAKERS AND SWITCH DISCONNECTORS



Low breaking capacity moulded case circuit breakers

Advantages of low breaking capacity MCCBs

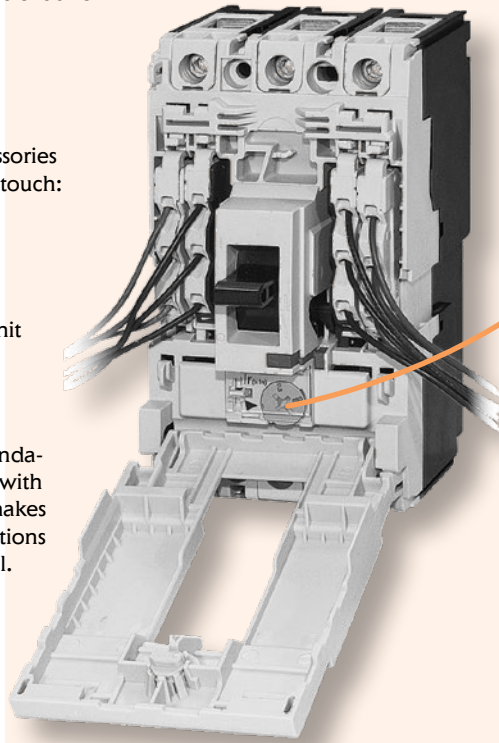
→ New series EB2S of MCCBs has excellent performances with reduced dimensions and new modern design.

→ Unique accessory cover opens with only one screw.

→ Practical internal accessories can be installed with one touch:

- auxiliary switch
- alarm switch
- shunt trip unit
- undervoltage trip unit

→ EB2S series complies to safety recommendation standard IEC 60204-1. EB2S is marked with IEC symbol "direct opening action". This makes these devices also ideal for all OEM applications where safety and reliability are essential.



→ Customer can select between fixed and adjustable protection:

- Frame size 160A: fixed (series LF, SF & HF) or thermal trip adjustable (series LA, SA & HA)
- Frame size 250A: fixed (series LF, SF & HF) or thermal-magnetic trip adjustable (series LA, SA & HA)

Legend: L -> economic, lower short-circuit breaking capacity
 S -> standard short-circuit breaking capacity
 H -> high short-circuit breaking capacity

EB2S 160 fixed protection

Type	I_n (A)	Code No.	Poles	I_{cu} / I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 160/3LF 16A 3p	16	004671801	3	16/8	fixed/fixe	0,80	1
EB2S 160/3LF 20A 3p	20	004671802					
EB2S 160/3LF 25A 3p	25	004671803					
EB2S 160/3LF 32A 3p	32	004671804					
EB2S 160/3LF 40A 3p	40	004671805					
EB2S 160/3LF 50A 3p	50	004671806					
EB2S 160/3LF 63A 3p	63	004671807					
EB2S 160/3LF 80A 3p	80	004671808					
EB2S 160/3LF 100A 3p	100	004671809					
EB2S 160/3LF 125A 3p	125	004671810					
EB2S 160/4LF 16A 4p	16	004671814	4	16/8	fixed/fixe	1,00	
EB2S 160/4LF 20A 4p	20	004671815					
EB2S 160/4LF 25A 4p	25	004671816					
EB2S 160/4LF 32A 4p	32	004671817					
EB2S 160/4LF 40A 4p	40	004671818					
EB2S 160/4LF 50A 4p	50	004671819					
EB2S 160/4LF 63A 4p	63	004671820					
EB2S 160/4LF 80A 4p	80	004671821					
EB2S 160/4LF 100A 4p	100	004671822					
EB2S 160/4LF 125A 4p	125	004671823					
EB2S 160/4LF 160A 4p	160	004671824					

Low breaking capacity moulded case circuit breakers

EB2S 160 fixed protection							
Type	I_n (A)	Code No.	Poles	I_{cu}/I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 160/3SF 16A 3p	16	004671827	3	25/13	fixed/fixed	0,80	1
EB2S 160/3SF 20A 3p	20	004671828					
EB2S 160/3SF 25A 3p	25	004671829					
EB2S 160/3SF 32A 3p	32	004671830					
EB2S 160/3SF 40A 3p	40	004671831					
EB2S 160/3SF 50A 3p	50	004671832					
EB2S 160/3SF 63A 3p	63	004671833					
EB2S 160/3SF 80A 3p	80	004671834					
EB2S 160/3SF 100A 3p	100	004671835					
EB2S 160/3SF 125A 3p	125	004671836					
EB2S 160/4SF 16A 4p	16	004671840	4	25/13	fixed/fixed	1,00	1
EB2S 160/4SF 20A 4p	20	004671841					
EB2S 160/4SF 25A 4p	25	004671842					
EB2S 160/4SF 32A 4p	32	004671843					
EB2S 160/4SF 40A 4p	40	004671844					
EB2S 160/4SF 50A 4p	50	004671845					
EB2S 160/4SF 63A 4p	63	004671846					
EB2S 160/4SF 80A 4p	80	004671847					
EB2S 160/4SF 100A 4p	100	004671848					
EB2S 160/4SF 125A 4p	125	004671849					
EB2S 160/4SF 160A 4p	160	004671850					

EB2S 160 fixed protection							
Type	I_n (A)	Code No.	Poles	I_{cu}/I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 160/3HF 16A 3p	16	004671853	3	40/20	fixed/fixed	0,80	1
EB2S 160/3HF 20A 3p	20	004671854					
EB2S 160/3HF 25A 3p	25	004671855					
EB2S 160/3HF 32A 3p	32	004671856					
EB2S 160/3HF 40A 3p	40	004671857					
EB2S 160/3HF 50A 3p	50	004671858					
EB2S 160/3HF 63A 3p	63	004671859					
EB2S 160/3HF 80A 3p	80	004671860					
EB2S 160/3HF 100A 3p	100	004671861					
EB2S 160/3HF 125A 3p	125	004671862					
EB2S 160/4HF 16A 4p	16	004671866	4	40/20	fixed/fixed	1,00	1
EB2S 160/4HF 20A 4p	20	004671867					
EB2S 160/4HF 25A 4p	25	004671868					
EB2S 160/4HF 32A 4p	32	004671869					
EB2S 160/4HF 40A 4p	40	004671870					
EB2S 160/4HF 50A 4p	50	004671871					
EB2S 160/4HF 63A 4p	63	004671872					
EB2S 160/4HF 80A 4p	80	004671873					
EB2S 160/4HF 100A 4p	100	004671874					
EB2S 160/4HF 125A 4p	125	004671875					
EB2S 160/4HF 160A 4p	160	004671876					



EB2S 160 adjustable protection

Type	I _n (A)	Code No.	Poles	I _{cu} /I _c 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 160/3LA 25A 3p	25	004671879	3	16/8	adjustable (0.63-1)/fixed	0,80	1
EB2S 160/3LA 40A 3p	40	004671880					
EB2S 160/3LA 63A 3p	63	004671881					
EB2S 160/3LA 80A 3p	80	004671882					
EB2S 160/3LA 100A 3p	100	004671883					
EB2S 160/3LA 125A 3p	125	004671884					
EB2S 160/3LA 160A 3p	160	004671885	4				
EB2S 160/4LA 25A 4p	25	004671889					
EB2S 160/4LA 40A 4p	40	004671890					
EB2S 160/4LA 63A 4p	63	004671891					
EB2S 160/4LA 80A 4p	80	004671892					
EB2S 160/4LA 100A 4p	100	004671893					
EB2S 160/4LA 125A 4p	125	004671894					
EB2S 160/4LA 160A 4p	160	004671895					

EB2S 160 adjustable protection

Type	I _n (A)	Code No.	Poles	I _{cu} /I _c 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 160/3SA 25A 3p	25	004671899	3	25/13	adjustable (0.63-1)/fixed	0,80	1
EB2S 160/3SA 40A 3p	40	004671900					
EB2S 160/3SA 63A 3p	63	004671901					
EB2S 160/3SA 80A 3p	80	004671902					
EB2S 160/3SA 100A 3p	100	004671903					
EB2S 160/3SA 125A 3p	125	004671904					
EB2S 160/3SA 160A 3p	160	004671905	4				
EB2S 160/4SA 25A 4p	25	004671909					
EB2S 160/4SA 40A 4p	40	004671910					
EB2S 160/4SA 63A 4p	63	004671911					
EB2S 160/4SA 80A 4p	80	004671912					
EB2S 160/4SA 100A 4p	100	004671913					
EB2S 160/4SA 125A 4p	125	004671914					
EB2S 160/4SA 160A 4p	160	004671915					



EB2S 160 adjustable protection

Type	I _n (A)	Code No.	Poles	I _{cu} /I _c 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 160/3HA 25A 3p	25	004671919	3	40/20	adjustable (0.63-1)/fixed	0,80	1
EB2S 160/3HA 40A 3p	40	004671920					
EB2S 160/3HA 63A 3p	63	004671921					
EB2S 160/3HA 80A 3p	80	004671922					
EB2S 160/3HA 100A 3p	100	004671923					
EB2S 160/3HA 125A 3p	125	004671924					
EB2S 160/3HA 160A 3p	160	004671925	4				
EB2S 160/4HA 25A 4p	25	004671929					
EB2S 160/4HA 40A 4p	40	004671930					
EB2S 160/4HA 63A 4p	63	004671931					
EB2S 160/4HA 80A 4p	80	004671932					
EB2S 160/4HA 100A 4p	100	004671933					
EB2S 160/4HA 125A 4p	125	004671934					
EB2S 160/4HA 160A 4p	160	004671935					

Low breaking capacity moulded case circuit breakers

EB2S 250 fixed protection

Type	I_n (A)	Code No.	Poles	I_{cu}/I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 250/3LF 200A 3p	200	004671812	3	16/8	fixed/fixed	1,50	1
EB2S 250/3LF 250A 3p	250	004671813				1,50	
EB2S 250/4LF 200A 4p	200	004671825	4			1,90	
EB2S 250/4LF 250A 4p	250	004671826				1,90	

EB2S 250 fixed protection

Type	I_n (A)	Code No.	Poles	I_{cu}/I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 250/3SF 200A 3p	200	004671838	3	25/19	fixed/fixed	1,50	1
EB2S 250/3SF 250A 3p	250	004671839				1,50	
EB2S 250/4SF 200A 4p	200	004671851	4			1,90	
EB2S 250/4SF 250A 4p	250	004671852				1,90	

EB2S 250 fixed protection

Type	I_n (A)	Code No.	Poles	I_{cu}/I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 250/3HF 200A 3p	200	004671864	3	40/20	fixed/fixed	1,50	1
EB2S 250/3HF 250A 3p	250	004671865				1,50	
EB2S 250/4HF 200A 4p	200	004671877	4			1,90	
EB2S 250/4HF 250A 4p	250	004671878				1,90	

EB2S 250 adjustable protection

Type	I_n (A)	Code No.	Poles	I_{cu}/I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 250/3LA 200A 3p	200	004671887	3	16/8	adjustable (0.63-1)/ adjustable (5-11)	1,50	1
EB2S 250/3LA 250A 3p	250	004671888				1,50	
EB2S 250/4LA 200A 4p	200	004671897	4			1,90	
EB2S 250/4LA 250A 4p	250	004671898				1,90	

EB2S 250 adjustable protection

Type	I_n (A)	Code No.	Poles	I_{cu}/I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 250/3SA 200A 3p	200	004671907	3	25/19	adjustable (0.63-1)/ adjustable (5-11)	1,50	1
EB2S 250/3SA 250A 3p	250	004671908				1,50	
EB2S 250/4SA 200A 4p	200	004671917	4			1,90	
EB2S 250/4SA 250A 4p	250	004671918				1,90	

EB2S 250 adjustable protection

Type	I_n (A)	Code No.	Poles	I_{cu}/I_{cs} 400V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2S 250/3HA 200A 3p	200	004671927	3	40/20	adjustable (0.63-1)/ adjustable (5-11)	1,50	1
EB2S 250/3HA 250A 3p	250	004671928				1,50	
EB2S 250/4HA 200A 4p	200	004671937	4			1,90	
EB2S 250/4HA 250A 4p	250	004671938				1,90	



Internal accessories



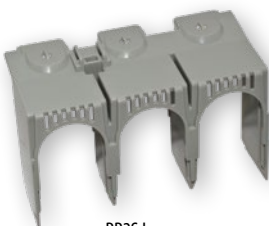
Accessories for EB25 160 and 250

Internal accessories (can be mounted by customer)	Code No.	Description	Poles	Packaging [pcs]
Auxiliary switch, PS2S 160-250	004671950	1 changeover contact	3, 4	1
Alarm switch, SS2S 160-250	004671951	1 changeover contact		
Shunt trip unit, DA2S 160-250 AC 200-240V	004671953	AC 200-240V		
Shunt trip unit, DA2S 160-250 AC 380-450V	004671954	AC 380-450V		
Shunt trip unit, DA2S 160-250 DC 24V	004671955	DC 24V		
Undervoltage trip unit, NA2S 160-250 AC 200-240V	004671956	AC 200-240V		
Undervoltage trip unit, NA2S 160-250 AC 380-450V	004671957	AC 380-450V		
Undervoltage trip unit, NA2S 160-250 DC 24V	004671958	DC 24V		

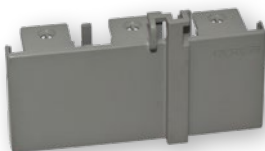
External accessories



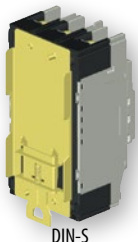
R02S



PR2S Long



PR2S RC



DIN-S

Accessories for EB25 160

	Code No.	Poles	Packaging [pcs]	
Breaker mounted handle, R02S 160	004671970	3, 4	1	
Panel mounted handle, R02S 160P	004671971			
Attach busbar, ZB2S 160/3 Spread	004671972	3	set = 3pcs	
Attach busbar, ZB2S 160/4 Spread	004671977	4	set = 4pcs	
Interpole barrier, IZ2S 160	004671973	3	1	
Terminal covers, PR2S 160/3 long	004671974	3		
Terminal covers, PR2S 160/4 long	004671990	4		
Terminal covers, PR2S 160/3 wide	004671991	3		
Terminal covers, PR2S 160/4 wide	004671992	4		
Terminal covers, PR2S 160/3 RC	004671993	3		
Terminal covers, PR2S 160/4 RC	004671994	4		
Din Rail Adaptor, DIN-S 160	004671975	3, 4		
Rear Connections, RC2S 160/3	004671978	3		set = 3pcs
Rear Connections, RC2S 160/4	004671979	4		set = 4pcs

Low breaking capacity moulded case circuit breakers

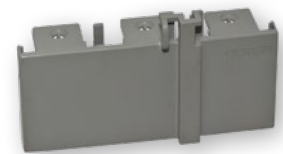
Accessories for EB2S 250			
	Code No.	Poles	Packaging [pcs]
Motor operator, MO2S 250 AC230-240V	004671980	3, 4	1
Motor operator, MO2S 250 DC24V	004671981		
Breaker mounted handle, RO2S 250	004671982		
Panel mounted handle, RO2S 250P	004671983		
Attach busbar, ZB2S 250/3 Spread	004671984	3	set = 3pcs
Attach busbar, ZB2S 250/4 Spread	004671995	4	set = 4pcs
Rear Connections, RC2S 250/3	004671996	3	set = 3pcs
Rear Connections, RC2S 250/4	004671997	4	set = 4pcs
Cable Clamps, SP2S 250/3	004671998	3	set = 3pcs
Cable Clamps, SP2S 250/4	004671999	4	set = 4pcs
Interpole barrier, IZ2S 250	004671985	3, 4	1
Terminal covers, PR2S 250/3 short	004671986	3	
Terminal covers, PR2S 250/4 short	004672000	4	
Terminal covers, PR2S 250/3 long	004672001	3	
Terminal covers, PR2S 250/4 long	004672002	4	
Terminal covers, PR2S 250/3 spread	004672003	3	
Terminal covers, PR2S 250/4 spread	004672004	4	
Terminal covers, PR2S 250/3 RC	004672005	3	
Terminal covers, PR2S 250/4 RC	004672006	4	
Terminal covers, PR2S 250/3 CC	004672007	3	
Terminal covers, PR2S 250/4 CC	004672008	4	
Busbar adapter 3p, DA-60/250/3/FE-5	001696162	3	
Busbar adapter 4p, DA-60/250/4/FE-5	001696163	4	
DIN 125 & 250	004671186	3, 4	



PR2S Long



PR2S Short



PR2S RC



MO2S



DA-60

Low voltage moulded case circuit breakers and low voltage switch disconnectors

Low voltage moulded case circuit breakers are used for the switching and protection of power supply cables, motors and other electrical equipment against overloads and short circuit faults. They provide, beside protection function, other functions as remote ON/OFF operation, undervoltage protection, main switch etc. They are available in range from 20 A up to 1600 A in 3 and 4 pole versions.

Advantages:

- Small dimensions, modular sizes
- Possibility of field-instalable accessories – up to 1600A frame size series 2 (EB2)
- High short circuit breaking capacity (up to 125 kA)
- Fast break mechanism
- Reduced energy let through I^2t – minimises thermal stresses
- Reduced tripping time – minimises damage after fault
- Reduced peak short current ampacity – minimised electrodynamic stresses on conductors and protected equipment
- Installation on mounting plate, 125 & 250 A frame size also on DIN-rail
- Wide range of accessories
- Compact design with high mechanical strength
- High dielectric withstand voltages (8 kV a.c.)
- Voltage level up to 690 V a.c. and 250 V d.c. – only MCCB's with thermal-magnetic tripping unit
- Direct opening – recommendation according to standard IEC 60204-1 – up to 1600 A frame size series 2 (EB2)
- Common internal accessories – up to 1600 A frame size series 2 (EB2)
- Visual safety
- Unsurpassed flexibility

Moulded case circuit breaker ETIBREAK EB2

Thermal magnetic

Thermal magnetic MCCBs are available in frame sizes from 125A to 800A. All frame sizes have adjustable both thermal and magnetic trip settings. Overload protection is adjustable between 63 % and 100 % of I_n , meanwhile short-circuit between 6-13x I_n (more details in the technical part of catalogue).

Legend: EB2 -> series 2
 L -> economic, lower short-circuit breaking capacity
 S -> standard short-circuit breaking capacity
 H -> high short-circuit breaking capacity

ETIBREAK EB2 125							
Type	I _n [A]	Code No.	Poles	I _{cu} /I _{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 125/3L 20A 3p	20	004671021	3	25/19	0,63-1/6-12	1,1	1
EB2 125/3L 32A 3p	32	004671022			0,63-1/6-12		
EB2 125/3L 50A 3p	50	004671023			0,63-1/6-12		
EB2 125/3L 63A 3p	63	004671024			0,63-1/6-12		
EB2 125/3L 100A 3p	100	004671025			0,63-1/6-12		
EB2 125/3L 125A 3p	125	004671026			0,63-1/6-10		
EB2 125/4L 20A 4p	20	004671027	4	25/19	0,63-1/6-12	1,4	1
EB2 125/4L 32A 4p	32	004671028			0,63-1/6-12		
EB2 125/4L 50A 4p	50	004671029			0,63-1/6-12		
EB2 125/4L 63A 4p	63	004671030			0,63-1/6-12		
EB2 125/4L 100A 4p	100	004671031			0,63-1/6-12		
EB2 125/4L 125A 4p	125	004671032			0,63-1/6-10		
EB2 125/3S 20A 3p	20	004671041	3	36/36	0,63-1/6-12	1,1	1
EB2 125/3S 32A 3p	32	004671042			0,63-1/6-12		
EB2 125/3S 50A 3p	50	004671043			0,63-1/6-12		
EB2 125/3S 63A 3p	63	004671044			0,63-1/6-12		
EB2 125/3S 100A 3p	100	004671045			0,63-1/6-12		
EB2 125/3S 125A 3p	125	004671046			0,63-1/6-10		
EB2 125/4S 20A 4p	20	004671047	4	36/36	0,63-1/6-12	1,4	1
EB2 125/4S 32A 4p	32	004671048			0,63-1/6-12		
EB2 125/4S 50A 4p	50	004671049			0,63-1/6-12		
EB2 125/4S 63A 4p	63	004671050			0,63-1/6-12		
EB2 125/4S 100A 4p	100	004671051			0,63-1/6-12		
EB2 125/4S 125A 4p	125	004671052			0,63-1/6-10		
EB2 125/3H 20A 3p	20	004672101	3	65/36	0,63-1/6-12	1,1	1
EB2 125/3H 32A 3p	32	004672102			0,63-1/6-12		
EB2 125/3H 50A 3p	50	004672103			0,63-1/6-12		
EB2 125/3H 63A 3p	63	004672104			0,63-1/6-12		
EB2 125/3H 100A 3p	100	004672105			0,63-1/6-12		
EB2 125/3H 125A 3p	125	004672106			0,63-1/6-10		
EB2 125/4H 20A 4p	20	004672107	4	65/36	0,63-1/6-12	1,4	1
EB2 125/4H 32A 4p	32	004672108			0,63-1/6-12		
EB2 125/4H 50A 4p	50	004672109			0,63-1/6-12		
EB2 125/4H 63A 4p	63	004672110			0,63-1/6-12		
EB2 125/4H 100A 4p	100	004672111			0,63-1/6-12		
EB2 125/4H 125A 4p	125	004672112			0,63-1/6-10		
EB2 125/3V 20A 3p 1000V	20	004671371	3	4/4*	0,63-1/6-12	1,1	1
EB2 125/3V 32A 3p 1000V	32	004671372			0,63-1/6-12		
EB2 125/3V 50A 3p 1000V	50	004671373		6/4*	0,63-1/6-12		
EB2 125/3V 63A 3p 1000V	63	004671374			0,63-1/6-12		
EB2 125/3V 100A 3p 1000V	100	004671375			0,63-1/6-12		
EB2 125/3V 125A 3p 1000V	125	004671376			0,63-1/6-10		

*1100V AC





ETIBREAK EB2 160/250

Type	I _n [A]	Code No.	Poles	I _{cu} /I _{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 250/3L 200A 3p	200	004671072	3	25/19	0,63-1/6-13	1,5	1
EB2 250/3L 250A 3p	250	004671073			0,63-1/6-10		
EB2 250/4L 200A 4p	200	004671075	4		0,63-1/6-13	1,9	
EB2 250/4L 250A 4p	250	004671076			0,63-1/6-10		
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EB2 160/3S 160A 3p	160	004671061	3	36/36	0,63-1/6-13	1,5	1
EB2 250/3S 200A 3p	200	004671082			0,63-1/6-13		
EB2 250/3S 250A 3p	250	004671083			0,63-1/6-10		
EB2 160/4S 160A 4p	160	004671062	4		0,63-1/6-13	1,9	
EB2 250/4S 200A 4p	200	004671085			0,63-1/6-13		
EB2 250/4S 250A 4p	250	004671086			0,63-1/6-10		
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EB2 160/3H 160A 3p	160	004672120	3	65/36	0,63-1/6-13	1,5	1
EB2 250/3H 160A 3p	160	004672130			0,63-1/6-13		
EB2 250/3H 200A 3p	200	004672131			0,63-1/6-13		
EB2 250/3H 250A 3p	250	004672132	4		0,63-1/6-10	1,9	
EB2 160/4H 160A 4p	160	004672121			0,63-1/6-13		
EB2 250/4H 160A 4p	160	004672133			0,63-1/6-13		
EB2 250/4H 200A 4p	200	004672134	4	0,63-1/6-13	1,9		
EB2 250/4H 250A 4p	250	004672135		0,63-1/6-10			
<hr/>							
EB2 250/3V 160A 3p 1000V	160	004671377	3	6/4*	0,63-1/6-13	1,5	1
EB2 250/3V 250A 3p 1000V	250	004671378			0,63-1/6-10		

*1100V AC



ETIBREAK EB2 400

Type	I _n [A]	Code No.	Poles	I _{cu} /I _{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 400/3LF 400A 3p	400A	004671105	3	25/25	fixed/adjustable	4,2	1
EB2 400/3SF 400A 3p	400A	004671106			fixed/adjustable	4,2	
EB2 400/4SF 400A 4p	400A	004671108	4		(6-12)	5,6	
<hr/>							
EB2 400/3L 250A 3p	250	004671091	3	25/25	0,63-1/6-12	4,2	1
EB2 400/3L 400A 3p	400	004671092				5,6	
EB2 400/4L 250A 4p	250	004671093	4			5,6	
EB2 400/4L 400A 4p	400	004671094				5,6	
<hr/>							
EB2 400/3S 250A 3p	250	004671101	3	50/50	0,63-1/6-12	4,3	1
EB2 400/3S 400A 3p	400	004671102				5,7	
EB2 400/4S 250A 4p	250	004671103	4			5,7	
EB2 400/4S 400A 4p	400	004671104				5,7	

ETIBREAK EB2 630/800

Type	I _n [A]	Code No.	Poles	I _{cu} /I _{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 800/3LF 630A 3p	630	004671117	3	36/36	fixed/adjustable (5-10)	8	1
EB2 800/3LF 800A 3p	800	004672204				8,5	
EB2 800/4LF 630A 4p	630	004671118	4			11	
EB2 800/4LF 800A 4p	800	004672205				11,5	
EB2 800/3L 630A 3p	630	004672150	3	36/36	0,63-1 / 5-10	8,5	1
EB2 800/3L 800A 3p	800	004672151				11,5	
EB2 800/4L 630A 4p	630	004672152	4			11,5	
EB2 800/4L 800A 4p	800	004672153				11,5	
EB2 800/3S 630A 3p	630	004672160	3	50/50	0,63-1 / 5-10	8,5	1
EB2 800/3S 800A 3p	800	004672161				11,5	
EB2 800/4S 630A 4p	630	004672162	4			11,5	
EB2 800/4S 800A 4p	800	004672163				11,5	
EB2 800/3H 630A 3p	630	004672170	3	70/50	0,63-1 / 5-10	8,5	1
EB2 800/3H 800A 3p	800	004672171				11,5	
EB2 800/4H 630A 4p	630	004672172	4			11,5	
EB2 800/4H 800A 4p	800	004672173				11,5	



ETIBREAK

Microprocessor's MCCBs

Microprocessor's MCCBs are available in frame sizes from 250 A up to 1600 A, with rated current from 40 A up to 1600 A. All frame sizes have adjustable thermal and magnetic protection.

Series 2: Protection against overload can be adjusted between 0,4 – 1 x I_n, meanwhile short-circuit protection has already preset different curves, which can be easily selected according to the type of load.

Optional Functions:

- A - Standard relay with LSI Characteristic (where no letters are present then MCCB is A type)
- P - Preferential Trip Alarm
- G - Ground Fault

- N - Neutral Protection
- S - Phase rotation function
- C - Communication function
- W - Electrical energy pulse
- H - Harmonic current

ETIBREAK EB2 250

Type	I _n [A]	Code No.	Poles	I _{cu} /I _{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 250/3LE 40A 3p	40	004671351	3	36/36	0,4-1/ adjustable	2,5	1
EB2 250/3LE 125A 3p	125	004671352				2,5	
EB2 250/3LE 160A 3p	160	004671353	4			3,3	
EB2 250/3LE 250A 3p	250	004671354				3,3	
EB2 250/4LE 40A 4p	40	004671355	4	70/70	0,4-1/ adjustable	3,3	1
EB2 250/4LE 125A 4p	125	004671356				3,3	
EB2 250/4LE 160A 4p	160	004671357	4			3,3	
EB2 250/4LE 250A 4p	250	004671358				3,3	
EB2 250/3E 40A 3p	40	004671301	3	70/70	0,4-1/ adjustable	2,5	1
EB2 250/3E 125A 3p	125	004671302				2,5	
EB2 250/3E 160A 3p	160	004671303	4			3,3	
EB2 250/3E 250A 3p	250	004671304				3,3	
EB2 250/4E 40A 4p	40	004671305	4	70/70	0,4-1/ adjustable	3,3	1
EB2 250/4E 125A 4p	125	004671306				3,3	
EB2 250/4E 160A 4p	160	004671307	4			3,3	
EB2 250/4E 250A 4p	250	004671308				3,3	





ETIBREAK EB2 400

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 400/3E 250A 3p	250	004671111	3	50/50	0,4-1/ adjustable	4,3	1
EB2 400/3E 400A 3p	400	004671112					
EB2 400/3E 400A 3p APG	400	004671115					
EB2 400/4E 250A 4p	250	004671113	4	50/50	0,4-1/ adjustable	5,7	1
EB2 400/4E 400A 4p	400	004671114					
EB2 400/4E 400A 4p APGN	400	004671116					

ETIBREAK EB2 400 LCD

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 400/3LCD 250A 3p A	250	004672144	3	50/50	0,4-1 / adjustable	4,3	1
EB2 400/3LCD 250A 3p APCWH	250	004672145					
EB2 400/3LCD 400A 3p A	400	004672146					
EB2 400/3LCD 400A 3p APCWH	400	004672147	4	50/50	0,4-1 / adjustable	5,7	1
EB2 400/4LCD 250A 4p A	250	004672148					
EB2 400/4LCD 250A 4p AGN	250	004672290					
EB2 400/4LCD 250A 4p APGNS	250	004672154	4	70/70	0,4-1 / adjustable	5,7	1
EB2 400/4LCD 250A 4p APCWH	250	004672155					
EB2 400/4LCD 250A 4p APGNSCWH	250	004672291					
EB2 400/4LCD 400A 4p A	400	004672156	4	70/70	0,4-1 / adjustable	5,7	1
EB2 400/4LCD 400A 4p AGN	400	004672292					
EB2 400/4LCD 400A 4p APGNS	400	004672157					
EB2 400/4LCD 400A 4p APCWH	400	004672158	4	70/70	0,4-1 / adjustable	5,7	1
EB2 400/4LCD 400A 4p APGNSCWH	400	004672293					
EB2 400/4LCD 400A 4p APGNSCWH	400	004672296					
EB2 400/4LCD 400A 4p APGNSCWH	400	004672297	4	70/70	0,4-1 / adjustable	5,7	1
EB2 400/4LCD 400A 4p APGNSCWH	400	004672298					



ETIBREAK EB2 630

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 630/3LE 630A 3p	630	004671121	3	36/36	0,4-1/ adjustable	3,75	1
EB2 630/4LE 630A 4p	630	004671122	4			4,95	
EB2 630/4LE 630A 4p APGN	630	004671123	4			6,5	
EB2 630/3E 630A 3p	630	004671127	3	50/50	0,4-1/ adjustable	3,75	1
EB2 630/4E 630A 4p	630	004671128	4			4,95	
EB2 630/4E 630A 4p APGN	630	004671129	4			6,5	
EB2 630/3HE 630A 3p	630	004672140	3	70/70	0,4-1/ adjustable	3,75	1
EB2 630/4HE 630A 4p	630	004672141	4			4,95	



Low voltage moulded case circuit breakers and low voltage switch disconnectors

ETIBREAK EB2 630 LCD

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 630/3LLCD 630A 3p A	630	004672122	3	36/36	0,4-1/ adjustable	5	1
EB2 630/3LLCD 630A 3p APCWH	630	004672123	3				
EB2 630/4LLCD 630A 4p A	630	004672124	4				
EB2 630/4LLCD 630A 4p AGN	630	004672125					
EB2 630/4LLCD 630A 4p APGNS	630	004672126					
EB2 630/4LLCD 630A 4p APCWH	630	004672127					
EB2 630/4LLCD 630A 4p APGNSCWH	630	004672128					
EB2 630/4LCD 630A 4p AGN	630	004672142	4	50/50	0,4-1/ adjustable	6,5	1
EB2 630/4LCD 630A 4p APGNSCWH	630	004672143	4	50/50	0,4-1/ adjustable	6,5	1

ETIBREAK EB2 800

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 800/3LE 800A 3p	800	004672180	3	50/50	0,4-1/ adjustable	9,1	1
EB2 800/4LE 800A 4p	800	004672181	4				
EB2 800/4LE 800A 4p AGN	800	004672182	4				
EB2 800/4LE 800A 4p APGN	800	004672183	4				
EB2 800/3E 800A 3p	800	004672190	3	70/70	0,4-1/ adjustable	9,1	1
EB2 800/3E 800A 4p	800	004672191	4				
EB2 800/3HE 630A 3p	630	004672200	3	125/94	0,4-1/ adjustable	13,3	1
EB2 800/3HE 800A 3p	800	004672201					
EB2 800/4HE 630A 4p	630	004672202	4				
EB2 800/4HE 800A 4p	800	004672203					

ETIBREAK EB2 1000

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 1000/3LE 1000A 3p	1000	004672210	3	50/38	0,4-1/ adjustable	11	1
EB2 1000/4LE 1000A 4p	1000	004672211	4				
EB2 1000/4LE 1000A 4p APGN	1000	004672212	4				
EB2 1000/3E 1000A 3p	1000	004672220	3	70/50	0,4-1/ adjustable	11	1
EB2 1000/3E 1000A 4p	1000	004672221	4				
EB2 1000/4E 1000A 4p APGN	1000	004672222	4				

ETIBREAK EB2 1250

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 1250/3LE 1250A 3p	1250	004672230	3	50/38	0,4-1/ adjustable	19,8	1
EB2 1250/4LE 1250A 4p	1250	004672231	4				
EB2 1250/4LE 1250A 4p APGN	1250	004672232	4				
EB2 1250/3E 1250A 3p	1250	004672240	3	70/50	0,4-1/ adjustable	19,8	1
EB2 1250/3E 1250A 4p	1250	004672241	4				
EB2 1250/4E 1250A 4p APGN	1250	004672242	4				





ETIBREAK EB2 1600

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} 400/415V [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2 1600/3LE-FC 1600A 3p	1600	004672250	3	50/38	0,4-1 / adjustable	27	1
EB2 1600/4LE-FC 1600A 4p	1600	004672251	4			35	
EB2 1600/4LE-FC 1600A 4p APGN	1600	004672252	4			35	
EB2 1600/3LE-RC 1600A 3p	1600	004672270	3			27	
EB2 1600/4LE-RC 1600A 4p	1600	004672271	4			35	
EB2 1600/4LE-RC 1600A 4p APGN	1600	004672272	4			35	
EB2 1600/3E-RC 1600A 3p	1600	004672280	3	100/75	0,4-1 / adjustable	27	1
EB2 1600/4E-RC 1600A 4p	1600	004672281	4			35	
EB2 1600/4E-RC 1600A 4p APGN	1600	004672282	4			35	
EB2 1600/3E-FC 1600A 3p	1600	004672260	3			27	
EB2 1600/3E-FC 1600A 4p	1600	004672261	4			35	
EB2 1600/4E-FC 1600A 4p APGN	1600	004672262	4			35	

FC - Front Connection
RC - Rear Connection

Low voltage switch disconnecter ETIBREAK ED2



ETIBREAK ED2 125-1600

Type	I_n [A]	Code No.	Poles	I_{cm} [kA peak]	U_c AC/DC [V]	Weight [kg]	Packaging [pcs]
ED2 125/3	125	004671271	3	3,6	690/250	1,1	1
ED2 160/3	160	004671272	3	6	690/250	1,5	1
ED2 250/3	250	004671273	3	6	690/250	1,5	1
ED2 400/3	400	004671274	3	9	690/250	4,2	1
ED2 630/3	630	004671275	3	9	690/250	4,4	1
ED2 800/3	800	004672370	3	17	690/250	8,5	1
ED2 1000/3	1000	004672373	3	17	690/250	10,4	1
ED2 1250/3	1250	004672371	3	32	690/250	18,2	1
ED2 1250/3 PI 3C	1250	004672374	3	32	690/250	18,2	1
ED2 1600/3 FC	1600	004672372	3	45	690/250	24,9	1
ED2 125/4	125	004671276	4	3,6	690/250	1,4	1
ED2 160/4	160	004671277	4	6	690/250	1,9	1
ED2 250/4	250	004671278	4	6	690/250	1,9	1
ED2 400/4	400	004671279	4	9	690/250	5,6	1
ED2 630/4	630	004671280	4	9	690/250	5,8	1
ED2 800/4	800	004672380	4	17	690/250	11,5	1
ED2 1000/4	1000	004672383	4	17	690/250	14,0	1
ED2 1250/4	1250	004672381	4	32	690/250	23,4	1
ED2 1600/4 FC	1600	004672382	4	45	690/250	32,9	1

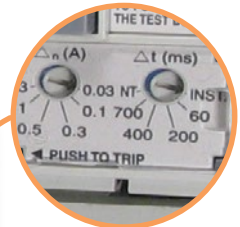
Note:
All internal and external accessories for MCCBs can also be mounted to corresponding type of switch disconnectors.

ED2 1250/3 PI 3C:
This is an already prepared Plug-in version for ED2 with 3 AUX terminals on conversion side. Beside that you have to order base side (NPF) and AUX terminals for base side (please see accessories for 1250AF)

Low voltage moulded case circuit breakers with residual current protection

Main features and advantages

Breaking capacities as on MCCBs



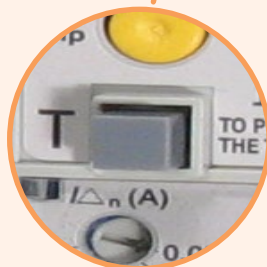
Adjustable residual current tripping thresholds between 30mA and 3A. Adjustable time delay for residual current protection between 60ms and 700ms including INST (instantaneous) and NT (No Trip).



Type A: Tripping is ensured for residual sinusoidal AC in the presence of residual pulsating DC.



Voltage Presence LED Indicator and Trip Indicator (the yellow button pops up to indicate tripping due to residual current)



Test Button (to test the residual current detection and tripping system)



Dielectric test device plug (to allow dielectric testing with the EB2R closed – ON)



Adjustable overload protection I_R can be set between 63% and 100% of I_n

Low voltage moulded case circuit breaker with residual current protection EB2R

Main advantages:

- Combined protection against overloads, short circuits and earth leakage integrated in one device
- The new EB2R save the space
- The EB2R has the same dimensions and fixing as the EB2 MCCBs
- The EB2R eliminates the need for either an external relay with current transformers or add-on block
- Residual current is adjustable
- Earth leakage protection time delay is adjustable
- Wide range of accessories (as MCCB – only shunt/undervoltage trip units can not be fitted to EB2R)



ETIBREAK EB2R 125

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2R 125/3L 20A 3P	20	004671501	3	25/19	0.63-1/12	1,1	1
EB2R 125/3L 32A 3P	32	004671502	3	25/19	0.63-1/12	1,1	1
EB2R 125/3L 50A 3P	50	004671503	3	25/19	0.63-1/12	1,1	1
EB2R 125/3L 63A 3P	63	004671504	3	25/19	0.63-1/12	1,1	1
EB2R 125/3L 100A 3P	100	004671505	3	25/19	0.63-1/12	1,1	1
EB2R 125/3L 125A 3P	125	004671506	3	25/19	0.63-1/10	1,1	1
EB2R 125/4L 20A 4P	20	004671507	4	25/19	0.63-1/12	1,4	1
EB2R 125/4L 32A 4P	32	004671508	4	25/19	0.63-1/12	1,4	1
EB2R 125/4L 50A 4P	50	004671509	4	25/19	0.63-1/12	1,4	1
EB2R 125/4L 63A 4P	63	004671510	4	25/19	0.63-1/12	1,4	1
EB2R 125/4L 100A 4P	100	004671511	4	25/19	0.63-1/12	1,4	1
EB2R 125/4L 125A 4P	125	004671512	4	25/19	0.63-1/10	1,4	1

Note: all internal and external accessories can be used with EB2R – only exceptions are DA shunt trip unit and NA undervoltage trip unit (cannot be fitted to EB2R)

Residual current monitor and pre trip module - ETIBREAK EB2R 125

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2R-M 125/3L 20A 3P	20	004671513	3	25/19	0,63-1/12	1,1	1
EB2R-M 125/3L 32A 3P	32	004671514			0,63-1/12	1,1	
EB2R-M 125/3L 50A 3P	50	004671515			0,63-1/12	1,1	
EB2R-M 125/3L 63A 3P	63	004671516			0,63-1/12	1,1	
EB2R-M 125/3L 100A 3P	100	004671517			0,63-1/12	1,1	
EB2R-M 125/3L 125A 3P	125	004671518			0,63-1/10	1,1	
EB2R-M 125/4L 20A 4P	20	004671519	4	25/19	0,63-1/12	1,4	
EB2R-M 125/4L 32A 4P	32	004671520			0,63-1/12	1,4	
EB2R-M 125/4L 50A 4P	50	004671521			0,63-1/12	1,4	
EB2R-M 125/4L 63A 4P	63	004671522			0,63-1/12	1,4	
EB2R-M 125/4L 100A 4P	100	004671523			0,63-1/12	1,4	
EB2R-M 125/4L 125A 4P	125	004671524				1,4	

ETIBREAK EB2R 250

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2R 250/3L 160A 3P	160	004671581	3	25/19	0.63-1/13	1,5	1
EB2R 250/3L 250A 3P	250	004671582	3	25/19	0.63-1/10	1,5	1
EB2R 250/4L 160A 4P	160	004671583	4	25/19	0.63-1/13	1,9	1
EB2R 250/4L 250A 4P	250	004671584	4	25/19	0.63-1/10	1,9	1

Note: all internal and external accessories can be used with EB2R – only exceptions are DA shunt trip unit and NA under-voltage trip unit (cannot be fitted to EB2R)



Residual current monitor and pre trip module - ETIBREAK EB2R 250

Type	I_n [A]	Code No.	Poles	I_{cu}/I_{cs} [kA]	Adjustment thermal/magnetic	Weight [kg]	Packaging [pcs]
EB2R-M 250/3L 160A 3P	160	004671585	3	25/19	0,63-1/13	1,5	1
EB2R-M 250/3L 250A 3P	250	004671586			0,63-1/10	1,5	
EB2R-M 250/4L 160A 4P	160	004671587	4	25/19	0,63-1/13	1,9	
EB2R-M 250/4L 250A 4P	250	004671588			0,63-1/10	1,9	



Residual current monitor and pre trip module (optional)

- normally open alarm contact (2A, 250V AC) closes on detection of residual current. Alarm threshold is adjustable.
- Green LED indicates voltage is present
- Red LED provides visual indications of residual current.
- Can be configured to provide trip + alarm or alarm only.
- Remote trip terminals allow tripping by push-button
- Can be configured to provide voltage drop protection.

Accessories

Internal accessories



NA2



PS2

Undervoltage trip for EB2, ED2 125-630

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
Undervoltage trip unit NA2 125-630AF AC200-240V	004671153	200-240 V AC	3, 4	1/1
Undervoltage trip unit NA2 125-630AF AC380-450V	004671154	380-450 V AC	3, 4	1/1
Undervoltage trip unit NA2 125-630AF DC24V	004671155	24 V DC	3, 4	1/1
Undervoltage trip unit NA2 125-630AF DC100-120V	004671156	100-120 V DC	3, 4	1/1
Undervoltage trip unit NA2 125-630AF DC200-240V	004671157	200-240 V DC	3, 4	1/1

Important note: The shunt trip unit DA and undervoltage trip unit NA cannot be mounted in the same breaker

Undervoltage trip for EB2, ED2 800-1600

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
Undervoltage trip unit NA2 800-1600AF AC380-415V	004672299	AC 380-415V	3, 4	1/1
Undervoltage trip unit NA2 800-1600AF AC220-240V	004672300	AC 220-240 V	3, 4	1/1
Undervoltage trip unit NA2 800-1600AF AC415-450V	004672301	AC 415-450 V	3, 4	1/1
Undervoltage trip unit NA2 800-1600AF DC24V	004672302	24 V DC	3, 4	1/1
Undervoltage trip unit NA2 800-1600AF DC100-120V	004672303	100-120 V DC	3, 4	1/1
Undervoltage trip unit NA2 800-1600AF DC200-240V	004672304	200-240 V DC	3, 4	1/1

Important note: The shunt trip unit DA and undervoltage trip unit NA cannot be mounted in the same breaker

Undervoltage trip for EB2, ED2 125-630AF - Time Delay

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
NA2 TD 125-630AF AC230-240V	004672341	230-240V AC	3, 4	1/1
NA2 TD 125-630AF AC380-415V	004672342	380-415V AC	3, 4	1/1
NA2 TD 125-630AF AC440-450V	004672343	440-450V AC	3, 4	1/1
NA2 TD 125-630AF DC24V	004672344	24V DC	3, 4	1/1
NA2 TD 125-630AF DC115-120V	004672345	115-120V DC	3, 4	1/1

Important note: The shunt trip unit DA and undervoltage trip unit NA cannot be mounted in the same breaker

Time delay of 500ms

Time delay units are fitted to the outside of MCCBs

Undervoltage trip for EB2, ED2 400-630AF only 4p - Time Delay

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
NA2 TD 4p 400-630AF AC230-240V	004672365	230-240V AC	4	1/1
NA2 TD 4p 400-630AF AC380-415V	004672366	380-415V AC	4	1/1
NA2 TD 4p 400-630AF AC440-450V	004672367	440-450V AC	4	1/1
NA2 TD 4p 400-630AF DC24V	004672368	24V DC	4	1/1
NA2 TD 4p 400-630AF DC115-120V	004672369	115-120V DC	4	1/1

Important note: The shunt trip unit DA and undervoltage trip unit NA cannot be mounted in the same breaker

Time delay of 500ms

Time delay units are fitted to the outside of MCCBs

Undervoltage trip for EB2, ED2 800-1000AF - Time Delay

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
NA2 TD 800-1000AF AC230-240V	004672305	230-240V AC	3, 4	1/1
NA2 TD 800-1000AF AC380-415V	004672306	380-415V AC	3, 4	1/1
NA2 TD 800-1000AF AC440-450V	004672307	440-450V AC	3, 4	1/1
NA2 TD 800-1000AF DC24V	004672308	24V DC	3, 4	1/1
NA2 TD 800-1000AF DC115-120V	004672309	115-120V DC	3, 4	1/1

Important note: The shunt trip unit DA and undervoltage trip unit NA cannot be mounted in the same breaker

Time delay of 500ms

Time delay units are fitted to the outside of MCCBs

Undervoltage trip for EB2, ED2 1250-1600AF - Time Delay

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
NA2 TD 1250-1600AF AC230-240V	004672390	230-240V AC	3, 4	1/1
NA2 TD 1250-1600AF AC380-415V	004672391	380-415V AC	3, 4	1/1
NA2 TD 1250-1600AF AC440-450V	004672392	440-450V AC	3, 4	1/1
NA2 TD 1250-1600AF DC24V	004672393	24V DC	3, 4	1/1
NA2 TD 1250-1600AF DC115-120V	004672394	115-120V DC	3, 4	1/1

Important note: The shunt trip unit DA and undervoltage trip unit NA cannot be mounted in the same breaker

Time delay of 500ms

Time delay units are fitted to the outside of MCCBs

Auxiliary & Alarm switch for EB2, ED2 125-1600 AF

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
Auxiliary switch, PS2 125-1600AF	004671141	1 changeover contact	3, 4	1/1
Auxiliary switch, heavy duty PS2-NO 125-1600AF	004671142	1 contact, NO	3, 4	1/1
Auxiliary switch, heavy duty PS2-NC 125-1600AF	004671143	1 contact, NC	3, 4	1/1
Alarm switch SS2 125-1600AF	004671144	1 changeover contact	3, 4	1/1
Alarm switch, heavy duty SS2-NO 125-1600AF	004671145	1 contact, NO	3, 4	1/1
Alarm switch, heavy duty SS2-NC 125-1600AF	004671146	1 contact, NC	3, 4	1/1



SS2

Shunt trip for EB2, ED2 125-1000A

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
DA2 125-1000AF AC200-240V	004671147	AC200-240V	3, 4	1/1
DA2 125-1000AF AC380-450V	004671148	AC380-450V	3, 4	1/1
DA2 125-1000AF DC24V	004671149	DC24V	3, 4	1/1
DA2 125-1000AF DC48V	004671150	DC48V	3, 4	1/1
DA2 125-1000AF DC100-120V	004671151	DC110-120V	3, 4	1/1
DA2 125-1000AF DC 200-240V	004671152	DC 200-240V	3, 4	1/1
DA2 125-1000AF DC 12V	004671159	12V DC	3, 4	1/1
DA2 125-1000AF AC 24V	004671189	24V AC	3, 4	1/1

Important note: The shunt trip unit DA and undervoltage trip unit NA cannot be mounted in the same breaker



DA2

Shunt trip for EB2, ED2 1250 & 1600A

Internal accessories can be mounted by customer	Code No.	Description	Poles	Packaging [pcs]
DA2 1250-1600AF AC200-240V	004671135	AC200-240V	3, 4	1/1
DA2 1250-1600AF AC380-450V	004671136	AC380-450V	3, 4	1/1
DA2 1250-1600AF DC24V	004671137	DC24V	3, 4	1/1
DA2 1250-1600AF DC48V	004671138	DC48V	3, 4	1/1
DA2 1250-1600AF DC100-120V	004671139	DC110-120V	3, 4	1/1
DA2 1250-1600AF DC 200-240V	004671140	DC 200-240V	3, 4	1/1
DA2 1250-1600AF AC 24V	004671190	24V AC	3, 4	1/1

Important note: The shunt trip unit DA and undervoltage trip unit NA cannot be mounted in the same breaker

External accessories



PSPSS / PSHUV



PIO



ZB2 Straight



M02



IP3X R02

Accessories for EB2, ED2 125-1600 AF

	Code No	Poles	Packaging [pcs]
Plug for aux. And alarm switches PSPSS 125-630AF	004671457	3, 4	1/1
Plug for shunt trips and underv. trips PSHUV 125-630AF	004671458	3, 4	1/1
Socket – for internal accessories PIO 125-1000AF	004671459	3, 4	1/1
Mechanical interlock, MW cable 1m	004671178	3, 4	1/1
Mechanical interlock, MW cable 1,5m	004671179	3, 4	1/1
OCR checker 200-240V AC	004672310	3, 4	1/1
Terminal cover lock PZ 125-630AF	004672400	3, 4	1/1

Accessories for EB2, ED2 125

	Code No	Poles	Packaging [pcs]
Attach busbar, ZB2 125/3 Straight	004671161	3	3
Attach busbar, ZB2 125/4 Straight	004671162	4	3
Solderless Terminal, SP2 125/3	004671163	3	4
Solderless Terminal, SP2 125/4	004671164	4	4
Rear connections, RC2 125/3	004671187	3	3
Rear connections, RC2 125/4	004671188	4	4

Accessories for EB2, ED2 125

	Code No	Poles	Packaging [pcs]
Motor Operator, M02 125 AC230-240V	004671165	3, 4	1
Motor Operator, M02 125 AC100-110V	004671311	3, 4	1
Motor Operator, M02 125 DC24V	004671313	3, 4	1
Motor Operator, M02 125 DC48V	004671314	3, 4	1
Motor Operator, M02 125 DC100V	004671315	3, 4	1
Motor Operator, M02 125 AC230-240V, reset	004671166	3, 4	1
Motor Operator, M02 125 AC100-110V, reset	004671316	3, 4	1
Motor Operator, M02 125 DC24V, reset	004671318	3, 4	1
Motor Operator, M02 125 DC48V, reset	004671319	3, 4	1
Motor Operator, M02 125 DC100V, reset	004671320	3, 4	1
Motor Operator, M02 125 DC220V, reset	004671327	3, 4	1

Accessories for EB2, ED2 125

	Code No	Poles	Packaging [pcs]
Door Flange, PR2 125-250	004671167	3, 4	1
Door Flange, PR2 - mot 125-250	004671472	3, 4	1
Breaker mounted handle IP3X, R02 125, black	004671168	3, 4	1
Breaker mounted handle IP3X, R02 125, keylock (cylindrical), black	004671169	3, 4	1
Breaker mounted handle IP3X, R02 125, red	004671321	3, 4	1
Breaker mounted handle IP3X, R02 125, keylock (cylindrical), red	004671322	3, 4	1
Door mounted handle IP55, R02 125P, black	004671170	3, 4	1
Door mounted handle IP65, R02 125P, keylock (cylindrical), black	004671171	3, 4	1
Door mounted handle IP55, R02 125P, red	004671323	3, 4	1
Door mounted handle IP65, R02 125P, keylock (cylindrical), red	004671324	3, 4	1

Handle operating mechanism can be padlocked in OFF

Accessories

Accessories for EB2, ED2 125

	Code No	Poles	Packaging [pcs]
Slide mechanical interlock, MS 125 3P, MO or RO assembly not possible	004671172	3	1
Slide mechanical interlock, MS 125 4P, MO or RO assembly not possible	004671173	4	1
Link mechanical interlock, MLR 125 right, MO or RO assembly possible	004671174	3, 4	1
Link mechanical interlock, MLL 125 left 3p, MO or RO assembly possible	004671175	3	1
Link mechanical interlock, MLL 125 left 4p, MO or RO assembly possible	004671176	4	1
Wire mechanical interlock, MW 125, mechanism, MO or RO assembly possible	004671177	3, 4	1

Link mechanical configuration; MLR_right + MLL_left

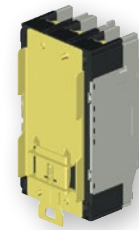
Wire mechanical configuration; 2x MW_mech. + MW_cable



MLR+MLL

Accessories for EB2, ED2 125

	Code No	Poles	Packaging [pcs]
OCR sealing cover 125 & 250	004671160	3, 4	1
Handle locks, ZA2 125-250	004671180	3, 4	1
Terminal cover lock, PZ 125-630AF	004672400	3, 4	1
Terminal cover, PRS2 125/3, front	004671181	3	1
Terminal cover, PRS2 125/4, front	004671182	4	1
Terminal cover, PRS2-SP 125/3, cable clamps	004671183	3	1
Terminal cover, PRS2-SP 125/4, cable clamps	004671184	4	1
Terminal cover, PRS2-NPF 125/3, plug-in	004671473	3	1
Terminal cover, PRS2-NPF 125/4, plug-in	004671474	4	1
Interpol barrier, IZ2 125	004671185	3, 4	1
DIN rail adapter, DIN 125 & 250	004671186	3, 4	1



DIN 125, 250



PRS2

Accessories for EB2, ED2 125

	Code No	Poles	Packaging [pcs]
Fixed plug-in 3-p, NPF 125	004671451	3	1
Fixed plug-in 4-p, NPF 125	004671452	4	1
Plug-in Conversion 3-p, NPI 125	004671453	3	1
Plug-in Conversion 4-p, NPI 125	004671454	4	1
Extension terminal for fixed Plug-in 3-p, SK3 125	004671455	3	3
Extension terminal for fixed Plug-in 4-p, SK4 125	004671456	4	4

- basic configuration: fixed plug-in + plug-in conversion

- extension terminals is used when fixed part of plug-in is under mounting plate - not used for basic configuration

- if additional accessories are installed in MCCB, plugs and sockets (PSPSS, PSHUV and PIO) are required



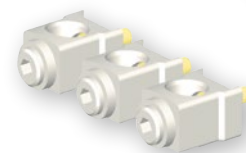
NPF



NPI

Accessories for EB2, ED2 160 and EB2, ED2 250

	Code No	Poles	Packaging [pcs]
Attach busbar ZB2 250/3 Offset	004671191	3	3
Attach busbar, ZB2 250/4 Straight	004671192	4	4
Attach busbar, ZB2 250/3 Straight	004671325	3	3
Solderless Terminal, SP2 250/3	004671193	3	3
Solderless Terminal, SP2 250/4	004671194	4	4
Rear connections, RC2 250/3S-L	004671477	3	3
Rear connections, RC2 250/3E	004671478	3	3
Rear connections, RC2 250/4S-L	004671479	4	4
Rear connections, RC2 250/4E	004671480	4	4
Busbar adapter 3p, DA-60/250/3/FE-5	001696162	3	1
Busbar adapter 4p, DA-60/250/4/FE-5	001696163	4	1



ZB2 Offset



SP2



RC2



DA-60



MO2

Accessories for EB2, ED2 160 and EB2, ED2 250

	Code No	Poles	Packaging [pcs]
Motor Operator, MO2 250 AC230-240V	004671195	3, 4	1
Motor Operator, MO2 250 AC100-110V	004671331	3, 4	1
Motor Operator, MO2 250 DC24V	004671333	3, 4	1
Motor Operator, MO2 250 DC48V	004671334	3, 4	1
Motor Operator, MO2 250 DC100V	004671335	3, 4	1
Motor Operator, MO2 250, AC230-240, reset	004671196	3, 4	1
Motor Operator, MO2 250 AC100-110V, reset	004671336	3, 4	1
Motor Operator, MO2 250 DC24V, reset	004671338	3, 4	1
Motor Operator, MO2 250 DC48V, reset	004671339	3, 4	1
Motor Operator, MO2 250 DC100V, reset	004671340	3, 4	1
Motor Operator, MO2 250 DC 200-220V, reset	004671328	3, 4	1



IP3X R02

Accessories for EB2, ED2 160 and EB2, ED2 250

	Code No	Poles	Packaging [pcs]
Door Flange, PR2 125-250	004671167	3, 4	1
Door Flange, PR2 - mot 125-250	004671472	3, 4	1
Breaker mounted handle IP3X, R02 250, black	004671197	3, 4	1
Breaker mounted handle IP3X, R02 250, keylock (cylindrical), black	004671198	3, 4	1
Breaker mounted handle IP3X, R02 250, red	004671341	3, 4	1
Breaker mounted handle IP3X, R02 250, keylock (cylindrical), red	004671342	3, 4	1
Door mounted handle IP55, R02 250P, black	004671199	3, 4	1
Door mounted handle IP65, R02 250P, black	004671200	3, 4	1
Door mounted handle IP55, R02 250P, red	004671343	3, 4	1
Door mounted handle IP65, R02 250P, red	004671344	3, 4	1

Handle operating mechanism can be padlocked in OFF

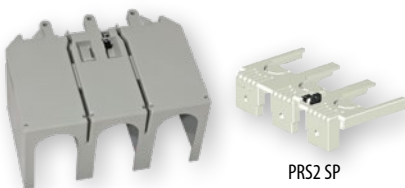


MS

Accessories for EB2, ED2 160 in EB2, ED2 250

	Code No	Poles	Packaging [pcs]
Slide mechanical interlock, MS 250 3P, MO or RO assembly not possible	004671201	3	1
Slide mechanical interlock, MS 250 4P, MO or RO assembly not possible	004671202	4	1
Link mechanical interlock, MLR 250 right, MO or RO assembly possible	004671203	3, 4	1
Link mechanical interlock, MLL 250 left 3p, MO or RO assembly possible	004671204	3	1
Link mechanical interlock, MLL 250 left 4p, MO or RO assembly possible	004671205	4	1
Wire mechanical interlock, MW 250, mechanism, MO or RO assembly possible	004671206	3, 4	1

Link mechanical interlock configuration; MLR_right + MLL_left
Wire mechanical interlock configuration; 2xMW_mech. + MW_cable



PRS2

PRS2 SP

Accessories for EB2, ED2 160 and EB2, ED2 250

	Code No	Poles	Packaging [pcs]
OCR sealing cover 125 & 250	004671160	3, 4	1
Handle locks, ZA2 125-250	004671180	3, 4	1
Terminal cover lock, PZ 125-630AF	004672400	3, 4	1
Terminal cover, PRS2 250/3, front	004671207	3	1
Terminal cover, PRS2 250/4, front	004671208	4	1
Terminal cover, PRS2-SP 250/3, cable clamps	004671209	3	1
Terminal cover, PRS2-SP 250/4, cable clamps	004671210	4	1
Terminal cover, PRS2-NPF 250/3, plug-in	004671475	3	1
Terminal cover, PRS2-NPF 250/4, plug-in	004671476	4	1
DIN rail adapter, DIN 125 & 250	004671186	3, 4	1

Accessories

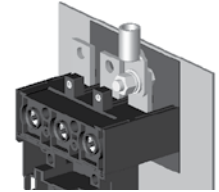
Accessories for EB2, ED2 160 and EB2, ED2 250

	Code No	Poles	Packaging [pcs]
Interpol barrier, IZ2 250	004671211	3, 4	1
Lateral block, LTBL 250, left	004671212	3, 4	1
Lateral block, LTBR 250, right	004671213	3, 4	1
Fixed plug-in 3-p, NPF 250	004671460	3	1
Fixed plug-in 4-p, NPF 250	004671461	4	1
Plug-in Conversion 3-p, NPI 250 for use with EB2 160/3S, 250/3L_S	004671462	3	1
Plug-in Conversion 4-p, NPI 250 for use with EB2 160/4S, 250/4L_S	004671463	4	1
Plug-in Conversion 3-p, NPI 250_E for use with EB2 250/3E	004671485	3	1
Plug-in Conversion 4-p, NPI 250_E for use with EB2 250/4E	004671486	4	1
Extension terminal for fixed Plug-in 3-p, SK3 250	004671464	3	set = 3 pcs
Extension terminal for fixed Plug-in 4-p, SK4 250	004671465	4	set = 4 pcs

- basic configuration: fixed plug-in + plug-in conversion
- extension terminals is used when fixed part of plug-in is under mounting plate - not used for basic configuration
- if additional accessories are installed in MCCB, plugs and sockets (PSPSS, PSHUV and PIO) are required,



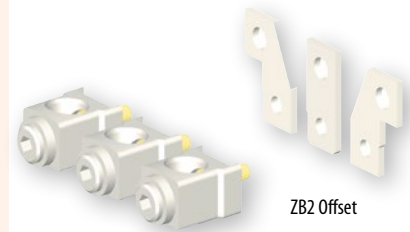
IZ2



SK3

Accessories for EB2, ED2 400 and EB2, ED2 630

	Code No	Poles	Packaging [pcs]
Attach busbar, ZB2 400/3 Offset	004671221	3	set = 3 pcs
Attach busbar, ZB2 400/4 Offset	004671222	4	set = 4 pcs
Attach busbar, ZB2 400/3 Straight	004671326	3	set = 3 pcs
Attach busbar, ZB2 630/3 Straight	004671223	3	set = 3 pcs
Attach busbar, ZB2 ZB2 630/3 Offset	004671220	3	set = 3 pcs
Attach busbar, ZB2 630/4 Offset	004671224	4	set = 4 pcs
Solderless Terminal, SP2 400/3	004671225	3	set = 3 pcs
Solderless Terminal, SP2 400/4	004671226	4	set = 4 pcs
Rear connections, RC2 400/3	004671247	3	3
Rear connections, RC2 400/4	004671248	4	4
Rear connections, RC2 630/3	004671249	3	3
Rear connections, RC2 630/4	004671250	4	4



ZB2 Offset

SP2



RC2

Accessories for EB2, ED2 400 and EB2, ED2 630

	Code No	Poles	Packaging [pcs]
Motor Operator, M02 630, AC100-240V	004671227	3, 4	1
Motor Operator, M02 630 DC24V	004671441	3, 4	1
Motor Operator, M02 630 DC100-120V	004671442	3, 4	1
Motor Operator, M02 630, AC100-240V, reset	004671228	3, 4	1
Motor Operator, M02 630 DC24V, reset	004671443	3, 4	1
Motor Operator, M02 630 DC100-120V, reset	004671444	3, 4	1
Motor Operator, M02 630 DC200-220V, reset	004671329	3, 4	1



M02

Accessories for EB2, ED2 400 and EB2, ED2 630

	Code No	Poles	Packaging [pcs]
Breaker mounted handle IP3X, R02 630, black	004671229	3, 4	1
Breaker mounted handle IP3X, R02 630, keylock, black	004671230	3, 4	1
Breaker mounted handle IP3X, R02 630, red	004671445	3, 4	1
Breaker mounted handle IP3X, R02 630, keylock, red	004671446	3, 4	1
Door mounted handle IP55, R02 630 P, black	004671231	3, 4	1
Door mounted handle IP65, R02 630P, black	004671232	3, 4	1
Door mounted handle IP55, R02 630P, red	004671447	3, 4	1
Door mounted handle IP65, R02 630P, red	004671448	3, 4	1

Handle operating mechanism can be padlocked in OFF



IP55, R02P



MW



PRS2



NPI



ZB2 Straight

Accessories for EB2, ED2 400 and EB2, ED2 630

	Code No	Poles	Packaging [pcs]
Slide mechanical interlock, MS 630 3P, MO or RO assembly not possible	004671233	3	1
Slide mechanical interlock, MS 630 4P, MO or RO assembly not possible	004671234	4	1
Link mechanical interlock, MLR 630 right , MO or RO assembly possible	004671235	3, 4	1
Link mechanical interlock, MLL 630 left 3p, MO or RO assembly possible	004671236	3	1
Link mechanical interlock, MLL 630 left 4p, MO or RO assembly possible	004671237	4	1
Wire mechanical interlock, MW 630, mechanism, MO or RO assembly possible	004671238	3, 4	1

Link mechanical interlock configuration; MLR_right + MLL_left

Wire mechanical interlock configuration; 2xMW_mech. + MW_cable

Accessories for EB2, ED2 400 and EB2, ED2 630

	Code No	Poles	Packaging [pcs]
Handle locks, ZA2 400/1000	004671239	3, 4	1
Terminal cover lock, PZ 125-630AF	004672400	3, 4	1
Terminal cover, PRS2 630/3, front	004671240	3	1
Terminal cover, PRS2 630/4, front	004671241	4	1
Terminal cover, PRS2-SP 630/3, cable clamps	004671242	3	1
Terminal cover, PRS2-SP 630/4, cable clamps	004671243	4	1
Interpol barrier, IZ2 400-1600	004671244	3, 4	1
Lateral block, LTBL 400-1000, left	004671245	3, 4	1
Lateral block, LTBR 400-1000, right	004671246	3, 4	1
Door Flange , PR2 400-630	004671449	3, 4	1

Accessories for EB2, ED2 400 and EB2, ED2 630

	Code No	Poles	Packaging [pcs]
Fixed plug-in 3-p, NPF 400-630	004671466	3	1
Fixed plug-in 4-p, NPF 400-630	004671467	4	1
Plug-in Conversion 3-p, NPI 400-630AF - 400A 3p	004671468	3	1
Plug-in Conversion 4-p, NPI 400-630AF - 400A 4p	004671469	4	1
Plug-in Conversion 3-p, NPI 400-630AF - 630A 3p	004671487	3	1
Plug-in Conversion 4-p, NPI 400-630AF - 630A 4p	004671488	4	1
Extension terminal for fixed Plug-in 3-p, SK3 400-630	004671470	3	set = 3 pcs
Extension terminal for fixed Plug-in 4-p, SK4 400-630	004671471	4	set = 4 pcs

- at 630A plug-in Conversion is max Rated current 504A at 50°C and 535,5A at 30°C and 40°C

- basic configuration: fixed plug-in + plug-in conversion

- extension terminals is used when fixed part of plug-in is under mounting plate - not used for basic configuration

- if additional accessories are installed in MCCB, plugs and sockets (PSPSS, PSHUV and PIO) are required,

Accessories for EB2, ED2 800

	Code No	Poles	Packaging [pcs]
Attach busbar, ZB2 S800-630/3 Straight	004672320	3	set = 3 pcs
Attach busbar, ZB2 S800-630/4 Straight	004672321	4	set = 4 pcs
Attach busbar, ZB2 S800-800/3 Straight	004672322	3	set = 3 pcs
Attach busbar, ZB2 S800-800/4 Straight	004672323	4	set = 4 pcs

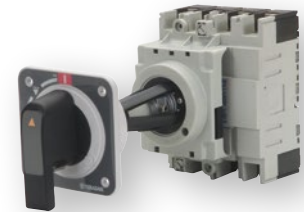
Accessories

Accessories for EB2, ED2 800 and EB2, ED2 1000

	Code No	Poles	Packaging [pcs]
Motor Operator, MO2 800-1000, AC100-240V	004672324	3, 4	1
Motor Operator, MO2 800-1000 DC24-48V	004672325	3, 4	1
Motor Operator, MO2 800-1000 DC100-120V	004672326	3, 4	1

Accessories for EB2, ED2 800 and EB2, ED2 1000

	Code No	Poles	Packaging [pcs]
Handle Operating Mechanism, RO2 800-1000, black	004672327	3, 4	1
Handle Operating Mechanism, RO2 800-1000, key lock, black	004672328	3, 4	1
Handle Operating Mechanism, RO2 800-1000, red	004672329	3, 4	1
Handle Operating Mechanism, RO2 800-1000, key lock, red	004672330	3, 4	1
External Handle Operating Mechanism, RO2 800-1000 P, black	004672331	3, 4	1
External Handle Operating Mechanism, RO2 800-1000P, red	004672332	3, 4	1
Toggle Extension, PRO2 800-1600A	004672319	3, 4	1



Door mounted handle
(door interlock handle)

Accessories for EB2, ED2 800 and EB2, ED2 1000

	Code No	Poles	Packaging [pcs]
Slide mechanical interlock, MS 800 3P, MO or RO assembly not possible	004672333	3	1
Slide mechanical interlock, MS 800 4P, MO or RO assembly not possible	004672334	4	1
Link mechanical interlock, MLR 800-1000 right, MO or RO assembly possible	004672335	3, 4	1
Link mechanical interlock, MLL 800-1000 left 3p, MO or RO assembly possible	004672336	3	1
Link mechanical interlock, MLL 800-1000 left 4p, MO or RO assembly possible	004672337	4	1
Wire mechanical interlock, MW 800-1000, mechanism, MO or RO assembly possible	004672338	3, 4	1

Link mechanical interlock configuration; MLR_right + MLL_left

Wire mechanical interlock configuration; 2xMW_mech. + MW_cable



MW_cable

Accessories for EB2, ED2 800 and EB2, ED2 1000

	Code No	Poles	Packaging [pcs]
Handle locks, ZA2 400/1000	004671239	3, 4	1
Terminal cover, PRS2 800-1000/3, front	004672339	3	1
Terminal cover, PRS2 800-1000/4, front	004672340	4	1
Interpol barrier, IZ2 400-1600	004671244	3, 4	1
Lateral block, LTBL 400-1000, left	004671245	3	1
Lateral block, LTBR 400-1000, right	004671246	4	1



PRS2

Accessories for EB2, ED2 800

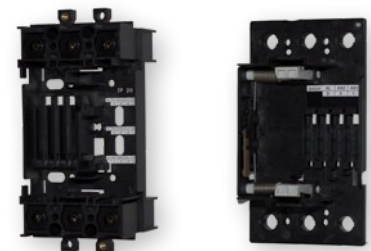
	Code No	Poles	Packaging [pcs]
Fixed, Plug-in 3-p, NPF 800/3 AB	004672402	3	1
Fixed, Plug-in 4-p, NPF 800/4 AB	004672404	4	1
Plug-in Conversion 3-p, NPI 800/3	004672405	3	1
Plug-in Conversion 4-p, NPI 800/4	004672406	4	1
3 flat bars for Plug-in mount blocks, ZB2 800/3 NPF	004672407	3	set = 3 pcs
4 flat bars for Plug-in mount blocks, ZB2 800/4 NPF	004672408	4	set = 4 pcs
Plug for aux. and alarm switches PSPSS 800-1000AF	004671491	3, 4	1
Plug for shunt trips and underv. trips PSHUV 800-1000AF	004671492	3, 4	1

- basic configuration: fixed plug-in + plug-in conversion

- extension terminals is used when fixed part of plug-in is under mounting plate - not used for basic configuration

- if additional accessories are installed in MCCB, plugs and sockets (PSPSS, PSHUV and PIO) are required,

- AB suitable for attach bars



NPF

NPI



Handle Operating Mechanism

Accessories for EB2, ED2 1250 and EB2, ED2 1600

	Code No	Poles	Packaging [pcs]
Motor Operator, MO2 1250-1600, AC240V	004672350	3, 4	1
Motor Operator, MO2 1250-1600 DC24-48V	004672351	3, 4	1
Motor Operator, MO2 1250-1600 DC100-110V	004672352	3, 4	1

Accessories for EB2, ED2 1250 and EB2, ED2 1600

	Code No	Poles	Packaging [pcs]
Handle Operating Mechanism, RO2 1250-1600, black	004672353	3, 4	1
Handle Operating Mechanism, RO2 1250-1600, key lock, black	004672354	3, 4	1
Handle Operating Mechanism, RO2 1250-1600, red	004672355	3, 4	1
Handle Operating Mechanism, RO2 1250-1600, key lock, red	004672356	3, 4	1
External Handle Operating Mechanism, RO2 1250-1600 P, black	004672357	3, 4	1
External Handle Operating Mechanism, RO2 1250-1600P, red	004672358	3, 4	1
Toggle Extension, PRO2 800-1600A	004672319	3, 4	1

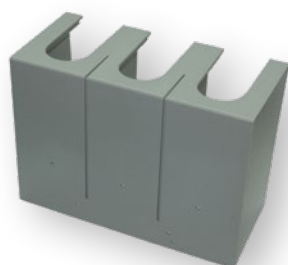
Accessories for EB2, ED2 1250

	Code No	Poles	Packaging [pcs]
Slide mechanical interlock, MS 1250 3P, MO or RO assembly not possible	004672359	3	1
Slide mechanical interlock, MS 1250 4P, MO or RO assembly not possible	004672360	4	1

Accessories for EB2, ED2 1250

	Code No	Poles	Packaging [pcs]
Fixed plug-in 3-p, NPF 1250/3	004672411	3	1
Fixed plug-in 4-p, NPF 1250/4	004672412	4	1
Plug-in Conversion 3-p, NPI 1250/3	004672413	3	1
Plug-in Conversion 4-p, NPI 1250/4	004672414	4	1
AUX terminal 1250A Base Side	004672415	3, 4	1

- Plug in version of MCCB has to be assembled by ETI
 - max 3 AUX terminals can be used and each has 5 connections



Terminal Cover

Accessories for EB2, ED2 1250

	Code No	Poles	Packaging [pcs]
Terminal cover, PRS2 1250/3, front	004672361	3	1
Terminal cover, PRS2 1250/4, front	004672362	4	1
Interpol barrier, IZ2 400-1600	004671244	3, 4	3/4

Technical data

Low voltage moulded case circuit breaker EB2

Product series	description	unit	condition	EB2 125				EB2 160	
				L	S	H	V	S	H
Model-type				L	S	H	V	S	H
Number of poles				3, 4			3	3, 4	
Nominal current ratings									
	I_n	(A)	50°C	20,32,50,				160	
				63,100,125					
Electrical characteristics									
Rated operational voltage	U_e	(V)	AC 50/60 Hz	690	690	690	1100	690	690
			DC	250	250	250	-	250	250
Rated insulation voltage	U_i	(V)		800	800	800	1100	800	800
Rated impulse withstand voltage	U_{imp}	(kV)		8	8	8	8	8	8
Ultimate breaking capacity (IEC, JIS, AS/NZS)	I_{cu}	(kA)	1100V AC	-	-	-	4*/6**	-	-
			690V AC	-	6	6		7.5	7.5
			525V AC	8	22	25		25	25
			440V AC	15	25	50		25	50
			400/415V AC	25	36	65		36	65
			220/240V AC	35	50	85		65	85
			250V DC	25	25	40		40	40
Service breaking capacity (IEC, JIS, AS/NZS)	I_{cs}	(kA)	1100V AC	-	-	-	4	-	-
			690V AC	-	6	6		7.5	7.5
			525V AC	6	22	22		25	25
			440V AC	12	25	25		25	25
			400/415V AC	19	36/30	36/33		36	36
			220/240V AC	27	50	85		65	85
Rated breaking capacity (NEMA)		(kA)	480V AC	8	22	25		22	25
			240VAC	35	50	85		65	85
Protection									
Adjustable thermal, adjustable magnetic				■	■	■	■	■	■
Fixed thermal, fixed magnetic				■					
Microprocessor									
Utilisation category				A	A	A	A	A	A
Installation									
Front connection				■	■	■	■	■	■
Attached flat bar				•	•	•	•	•	•
Solderless terminal (cable clamp)				•	•	•	•	•	•
Rear connection				•	•	•	•	•	•
Plug-in				•	•	•	•	•	•
Draw-out				-	-	-	-	-	-
DIN rail mounting				•	•	-	-	-	-
Dimensions	h	(mm)		155	155	155	165		
			w	(mm)	3 pole	90	90	90	105
				4 pole	120	120		140	
Weight		(kg)	3 pole	1.1	1.1	1.1	1.5		
			4 pole	1.4	1.4		1.9		
Operation									
Direct Opening Action				■	■	■	■	■	■
Toggle operation				■	■	■	■	■	■
Variable depth / direct mount operating handle				•	•	•	•	•	•
Motor operator				•	•	•	•	•	•
Endurance	Electrical	cycles	415V AC	30000	30000		20000		
			1100V AC			1000			
	Mechanical	cycles		30000	30000	7000	30000		
Standards				IEC 60947-2, EN 60947-2					

■ Standard • Optional - Not Available

*20, 32A

**50, 63, 100, 125A

Product series	description	unit	condition	EB2 250				EB2 250	
Model-type				L	S	H	V	LE	E
Number of poles				3,4			3	3,4	
Nominal current ratings									
	I_n	(A)	50°C	200, 250			160, 250	40, 125, 160, 250	
Electrical characteristics									
Rated operational voltage	U_e	(V)	AC 50/60 Hz	690	690	690	1100	690	690
			DC	250	250	250	-	-	-
Rated insulation voltage	U_i	(V)		800	800	800	1100	800	800
Rated impulse withstand voltage	U_{imp}	(kV)		8	8	8	8	8	8
Ultimate breaking capacity (IEC, JIS, AS/NZS)	I_{cu}	(kA)	1100V AC	-	-	-	6	-	-
			690V AC	-	7.5	7.5	-	7.5	20
			525V AC	10	25	25	-	25	35
			440V AC	15	25	50	-	25	50
			400/415V AC	25	36	65	-	36	70
			220/240V AC	35	65	85	-	65	125
Service breaking capacity (IEC, JIS, AS/NZS)	I_{cs}	(kA)	1100V AC	-	-	-	4	-	-
			690V AC	-	7.5	7.5	-	7.5	15
			525V AC	7.5	25	25	-	25	35
			440V AC	12	25	25	-	25	50
			400/415V AC	19	36	36	-	36	70
			220/240V AC	27	65	85	-	65	125
Rated breaking capacity (NEMA)		(kA)	480V AC	10	22	25	-	25	35
			240VAC	35	65	85	-	65	125
Rated short-time withstand current	I_{cw}	(kA)	0.3 s	-	-	-	-	-	-
Protection									
Adjustable thermal, adjustable magnetic				■	■	■	■	-	-
Fixed thermal, fixed magnetic								-	-
Microprocessor								■	■
Utilisation category				A	A	A	A	A	A
Installation									
Front connection				■	■	■	■	■	■
Attached flat bar				•	•	•	•	•	•
Solderless terminal (cable clamp)				•	•	•	•	•	•
Rear connection				•	•	•	•	•	•
Plug-in				•	•	•	•	•	•
Draw-out				-	-	-	-	-	-
DIN rail mounting				-	-	-	-	-	-
Dimensions	h	(mm)		165	165	165	165	165	165
			w	105	105	105	105	105	105
	d	(mm)	3 pole	140	140	140	140	140	140
			4 pole	68	68	68	103	103	103
Weight		(kg)	3 pole	1.5	1.5	1.5	2.3	2.5	
			4 pole	1.9	1.9	1.9	3.1	3.3	
Operation									
Direct Opening Action				■	■	■	■	■	■
Toggle operation				■	■	■	■	■	■
Variable depth / direct mount operating handle				•	•	•	•	•	•
Motor operator				•	•	•	•	•	•
Endurance	Electrical	cycles	415V AC	10000	10000	10000	10000	10000	
			1100V AC				10000	10000	
Standards	Mechanical	cycles		30000	30000	70000	30000	30000	

■ Standard • Optional - Not Available

Technical data

Product series	description	unit	condition	EB2 400		EB2 400		EB2 630		
Model-type				L	S	E, LCD	HLCD	LE, LLCD	E, LCD	HE
Number of poles				3,4	3,4	3,4	4	3,4	3,4	3,4
Nominal current ratings										
	I_n	(A)	50°C	250,400	250,400	250,400		630	630	630
Electrical characteristics										
Rated operational voltage	U_e	(V)	AC 50/60 Hz	525	690	690	690	690*	690*	690*
			DC	250	250	-	-	-	-	-
Rated insulation voltage	U_i	(V)		800	800	800	800	800	800	800
Rated impulse withstand voltage	U_{imp}	(kV)		8	8	8	8	8	8	8
Ultimate breaking capacity (IEC, JIS, AS/NZS)										
	I_{cu}	(kA)	690V AC	-	20	20	20	10*	20*	20*
			525V AC	15	30	30	30	15	30	30
			440V AC	22	45	45	65	25	45	65
			400/415V AC	25	50	50	70	36	50	70
			220/240V AC	35	85	85	100	50	85	100
			250V DC	25	40	-	-	-	-	-
Service breaking capacity (IEC, JIS, AS/NZS)										
	I_{cs}	(kA)	690V AC	-	15	15	15	10*	15*	15*
			525V AC	15	30	30	30	15	30	30
			440V AC	22	45	45	50	25	45	50
			400/415V AC	25	50	50	50	36	50	50
			220/240V AC	35	85	85	85	50	85	85
			250V DC	19	40	-	-	-	-	-
Rated breaking capacity (NEMA)										
		(kA)	480V AC	15	25	25	30	15	25	30
			240VAC	35	85	85	100	50	85	100
Rated short-time withstand current	I_{cw}	(kA)	0.3 s	-	-	5	5	-	-	-
Protection										
Adjustable thermal, adjustable magnetic				■	■					
Fixed thermal, fixed magnetic										
Microprocessor						■	■	■	■	■
Utilisation category				A	A	B	B	A	A	A
Installation										
Front connection				■	■	■	■	■	■	■
Attached flat bar				•	•	•	•	•	•	•
Solderless terminal (cable clamp)				•	•	•	•	-	-	-
Rear connection				•	•	•	•	-	-	-
Plug-in				•	•	•	•	-	-	-
Draw-out				•	•	•	•	-	-	-
DIN rail mounting				-	-	-	-	-	-	-
Dimensions										
	h	(mm)		260	260	260	260	260	260	260
	w	(mm)	3 pole	140	140	140	-	140	140	140
		(mm)	4 pole	185	185	185	185	185	185	185
	d	(mm)		103	103	103	103	103	103	103
Weight										
		(kg)	3 pole	4.2	4.2	4.3	-	5.0	5.0	5.0
			4 pole	5.6	5.6	5.7	5.7	6.5	6.5	6.5
Operation										
Direct Opening Action				■	■	■	■	■	■	■
Toggle operation				■	■	■	■	■	■	■
Variable depth / direct mount operating handle				•	•	•	•	•	•	•
Motor operator				•	•	•	•	•	•	•
Endurance										
	Electrical	cycles	415V AC	4500	4500	4500	4500	4500	4500	4500
	Mechanical	cycles		15000	15000	15000	15000	15000	15000	15000
Standards				IEC 60947-2, EN 60947-2						

■ Standard • Optional - Not Available

* MCCB can not be used in IT system at this voltage

Product series	description	unit	condition	EB2 800			EB2 800			EB2 1000		EB2 1250		EB2 1600	
Model-type				L	S	H	LE	E	HE	LE	E	LE	E	LE	E
Number of poles				3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4	3, 4
Nominal current ratings															
	I _n	(A)	50°C	630, 800	630, 800	630, 800	800	800	800	1000	1000	1250	1250	1600	1600
Electrical characteristics															
Rated operational voltage	U _e	(V)	AC 50/60 Hz	690	690	690	690	690	690	690	690	690	690	690	690
			DC	250	250	250	-	-	-	-	-	-	-	-	-
Rated insulation voltage	U _i	(V)		800	800	800	800	800	800	800	800	800	800	800	800
Rated impulse withstand voltage	U _{imp}	(kV)		8	8	8	8	8	8	8	8	8	8	8	8
Ultimate breaking capacity (IEC, JIS, AS/NZS)	I _{cu}	(kA)	690V AC	10*	20*	25*	20*	25*	25*	20*	25*	20*	25*	20*	45*
			525V AC	15*	30	45	30	35	40	30	45	30	45	30	65
			440V AC	30	50	65	50	65	125	45	65	45	65	45	85
			400/415V AC	36	50	70	50	70	125	50	70	50	70	50	100/85
			220/240V AC	50	85	100	85	100	150	85	100	85	100	85	125
			250V DC	50	50	50	-	-	-	-	-	-	-	-	
Service breaking capacity (IEC, JIS, AS/NZS)	I _{cs}	(kA)	690V AC	10*	20*	20*	20*	20*	20*	15*	20*	15*	20*	15*	34*
			525V AC	15*	30	34	30	30	34	23	34	23	34	23	50
			440V AC	30	50	50	50	50	94	34	50	34	50	34	65
			400/415V AC	36	50	50	50	50	94	38	50	38	50	38	75/65
			220/240V AC	50	85	75	85	75	150	65	75	65	75	65	94
			250V DC	50	50	50	-	-	-	-	-	-	-	-	
Rated breaking capacity (NEMA)		(kA)	480V AC	15	30	45	30	35	40	30	45	30	45	30	65
			240V AC	50	85	100	85	100	150	85	100	85	100	85	125
Rated short-time withstand current	I _{cw}	(kA)	0,3 sec	-	-	-	10	10	10	-	-	15	15	20	20
Protection															
Adjustable thermal, adjustable magnetic				■	■	■	-	-	-	-	-	-	-	-	-
Fixed thermal, fixed magnetic				-	-	-	-	-	-	-	-	-	-	-	-
Microprocessor				-	-	-	■	■	■	■	■	■	■	■	■
Utilisation category				A	A	A	B	B	B	A	A	B	B	B	B
Installation															
Front connection				■	■	■	■	■	-	-	-	-	-	-	-
Attached flat bar				•	•	•	•	•	■	■	■	■	■	■	■
Solderless terminal (cable clamp)				•	•	•	-	-	-	-	•	-	-	-	-
Rear connection				•	•	•	-	-	•	•	-	-	-	•	•
Plug-in				•	•	•	-	-	•	-	-	-	-	-	-
Draw-out				-	-	-	-	-	-	-	-	-	-	-	-
DIN rail mounting				-	-	-	-	-	-	-	-	-	-	-	-
Dimensions	h	(mm)		273	273	273	273	273	273	273	273	370	370	370	370
	w	(mm)	3 pole	210	210	210	210	210	210	210	210	210	210	210	210
		(mm)	4 pole	280	280	280	280	280	280	280	280	280	280	280	280
	d	(mm)		103	103	103	103	103	140	103	103	120	120	140	140
Weight		(kg)	3 pole	8,5	8,5	8,5	9,1	9,1	12,3	11	11	19,8	19,8	27	27
			4 pole	11,5	11,5	11,5	12,3	12,3	14,8	14,8	14,8	25	25	35	35
Operation															
Direct Opening Action				■	■	■	■	■	■	■	■	■	■	■	■
Toggle operation				■	■	■	■	■	■	■	■	■	■	■	■
Variable depth / direct mount operating handle				•	•	•	•	•	•	•	•	•	•	•	•
Motor operator				•	•	•	•	•	•	•	•	•	•	•	•
Endurance	Electrical	cycles	690	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	2000	2000
	Mechanical	cycles		10000	10000	10000	10000	10000	10000	10000	10000	5000	5000	5000	5000
Standards IEC 60947-2, EN 60947-2															

■ Standard • Optional - Not Available
 * MCCB can not be used in IT system at this voltage

Technical data

Product series	description	unit	condition	EB2R	EB2R
Model-type				125L	250L
Number of Poles				3, 4	3, 4
Nominal current ratings					
	I_n	(A)	50°C	20, 32, 50	160, 250
				63, 100, 125	
Electrical characteristics					
Rated operational voltage	U_e	(V)	AC 50/60 Hz	525	525
Rated impulse withstand voltage	U_{imp}	(kV)		8	8
Ultimate breaking capacity (IEC, JIS, AS/NZS)	I_{cu}	(kA)	525V AC	8	10
			440V AC	15	15
			400/415V AC	25	25
			220/240V AC	35	35
Service breaking capacity (IEC, JIS, AS/NZS)	I_{cs}	(kA)	525V AC	6	7.5
			440V AC	12	12
			400/415V AC	19	19
			220/240V AC	27	27
Protection					
Adjustable thermal, adjustable magnetic				■	■
Residual current protection, Type A				■	■
Utilization category				A	A
Installation					
Front connection				■	■
Attached flat bar				•	•
Solderless terminal (cable clamp)				•	•
Rear connection				•	•
Plug-in				-	-
DIN rail mounting				•	-
Dimensions	h	(mm)		155	165
	w	(mm)	3 pole	90	105
			4 pole	120	140
	d	(mm)		68	68
Weight		(kg)	3 pole	1.1	1.5
			4 pole	1.4	1.9
Operation					
Direct Opening Action				■	■
Toggle operation				■	■
Variable depth / direct mount operating handle				•	•
Mechanical interlocks				-	-
Motor operator				•	•
Endurance	Electrical	cycles	440V AC	30000	30000
	Mechanical	cycles		30000	30000
Standards	IEC 60947-2, EN 60947-2				

■ Standard • Optional - Not Available

Product series	description	unit	condition	EB2 400		EB2 800	
Model-type				LF	SF	LF	LF
Number of poles				3	3, 4	3, 4	
Nominal current ratings							
	I_n	(A)	50°C	400 (45°C)	400 (45°C)	630 (45°C)	800 (45°C)
Electrical characteristics							
Rated operational voltage	U_c	(V)	AC 50/60 Hz	690	690	690	690
			DC	250	250	250	250
Rated insulation voltage	U_i	(V)		690	690	690	690
Rated impulse withstand voltage	U_{imp}	(kV)		8	8	8	8
Ultimate breaking capacity (IEC, JIS, AS/NZS)	I_{cu}	(kA)	3,817	10	15	10	10
			525V AC	15	22	15	15
			440V AC	22	30	30	30
			400/415V AC	25	36	36	36
			220/240V AC	35	50	50	50
			250V DC	35	40	50	50
Service breaking capacity (IEC, JIS, AS/NZS)	I_{cs}	(kA)	690V AC	10	15	10	10
			525V AC	15	22	15	15
			440V AC	22	30	30	30
			400/415V AC	25	36	36	36
			220/240V AC	35	50	50	50
			250V DC	35	40	50	50
Rated breaking capacity (NEMA)		(kA)	480V AC 240VAC				
Rated short-time withstand current							
Protection							
Fixed thermal, adjustable magnetic				-	■		
Fixed thermal, fixed magnetic				■		-	-
Microprocessor				-	-	-	-
Utilisation category				A	A	A	A
Installation							
Front connection				■	■	-	-
Attached flat bar				•	•	■	■
Solderless terminal (cable clamp)				•	•	•	•
Rear connection				•	•	•	•
Plug-in				•	•	•	•
Draw-out						-	-
DIN rail mounting				-	-	-	-
Dimensions	h	(mm)		260	260	273	273
		(mm)	3 pole	140	140	210	210
	w	(mm)	4 pole	-	185	280	280
		(mm)		103	103	103	103
Weight	(kg)		3 pole	4.2	4.2	8	8,5
			4 pole	-	5.6	11	11,5
Operation							
Direct Opening Action				■	■	■	■
Toggle operation				■	■	■	■
Variable depth / direct mount operating handle				•	•	•	•
Motor operator				•	•	•	•
Endurance	Electrical	cycles	415V AC	4500	4500	4000	4000
	Mechanical	cycles		15000	15000	10000	10000
Standards	IEC 60947-2, EN 60947-2						

■ Standard • Optional - Not Available

Technical data
Low voltage switch disconnecter

Product series	desc.	unit	condition	ED2	ED2	ED2	ED2	ED2	ED2	ED2	ED2	ED2		
Model-type				125	160	250	400	630	800	1000	1250	1600		
Number of Poles				3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4		
Nominal current ratings														
	I_n	(A)		125	160	250	400	630	800	1000	1250	1600		
Electrical characteristics														
Rated operational voltage	U_e	(V)	AC 50/60 Hz	690	690	690	690	690	690	690	690	690		
			DC	250	250	250	250	250	250	250	250	250		
Rated insulation voltage	U_i	(V)		800	800	800	800	800	800	800	800	800		
Rated impulse withstand voltage	U_{imp}	(kV)		8	8	8	8	8	8	8	8	8		
Rated short-circuit making capacity	I_{cm}	(kA peak)		3,6	6	6	9	9	17	17	32	45		
Rated short-time withstand current	I_{cw}	(kA rms)	0.3s	2	3	3	5	5	10	10	10	10		
			AC	AC-23A	AC-23A	AC-23A	AC-23A	AC-23A	AC-23A	AC-23A	AC-23A	AC-23A		
			DC	DC-22A	DC-22A	DC-22A	DC-22A	DC-22A	DC-22A	DC-22A	DC-22A	DC-22A		
Installation														
Front connection				■	■	■	■	■	■	-	-	-		
Attached flat bar				•	•	•	•	•	•	■	■	•		
Solderless terminal				•	•	•	•	•	-	-	-	-		
Rear connection				•	•	•	•	•	•	•	•	■		
Plug-in				•	•	•	•	•	•	-	•	-		
Draw- out				•	•	•	•	•	•	-	•	•		
DIN rail mounting				•	-	-	-	-	-	-	-	-		
Dimensions	h	(mm)		155	165	165	260	260	273	273	370	370		
			w	(mm)	3 pole	90	105	105	140	140	210	210	210	210
					4 pole	120	140	140	185	185	280	280	280	280
d	(mm)		68	68	68	103	103	103	103	120	140			
Weight		(kg)	3 pole	1.1	1.5	1.5	4.2	4.4	8,5	10,4	18,2	24,9		
			4 pole	1.4	1.9	1.9	5.6	5.8	11,5	14,0	23,4	32,9		
Operation														
Direct Opening Action				■	■	■	■	■	■	■	■	■		
Toggle operation				■	■	■	■	■	■	■	■	■		
Variable depth / direct mount operating handle				•	•	•	•	•	•	•	•	•		
Motor operator				•	•	•	•	•	•	•	•	•		
Endurance	Elec.	cycles	415V AC	30000	10000	10000	4500	4500	4000	4000	4000	2000		
				30000	30000	30000	15000	15000	10000	10000	5000	5000		
Standards				IEC 60947-2, EN 60947-2					IEC 60947-3, EN 60947-3					

Thermal magnetic adjustments and characteristics

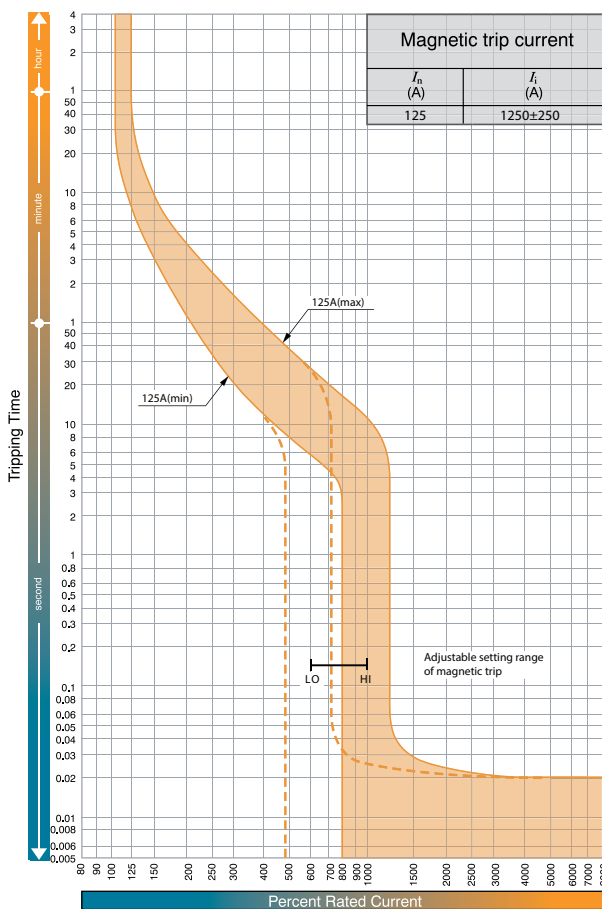
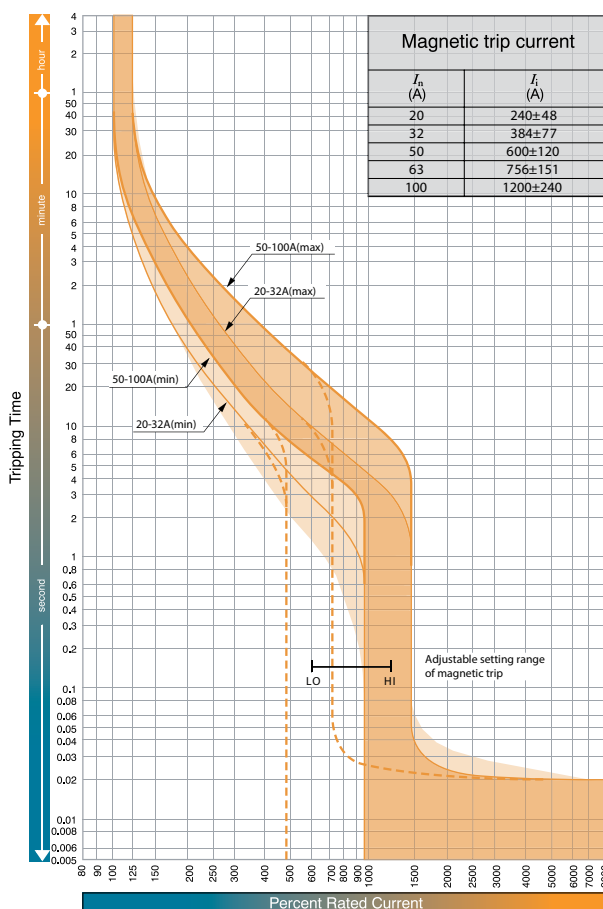
Thermal adjustment

Low voltage moulded case circuit breakers have a wide thermal adjustment range, one of the largest on the market. The rated current 'I_r' is continuously adjustable from 63% to 100% of this nominal current 'I_n'. There are three main points of calibration marked at 63%, 80% and 100%.

Magnetic adjustment

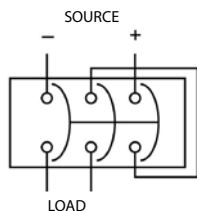
An adjustable magnetic characteristics allows short-circuit protection to be matched to the load and supply characteristics, for example motor inrush current or generator short-circuit current.

Time, current characteristics curves
EB2 125

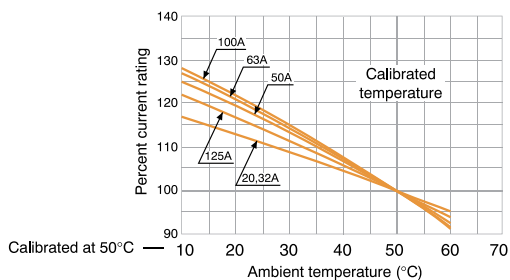


Special applications of thermal magnetic MCCBs

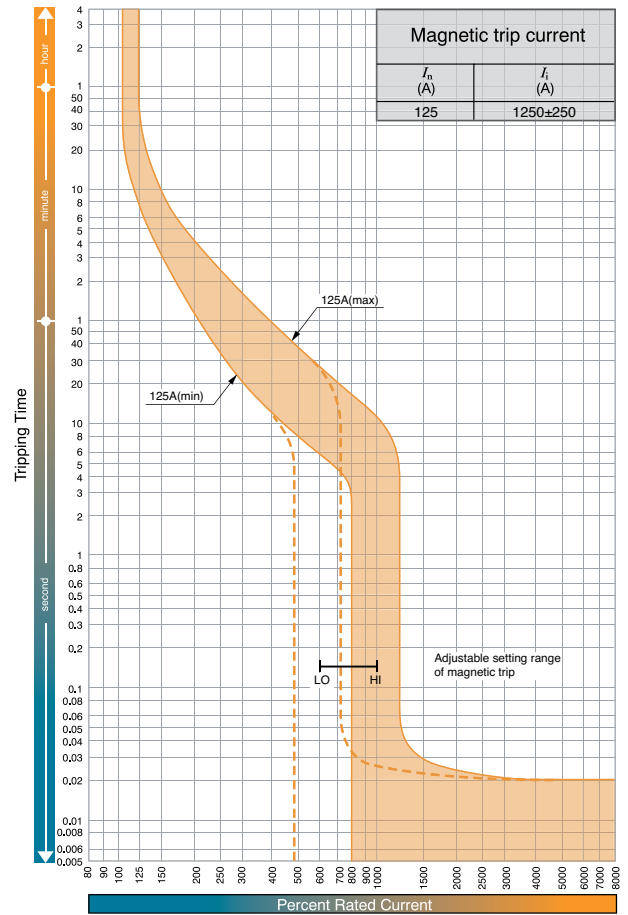
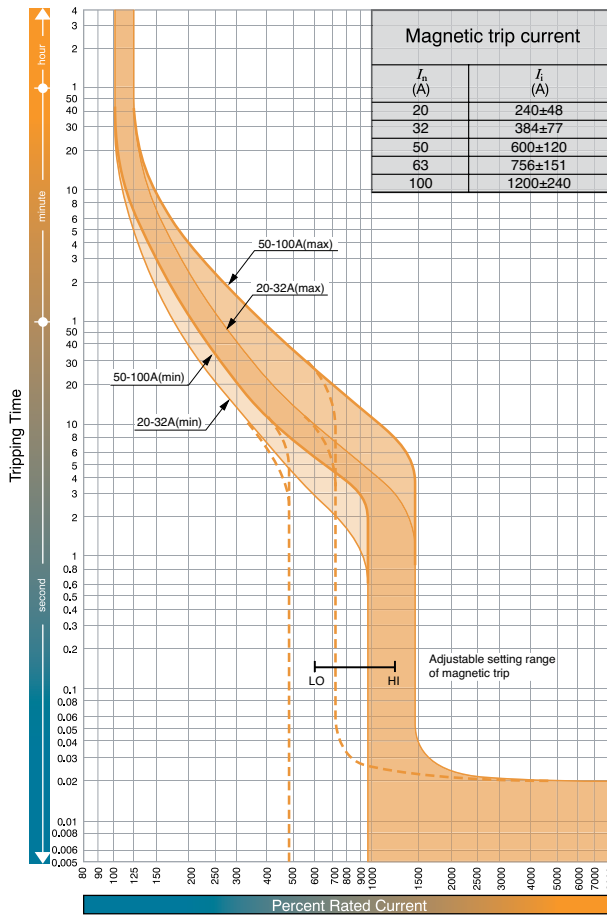
All standard thermal magnetic MCCBs are suitable for DC application up to 250 V DC.



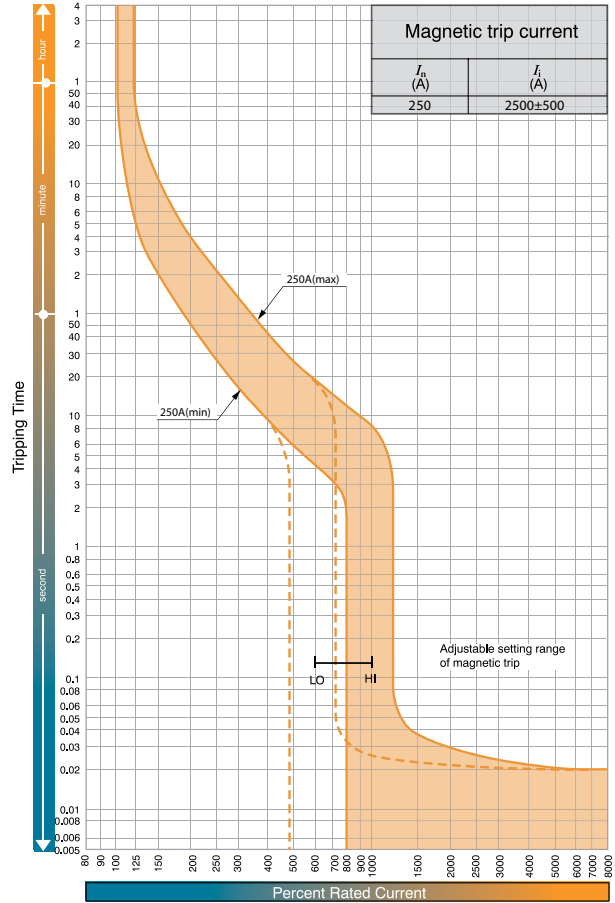
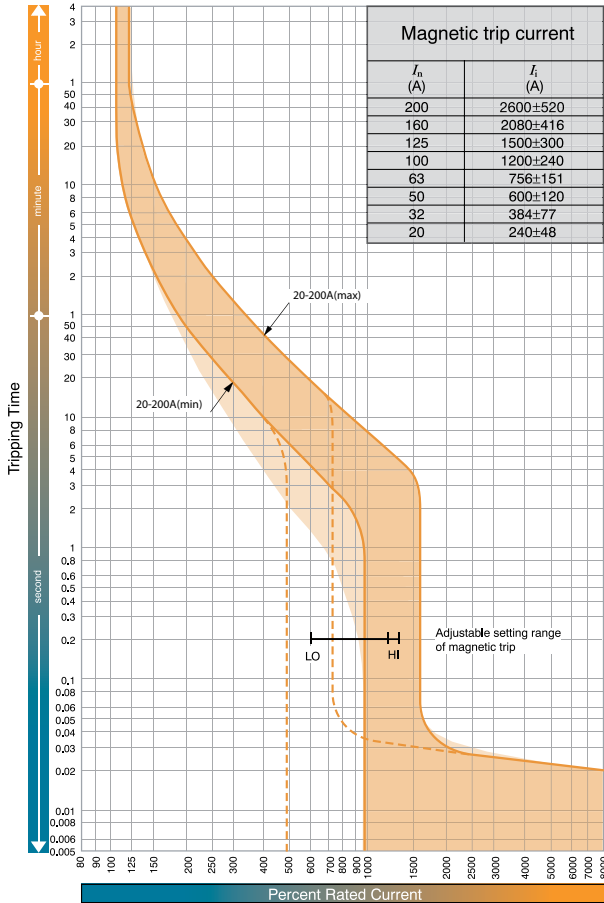
Ambient compensating curves



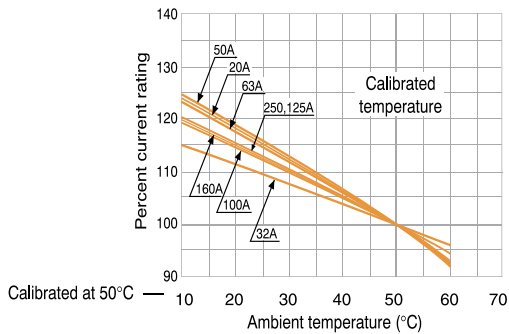
Time, current characteristics curves
EB2 125 1000V



Time, current characteristics curves EB2 160 and EB2 250

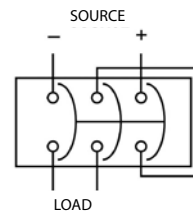


Ambient compensating curves

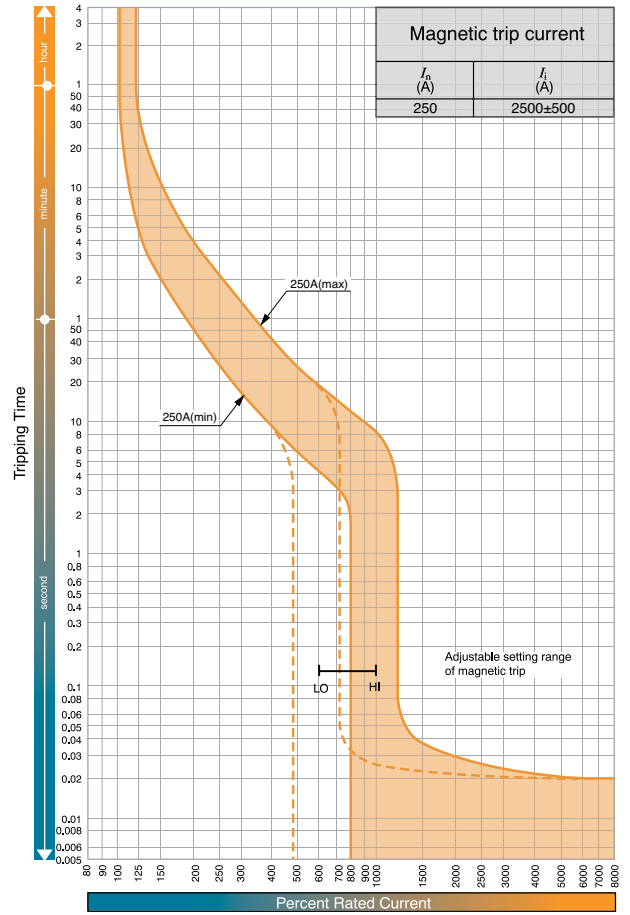
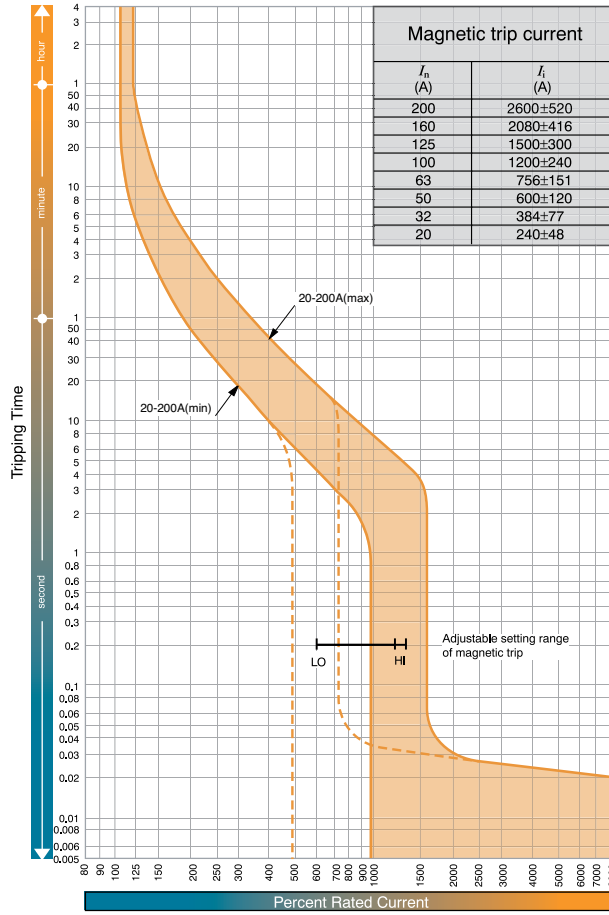


Special applications of thermal magnetic MCCBs

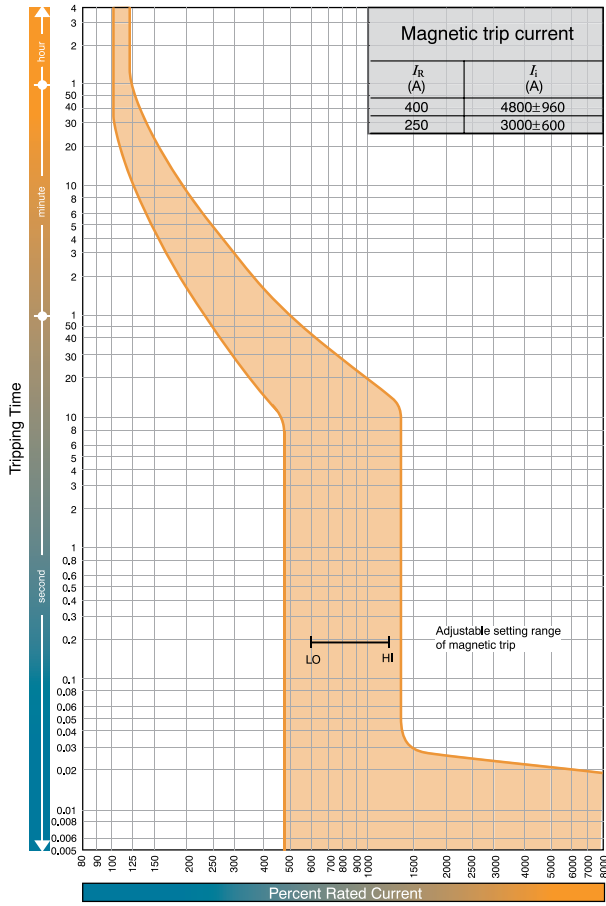
All standard thermal magnetic MCCBs are suitable for DC application up to 250 V DC.



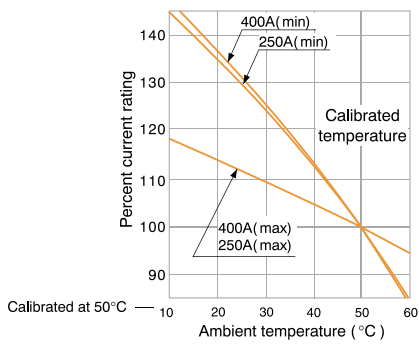
Time, current characteristics curves
EB2 250 1000V



Time, current characteristics curves
EB2 400

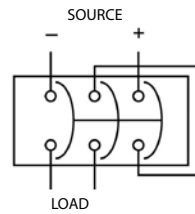


Ambient compensating curves

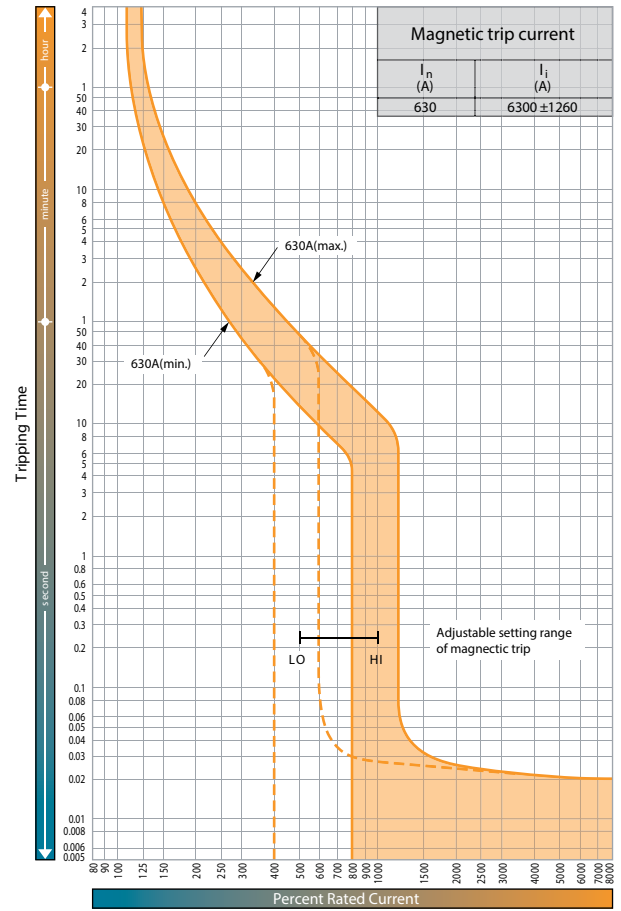
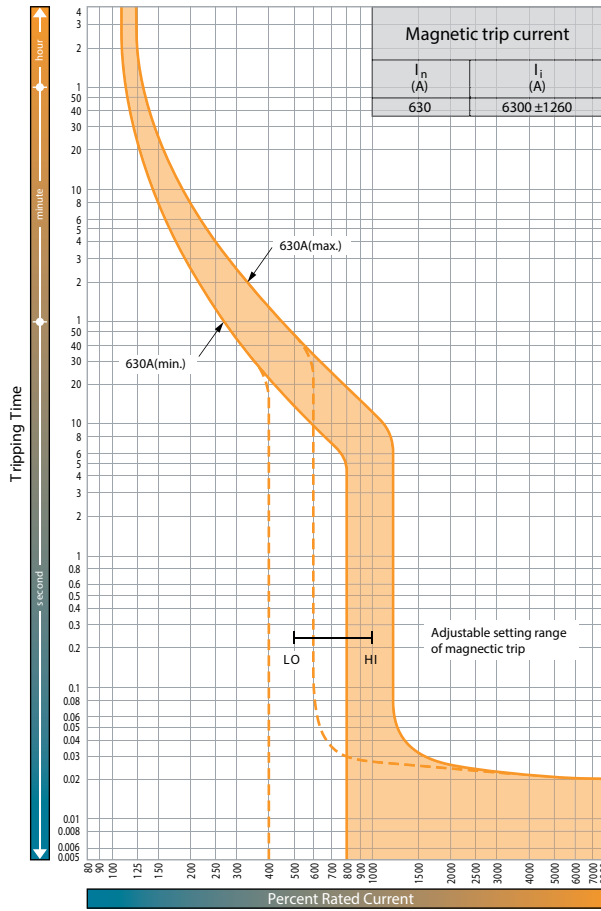


Special applications of thermal magnetic MCCBs

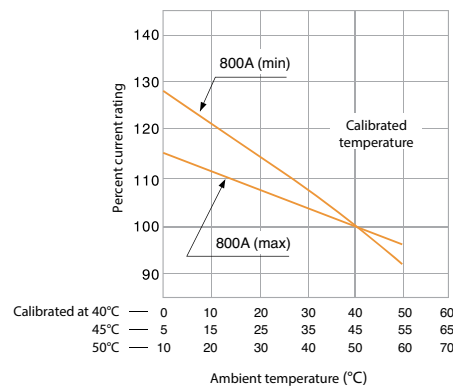
All standard thermal magnetic MCCBs are suitable for DC application up to 250 V DC.



Time, current characteristics curves EB2 630 and EB2 800

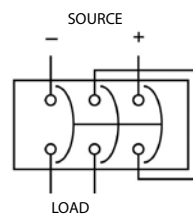


Ambient compensating curves

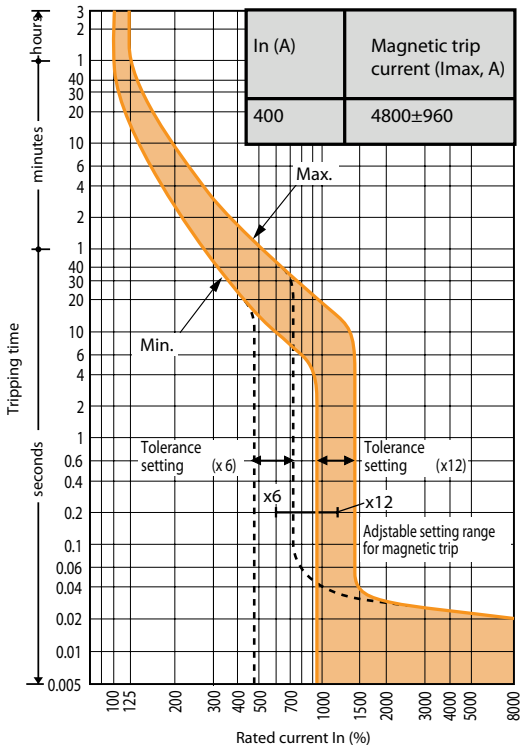


Special applications of thermal magnetic MCCBs

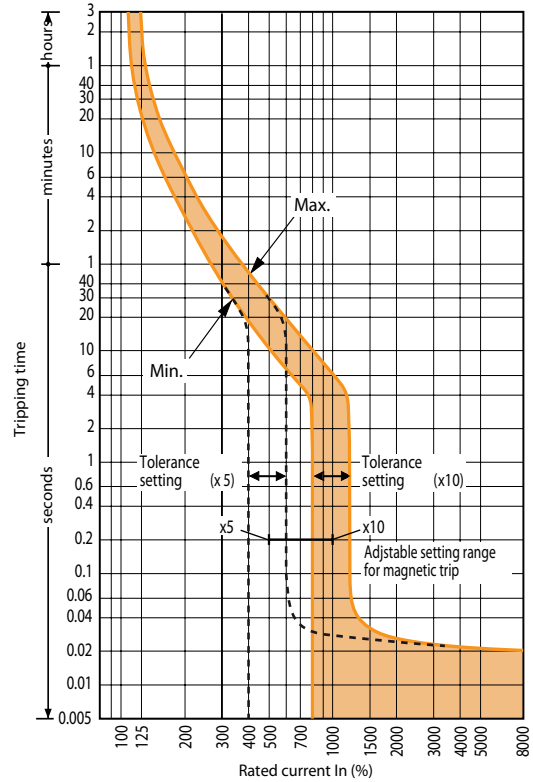
All standard thermal magnetic MCCBs are suitable for DC application up to 250 V DC.



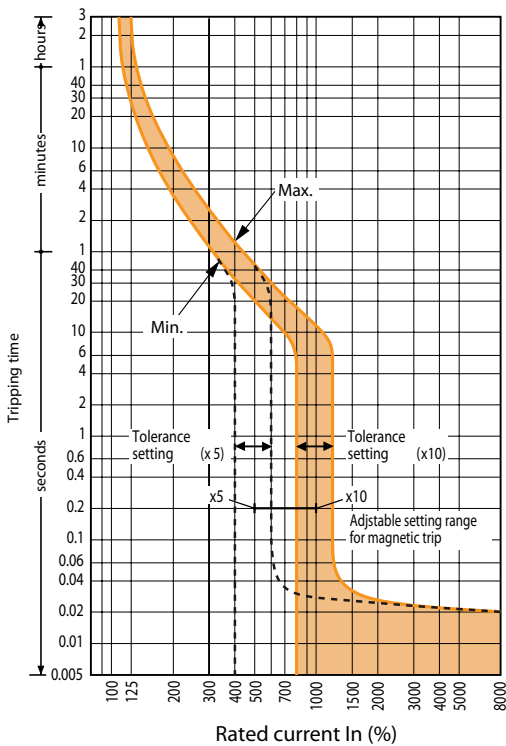
Time, current characteristics curves
EB2 400 SF



Time, current characteristics curves
EB2 800/LF 630A

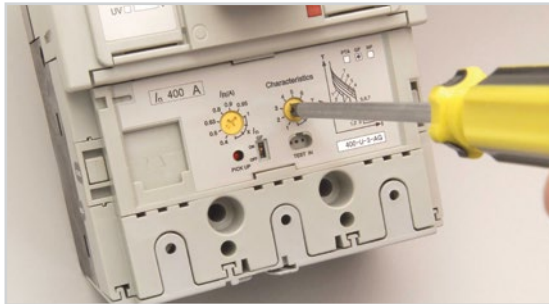


Time, current characteristics curves
EB2 800/LF 800A

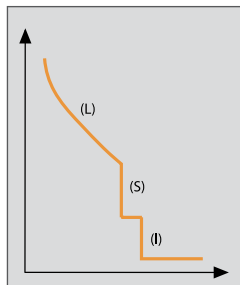


Microprocessor (electronic) based characteristics and adjustments EB2 series

Etibreak 2 MCCBs from 250A to 1600A frame sizes are available with electronic protection units. Current ratings, I_n , of 40A, 125A, 160A, 250A, 400A, 630A, 800A, 1000A, 1250A and 1600A are available. These offer great flexibility as their characteristics can be set to suit a wide range of application conditions. Overload protection can be set between 0.4 and 1.0 times I_n .

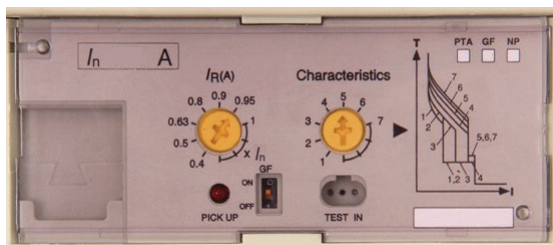


Selecting a Preset Characteristic for a 400A Etibreak 2 MCCB with Electronic Protection



Electronic protection characteristic

Every Etibreak electronic protection unit includes overload protection (L), delayed short-circuit protection (S) and instantaneous protection (I) as standard.



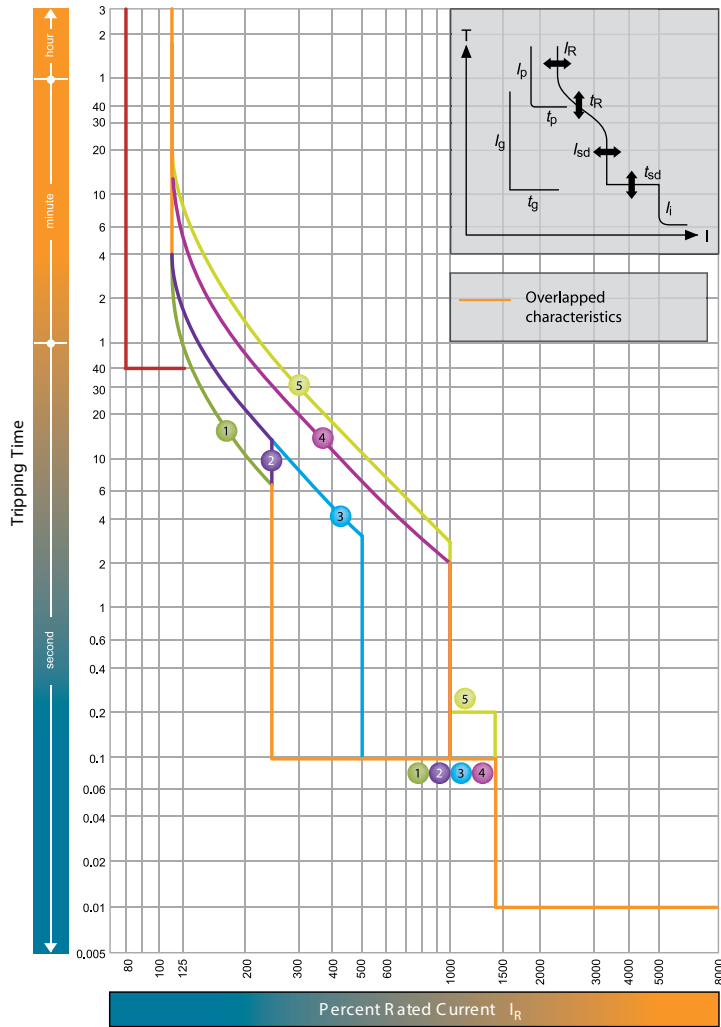
Adjustment dials

The left adjustment dial sets the rated current to match the conductor rating. The right adjustment dials select one of six on 630A models preset characteristics. The effects of the left adjustment dial (labelled $I_R(A)$), and the right adjustment dial (labelled Characteristics) are detailed in the tables shown underneath each time/current graph.

Tolerances of Characteristics

Characteristics		Tolerance
Long Time Delay (LTD)	t_R	+/- 20%
Short Time Delay (STD)	I_{sd}	+/- 15%
	t_{sd}	Total cleanig time +50ms, resettable time - 20ms
Instantaneous (INST)	I_1	+/- 20%

EB2 250 LE & E



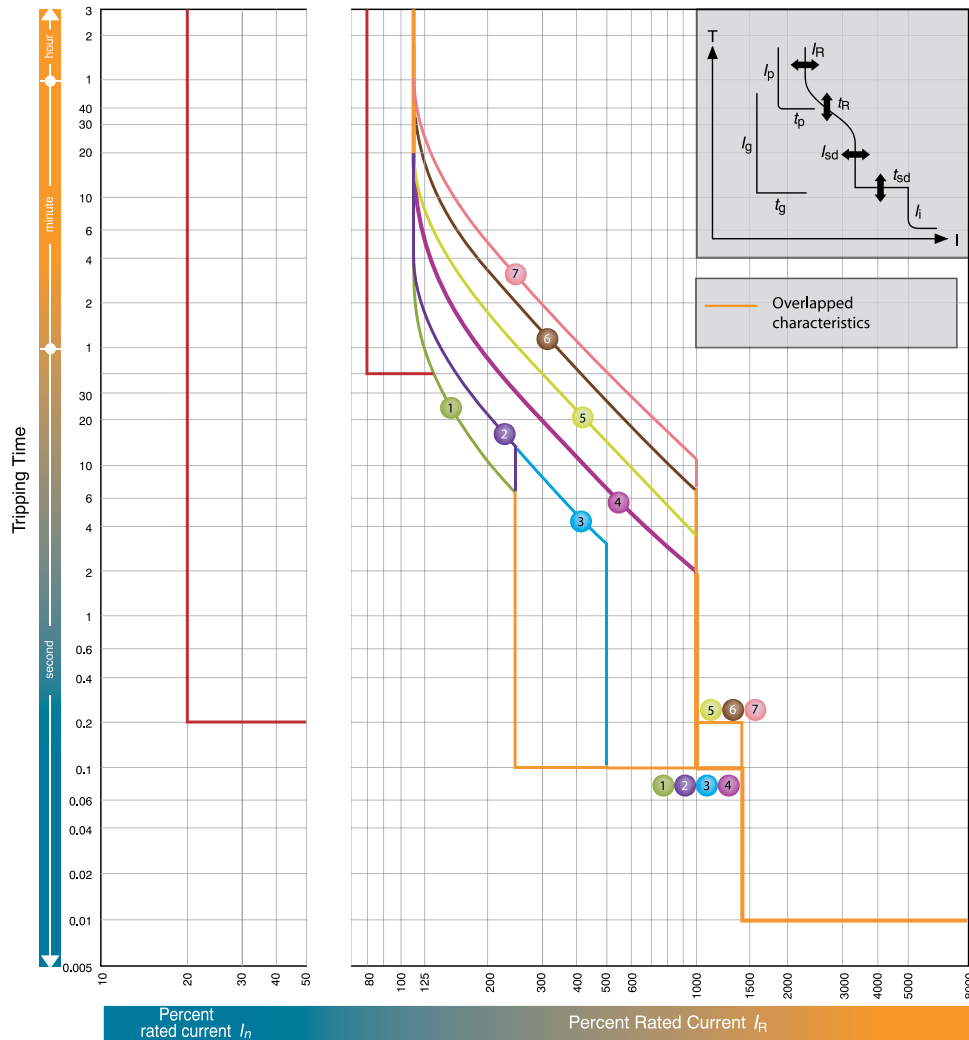
$I_n = 40, 125, 160, 250$

I_n (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	Characteristics		No.	1	2	3	4	5
	LTD	Index t_R	Index (s)	11	21	21	5	7,5
STD	Index I_{sd}	Index $x I_R$	2,5		5		10	
	Index t_{sd}	Index (s)	0,1					0,2
INST	Index I_i	Index $x I_R$	14 (Max: 13 $x I_i$) Note (1)					

Note: (1) I_i max. = 12 $x I_n$.

EB2 400 E, LCD, HLCD



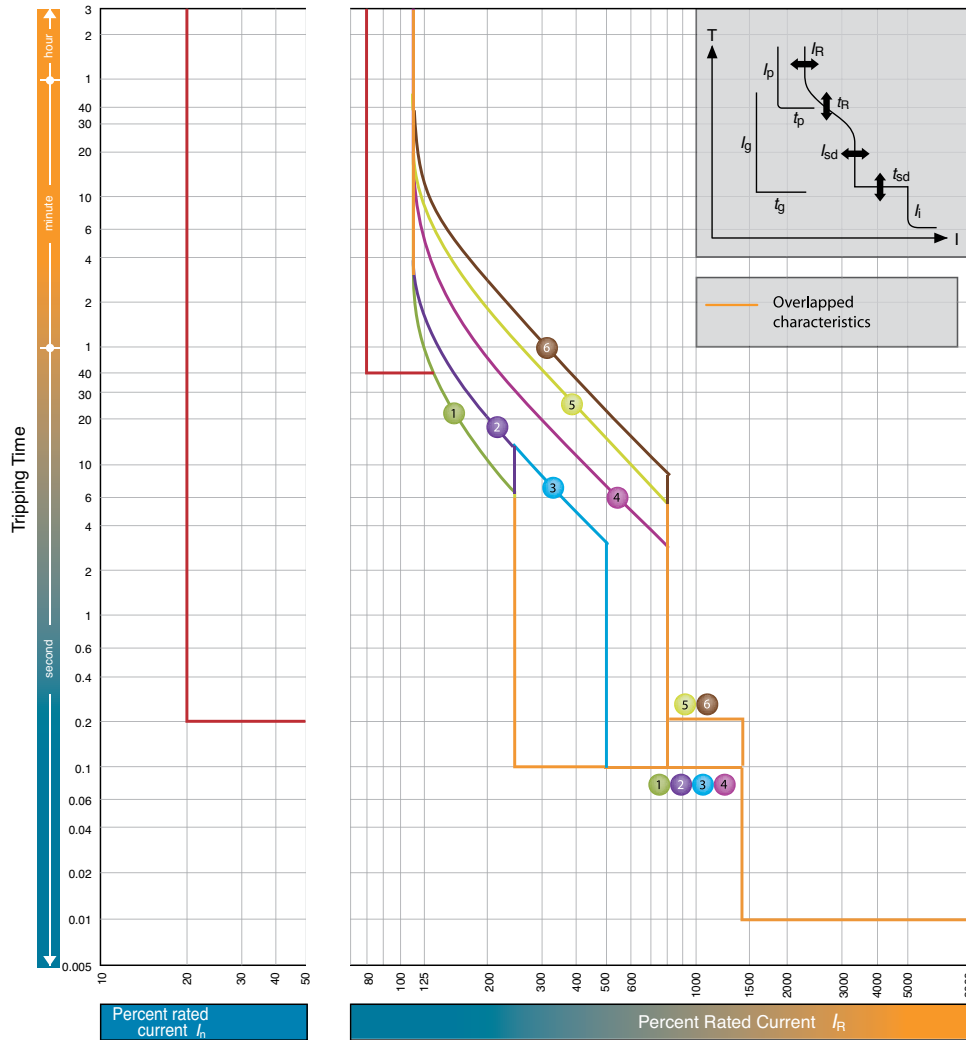
$I_n = 250^*, 400$

I_R (A)									
LTD Pick-up current	xI_n	0.4	0.5	0.63	0.8	0.9	0.95	1.0	

Characteristics		No.	1	2	3	4	5	6	7
Standard	LTD	Index t_r	11	21	21	5	10	19	29
	STD	Index I_{sd}	2.5			5	10		
		Index t_{sd}	0.1				0.2		
INST	Index I_i	Index $x I_R$	14 (Max: $13 \times I_n$)**						
Option	PTA	Index I_p	0,8						
		Index t_p	40						
	GF	Index I_g	0,2						
		Index t_g	0,2						
	NP	Index I_n	1,0/0,5***						
	Index t_n	Index (s)	$t_n = t_r$						

Notes:
 *GF is not available when I_n is 250A.
 ** $I_{i \max} = 13 \times I_n$.
 *** $1,0 \times I_R$ or $0,5 \times I_R$ can be selected. Characteristic of neutral protection (t_n vs. I_n) is identical to characteristic of phase protection (t_r vs. I_p).
 ****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.

EB2 630 LE, E, LCD, HLCD



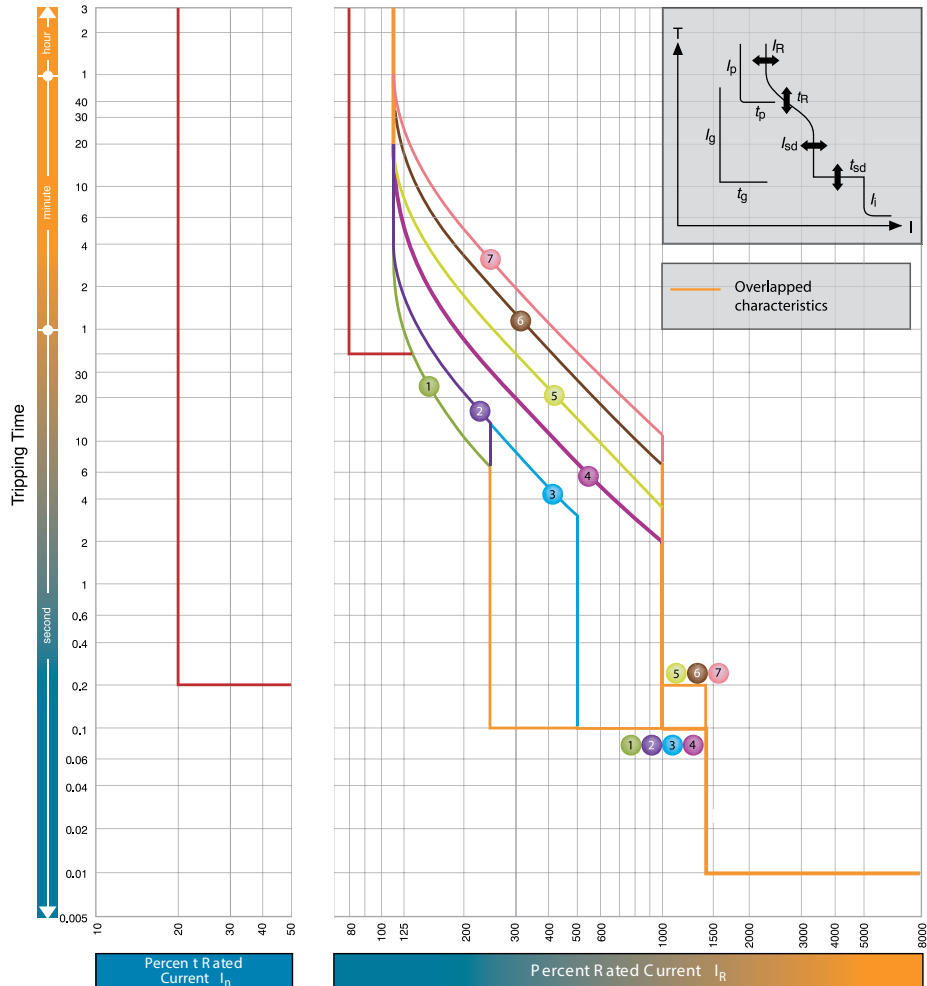
$I_n = 630A$

I_n (A)										
LTD Pick-up current	I_R	xI_n	0.4	0.5	0.63	0.8	0.85	0.9	0.95	1.0

Characteristics		No.	1	2	3	4	5	6
Standard	LTD	Index t_R	11	21	21	5	10	16
	STD	Index t_{sd}	@ 200% xI_n			@ 600% xI_n		
		Index t_{sd}	2.5	5	8			
Option	INST	Index I_i	0.1					
	PTA	Index I_p	14 (Max: $10 \times I_n$)*					
		Index t_n	0.8					
	GF	Index I_g	40					
		Index t_g	0.2					
	NP	Index I_N	0.2					
Index t_N		1,0/0,5** $t_N = t_R$						

Notes:
 * I_i max. = $10 \times I_n$.
 ** $1,0 \times I_n$ or $0,5 \times I_n$ can be selected. Characteristic of neutral protection (t_N vs. I_N) is identical to characteristic of phase protection (t_R vs. I_R).
 ***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.

EB2 800 LE, E, HE



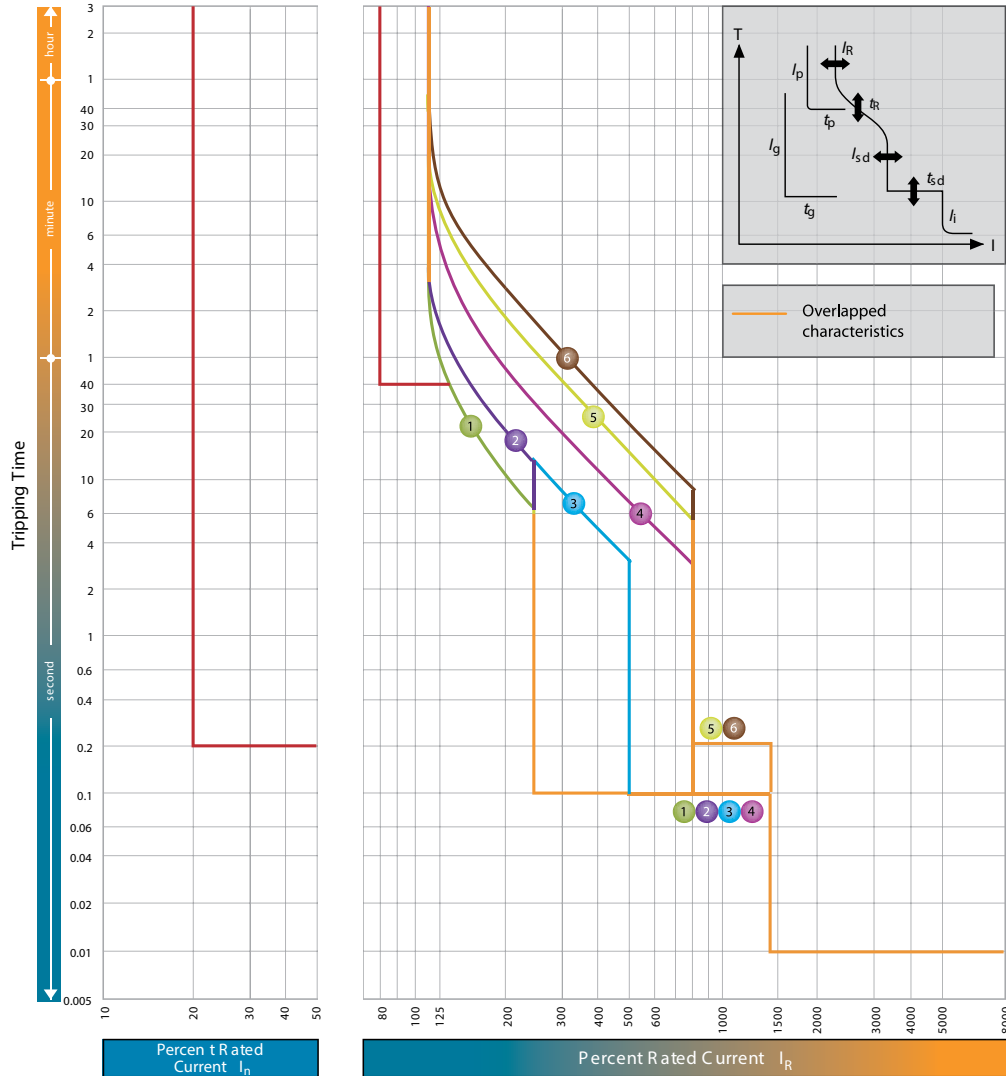
$I_n = 800$

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

	Characteristics		No.	1	2	3	4	5	6	7
	Standard	LTD	Index t_R	Index (s)	11	21	21	5	10	19
STD		Index I_{sd}	Index $x I_n$	2.5			5	10		
		Index t_{sd}	Index (s)	0.1				0.2		
	INST	Index I_i	Index $x I_n$	14 (max.: $12 x I_n$)*						
Option	PTA	Index I_p	Index $x I_n$	0,8						
		Index t_p	Index (s)	40						
	GF	Index I_{gp}	Index $x I_n$	0,2						
		Index t_{gp}	Index (s)	0,2						
	NP	Index I_N	Index $x I_n$	1,0/0,5***						
		Index t_N	Index (s)	$t_N = t_R$						

Notes:
 * $I_{max.} = 12 x I_n$
 *** $1,0 x I_n$ or $0,5 x I_n$ can be selected.
 Characteristic of neutral protection (t_N vs. I_n) is identical to characteristic of phase protection (t_R vs. I_n).
 ***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.

EB2 1000 LE, E



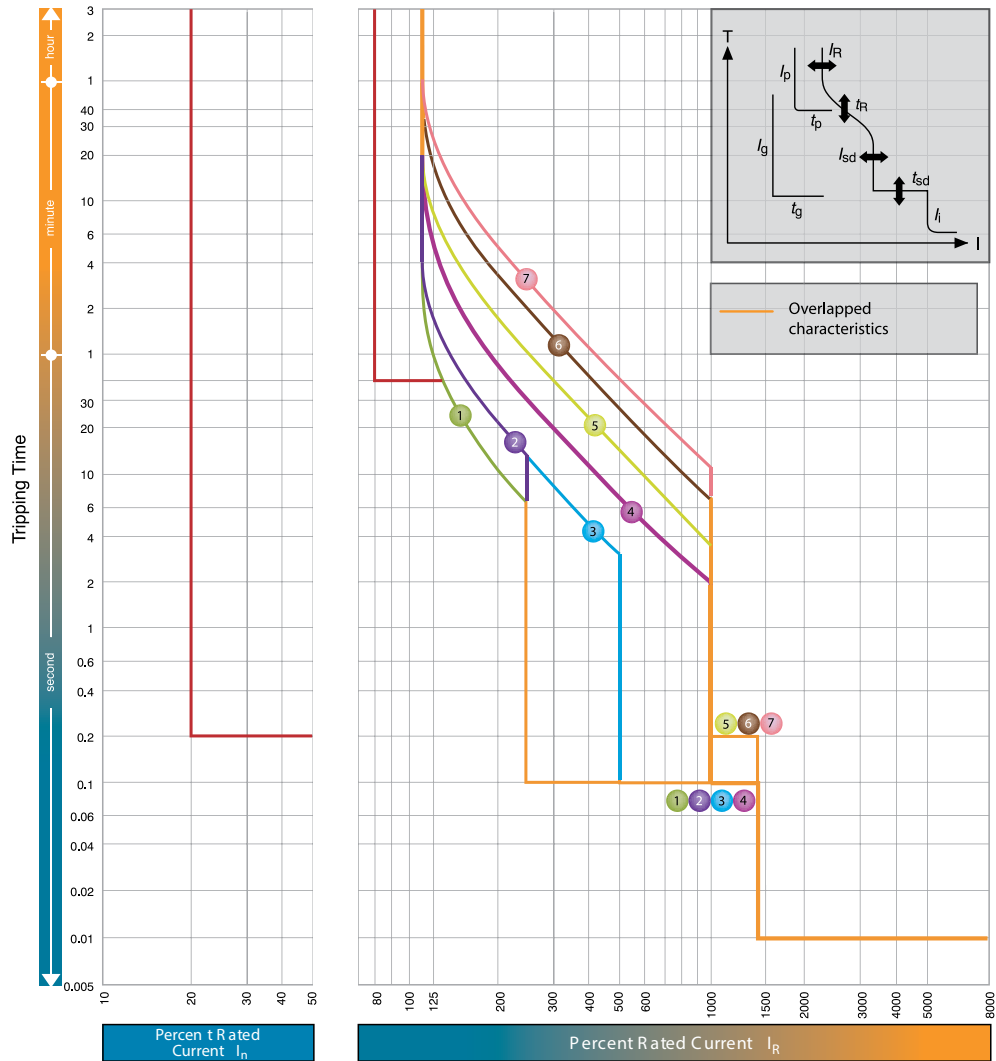
$I_n = 1000A$

I_n (A)										
LTD Pick-up current	I_R	xI_n	0.4	0.5	0.63	0.8	0.85	0.9	0.95	1.0

Characteristics		No.	1	2	3	4	5	6
Standard	LTD	Index t_R	11	21	21	5	10	16
	STD	Index t_{sd}	@ 200% xI_n			@ 600% xI_n		
		Index t_{sd}	2.5	5			8	
INST	Index I_g	Index xI_n	0.1				0.2	
Option	PTA	Index I_p	14 (max.: 10 xI_n)*					0.8
		Index t_n						40
	GF	Index I_g	0.2					0.2
		Index t_g	0.2					0.2
	NP	Index I_n	1,0/0,5***					
		Index t_n						$t_n = t_R$

Notes:
 * I_n max. = 10 xI_n .
 ***1,0 xI_n or 0,5 xI_n can be selected. Characteristic of neutral protection (t_n vs. I_n) is identical to characteristic of phase protection (t_R vs. I_R).
 ***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.

EB2 1250 LE, E



$I_n = 1250$

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	

Characteristics		No.	1	2	3	4	5	6	7
Standard	LTD	Index t_R	11	21	21	5	10	19	29
		Index (s)	@ 200% $x I_R$			@ 600% $x I_R$			
	STD	Index I_{sd}	2.5	5	10				
		Index (s)	0.1				0.2		
	INST	Index I_i	14 (max.: 12 $x I_n$)*						
Option	PTA	Index I_p	0,8						
		Index t_p	40						
	GF	Index I_g	0,2						
		Index t_g	0,2						
	NP	Index I_N	1,0/0,5***						
	Index t_N	$t_N = t_R$							

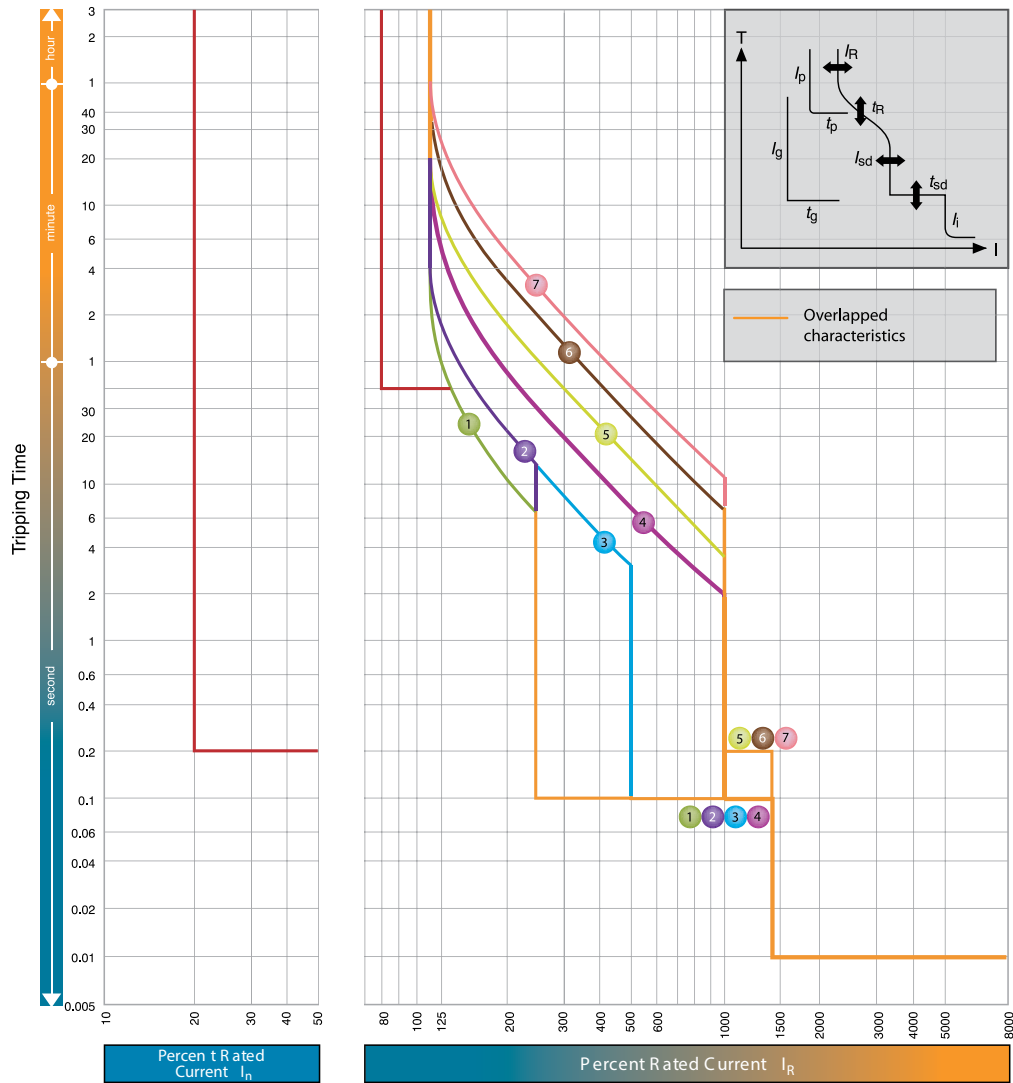
Notes:

* $I_{i,max.} = 12 x I_n$.

*** $1,0 x I_R$ 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_p vs. I_p).

***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.

EB2 1600 LE, E



$I_n = 1600A$

I_r (A)									
LTD Pick-up current	I_r	xI_n	0.4	0.5	0.63	0.8	0.9	0.95	1.0

Characteristics		No.	1	2	3	4	5	6	7
Standard	LTD	Index t_r	11	21	21	5	10	19	29
	STD	Index I_{sd}	@ 200% xI_r			@ 600% xI_r			
		Index t_{sd}	0.1			0.2			
INST	Index I_i	Index xI_r	14 (max.: 12 xI_n)*						
Option	PTA	Index I_p				0,8			
		Index t_p				40			
	GF	Index I_g				0,2			
		Index t_g				0,2			
	NP	Index I_N				1,0/0,5***			
		Index t_N				$t_N = t_r$			

Notes:
 * I_i max. = 12 xI_n .
 **1,0 xI_r or 0,5 xI_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).
 ***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.

EB2R adjustments

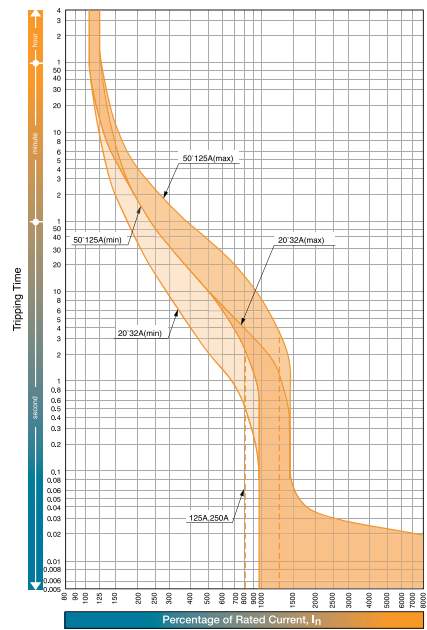
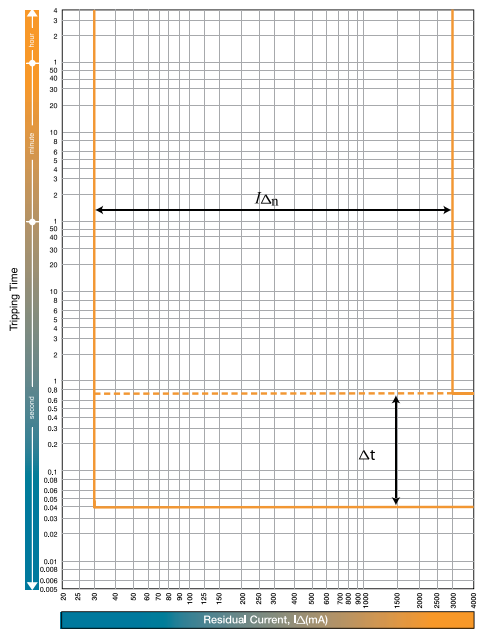
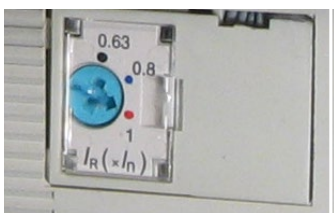
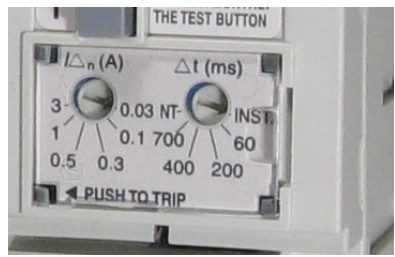
Residual current $I_{\Delta n}$ is the adjustable tripping threshold for earth leakage protection. It can be set between 30mA and 3A. Available settings are 30mA, 100mA, 300mA, 500mA, 1000mA and 3000mA. Available settings are shown below

Time delay Δt is introduced to the residual current (earth leakage) protection characteristic. Available settings are; INST, 60ms, 200ms, 400ms, 700ms and NT. INST means EB2R set to time delay 0 (max. actual tripping time is 40ms) NT means No trip (tripping time is 0) The maximum breaking time is shown in brackets. Note that $I_{\Delta n}$ is set at 30mA, Δt defaults 0.

I_n is the adjustable tripping threshold for overload protection. It can be set between 0,63 and 1,0 times I_n . Available I_n ratings are shown below

I_i is the tripping threshold for short-circuit protection. It is fixed at the values shown below

Model	$I_{\Delta n}$	Δt (ms)	I_n (A)	I_i
EB2R 125	0.03, 0.1, 0.3, 0.5, 1, 3	0(40), 60(195), 200(365), 400(620), 700(950), NT (∞)	20, 32, 50, 63, 100	$12 \times I_n$ (+/- 20%)
EB2R 125	0.03, 0.1, 0.3, 0.5, 1, 3	0(40), 60(195), 200(365), 400(620), 700(950), NT (∞)	125	$10 \times I_n$ (+/- 20%)
EB2R 250	0.03, 0.1, 0.3, 0.5, 1, 3	0(40), 60(195), 200(365), 400(620), 700(950), NT (∞)	160	$13 \times I_n$ (+/- 20%)
EB2R 250	0.03, 0.1, 0.3, 0.5, 1, 3	0(40), 60(195), 200(365), 400(620), 700(950), NT (∞)	250	$10 \times I_n$ (+/- 20%)



Internal accessories – series EB2

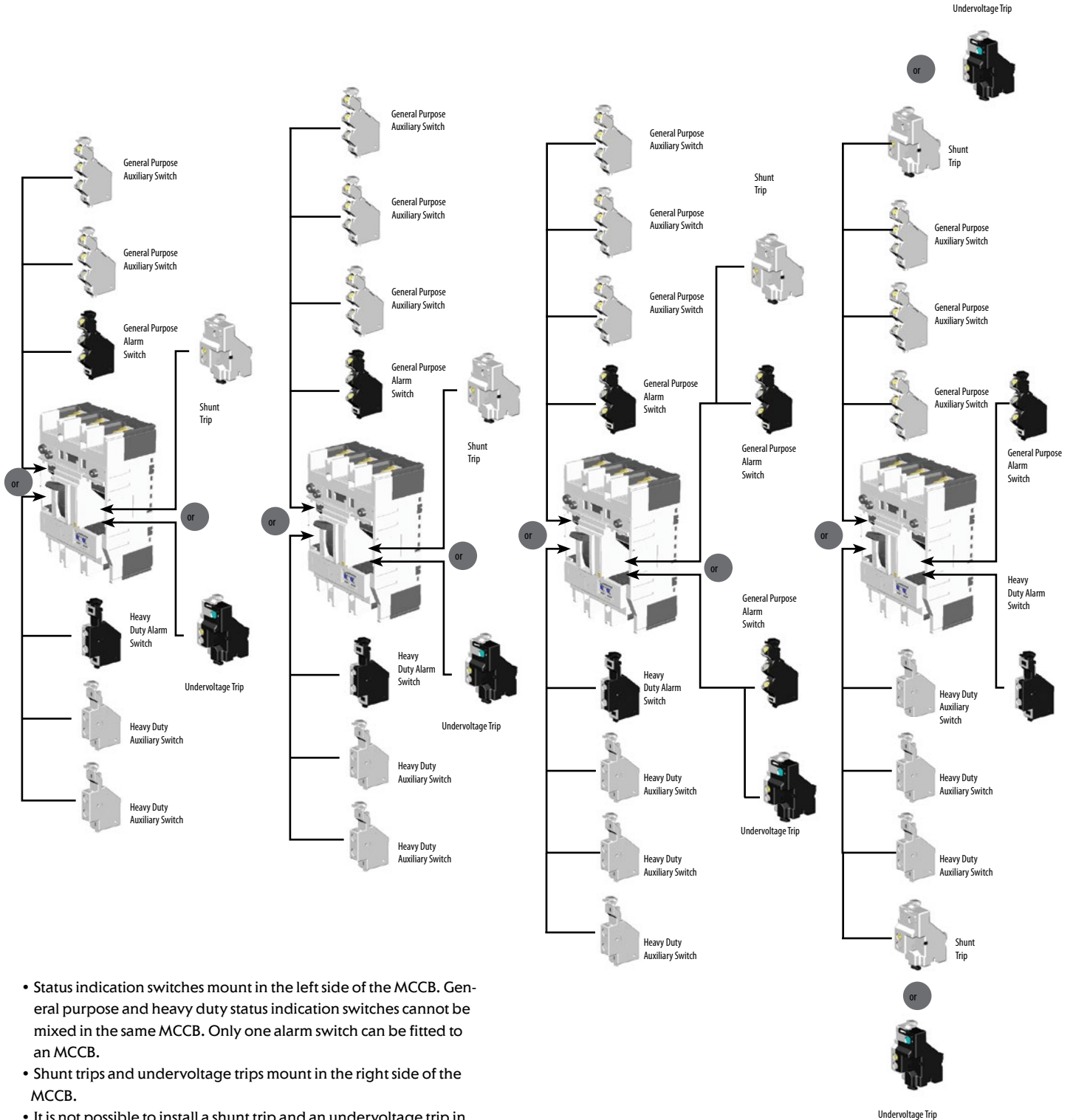
Ampere Frame size (A):

125, 160, 250

400, 630

800, 1000

1250, 1600

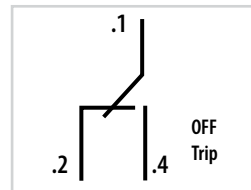


- Status indication switches mount in the left side of the MCCB. General purpose and heavy duty status indication switches cannot be mixed in the same MCCB. Only one alarm switch can be fitted to an MCCB.
- Shunt trips and undervoltage trips mount in the right side of the MCCB.
- It is not possible to install a shunt trip and an undervoltage trip in an MCCB as they occupy the same location. Undervoltage trips can provide remote tripping if necessary by wiring a normally closed contact or pushbutton in series with the protected supply.
- Undervoltage trips with time delays require an external time delay controller which clips to the side of the MCCB.

Internal accessories – series EB2



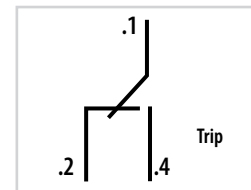
General Purpose Auxiliary Switch



Terminal Designations and Function of General Purpose Auxiliary Switch



General Purpose Alarm Switch



Terminal Designations and Function of General Purpose Alarm Switch

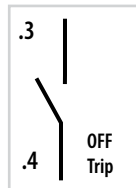
General purpose auxiliaries and alarm switch ratings

Volts (V)	AC Amperes (A)		Volts (V)	DC Amperes (A)		Minimum Load
	Resistive Load	Inductive Load		Resistive Load	Inductive Load	
440	-	-	250	-	-	100mA -> 15V DC.
240	3	2	125	0.4	0.05	
110	3	2	30	3	2	

Amperes (A)



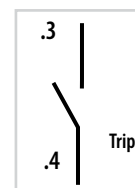
Heavy Duty Auxiliary Switch



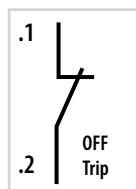
Terminal Designations and Function of Heavy Duty Auxiliary Switch NO contact



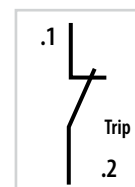
Heavy Duty Alarm Switch



Terminal Designations and Function of Heavy Duty Alarm Switch, NO contact



Terminal Designations and Function of Heavy Duty Auxiliary Switch, NC contact



Terminal Designations and Function of Heavy Duty Alarm Switch, NC contact

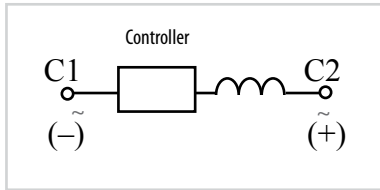
Ratings of Heavy Duty Auxiliary and Alarm switches

Volts (V)	AC Amperes (A)		Volts (V)	DC Amperes (A)	
	Resistive Load	Inductive Load		Resistive Load	Inductive Load
440	3	3	250	0.5	0.5
240	4	4	125	1	1
110	5	5	48	3	2.5
48	6	6	24	6	2.5



Shunt Trips

Ratings of Shunt Trips						
Rated Voltage	Voltage AC		Voltage DC			
	200-240	380-450	24	48	100-120	200-240
Excitation Current (A)	0.014	0.0065	0.03	0.03	0.011	0.011

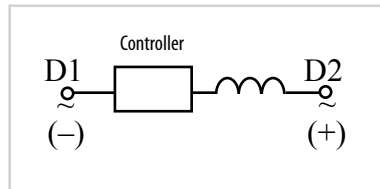


Terminal Designations of Shunt Trips



Undervoltage Trips

Ratings of Undervoltage Trips					
Rated Voltage	Power supply capacity (VA)		Excitation current (mA)		
	Voltage AC		Voltage DC		
	200-240	380-450	24	100-120	200-240
Power Supply Capacity (A)	1.4	2.28	23	10	10



Terminal Designations of Undervoltage Trips

External accessories

IZ – Interpole barrier. Installed between MCCB terminal, which increases the distance between poles to reduce the possibility of creepage.

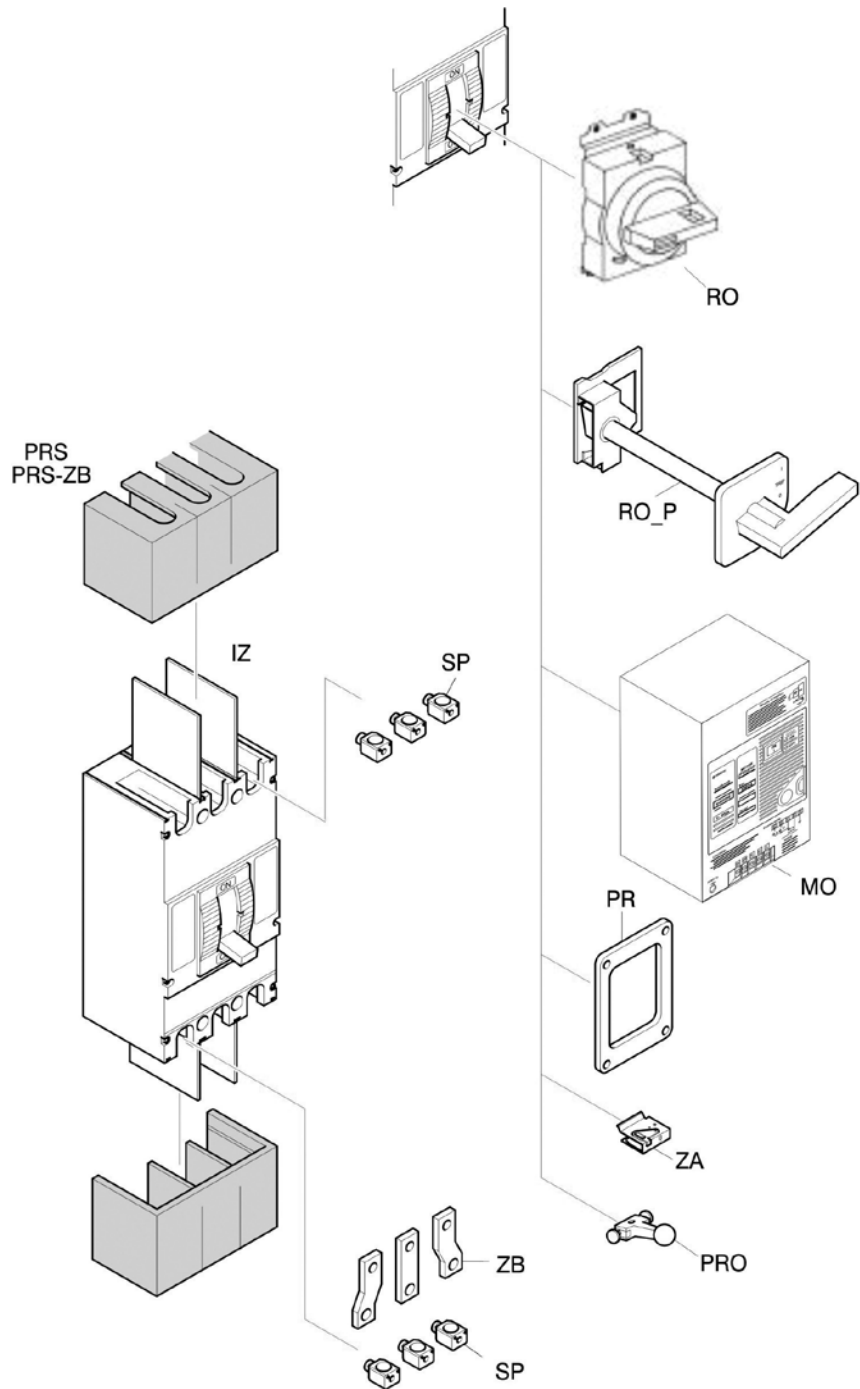
PRS – Terminal cover. The terminal covers are applied to the MCCB to prevent accidental contact with live parts and thereby protection against direct contact.

PRS-ZB – Terminal cover for att. Busbar. The terminal covers are applied to the MCCB to prevent accidental contact with live parts and thereby protection against direct contact. The width is different because of attach busbar.

SP – Solderless terminal

RO – Operating handle, breaker mounted. It's used when MCCB is installed in control centre / switchboard

RO_P – Operating handle, panel mounted, variable depth. This consists of an operating mechanism mounted on the breaker, an operating handle mounted on the panel door and a square shaft to connect the mechanism with the handle.



MO – Motor operator. Enabling to switch MCCB ON or OFF remotely.

PR – Door flange. Accessory for mounting on panel door.

ZA – Handle lock. Enables the MCCB to be padlocked in neither the ON or OFF position.

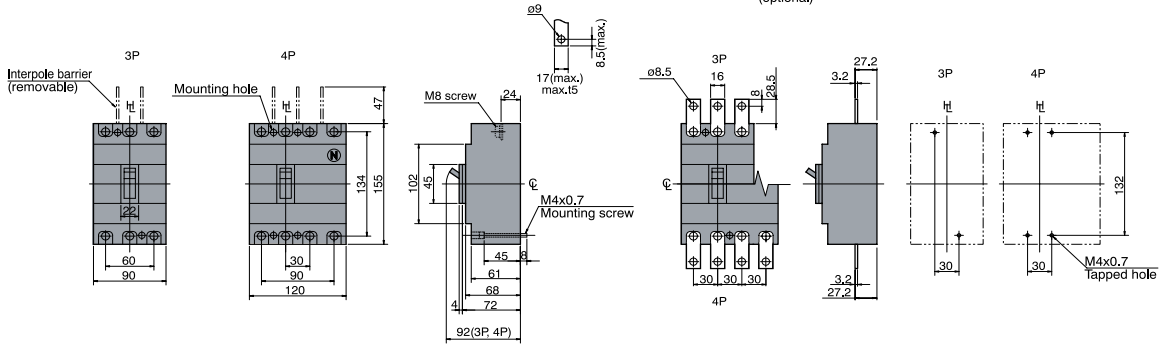
ZB – Attach busbar. Used for easier installation on busbar systems (widen terminals).

PRO – Handle extension. Used for easier manipulation ON/OFF at bigger MCCB's.

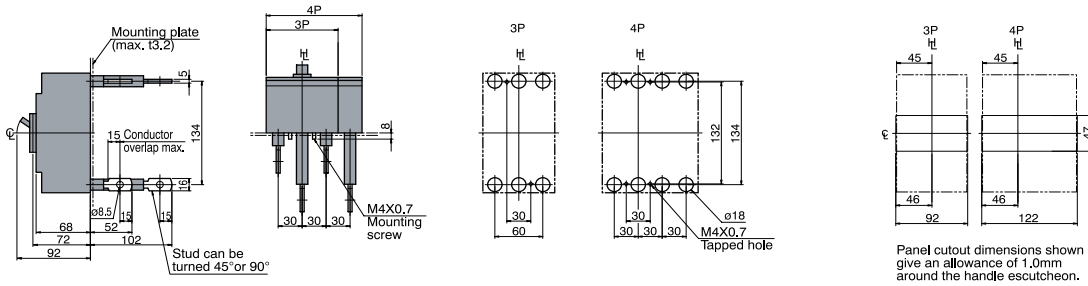
Dimensions

EB2 & EB2R 125

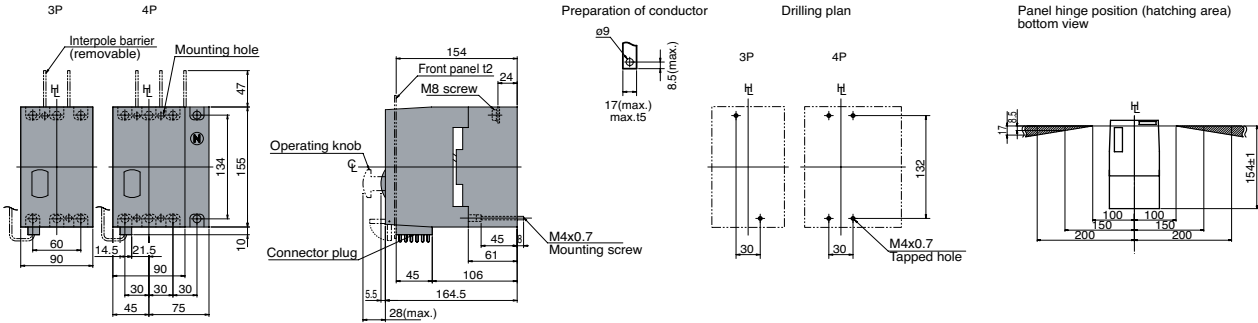
Front connected



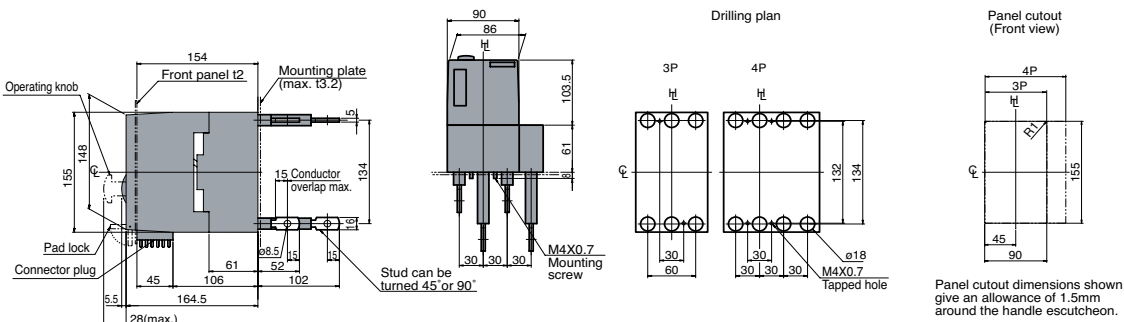
Rear connected



Front connected with Motor Operator



Rear connected with Motor Operator

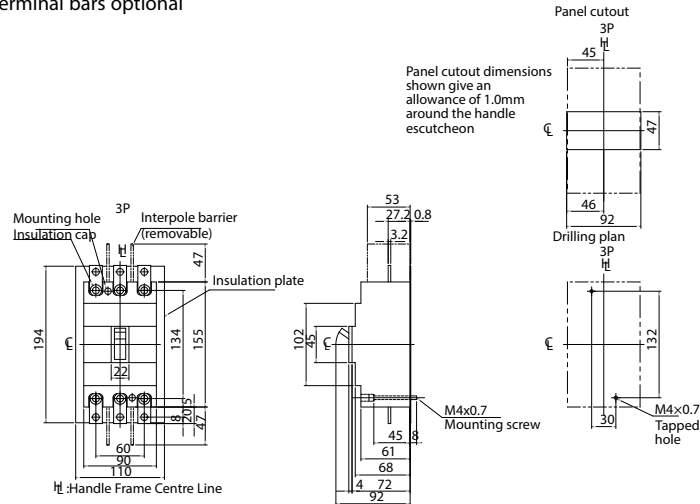


ETIBREAK

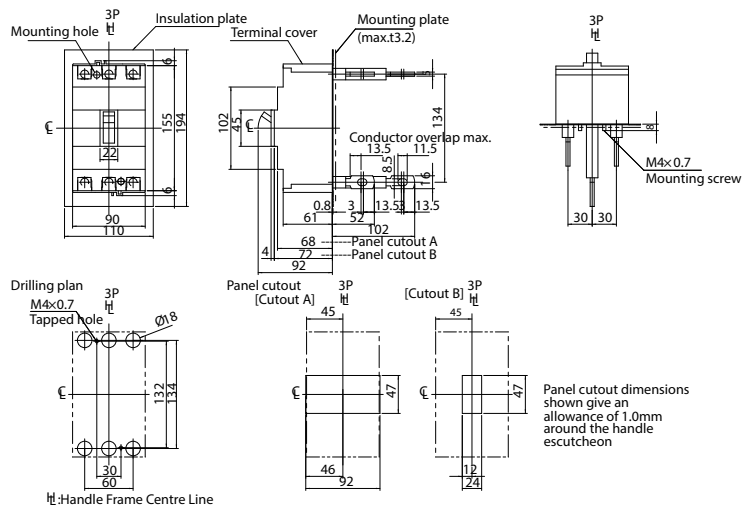
Technical data

EB2 125 1000V

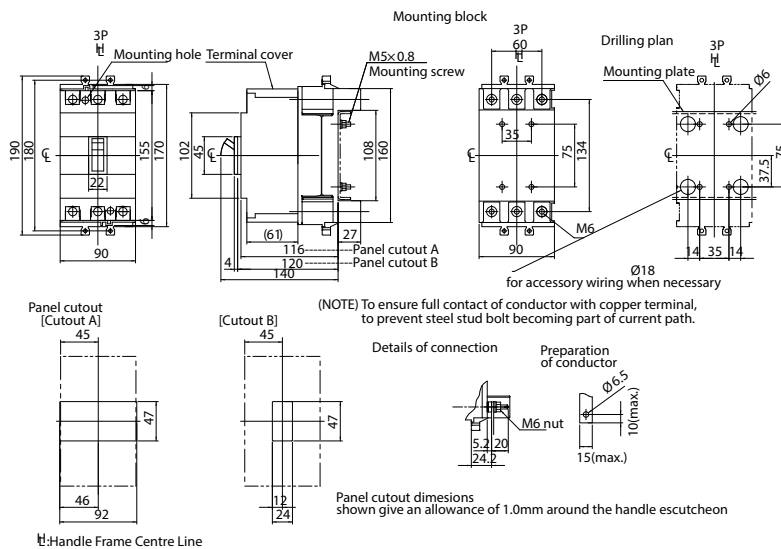
Front connected with terminal bars optional



Rear connected

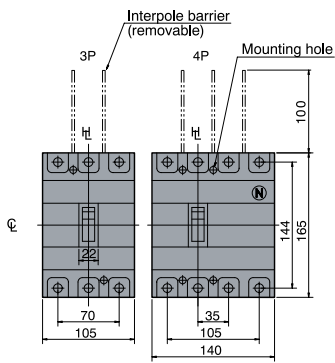


Plug in (PMB)

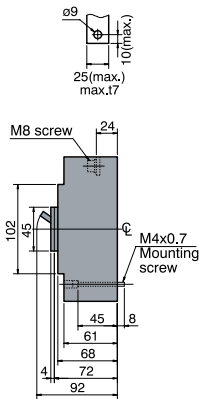


EB2 160, EB2 250 & EB2R 250

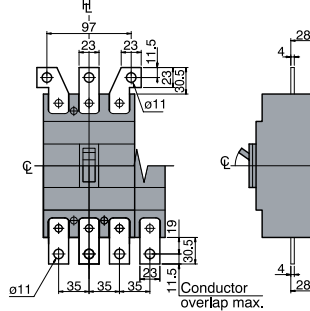
Front connected



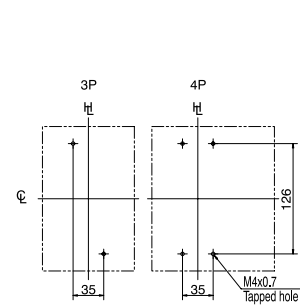
Preparation of conductor



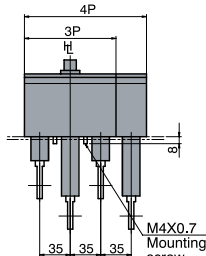
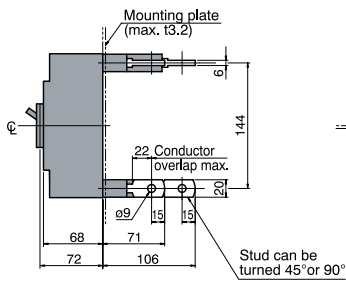
With terminal bars (optional)



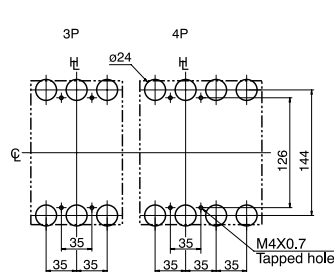
Drilling plan



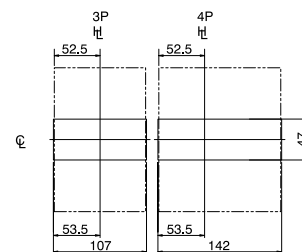
Rear connected



Drilling plan

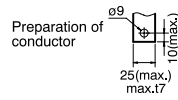
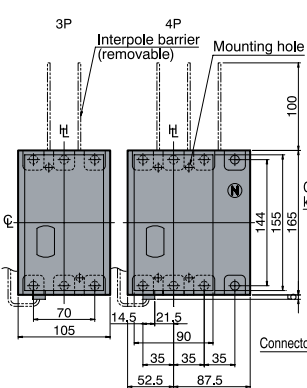


Panel cutout (Front view)

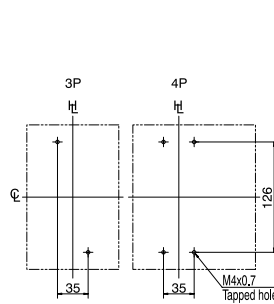


Panel cutout dimensions shown give an allowance of 1.0mm around the handle escutcheon.

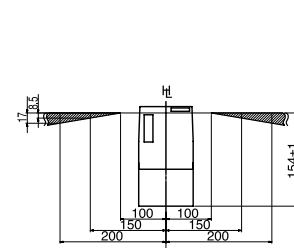
Front connected with Motor Operator



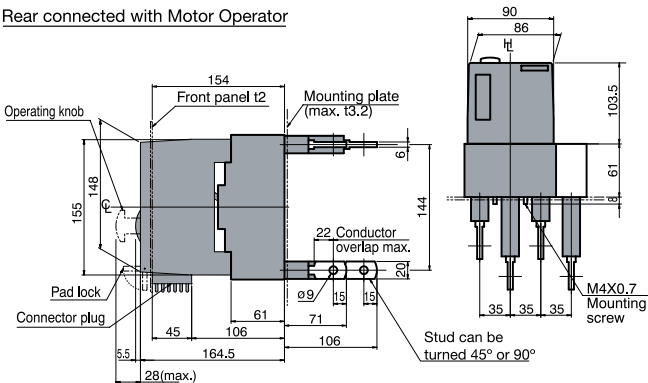
Drilling plan



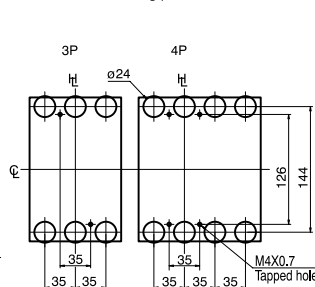
Panel hinge position (hatching area) bottom view



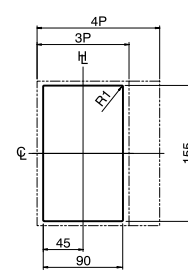
Rear connected with Motor Operator



Drilling plan



Panel cutout (Front view)

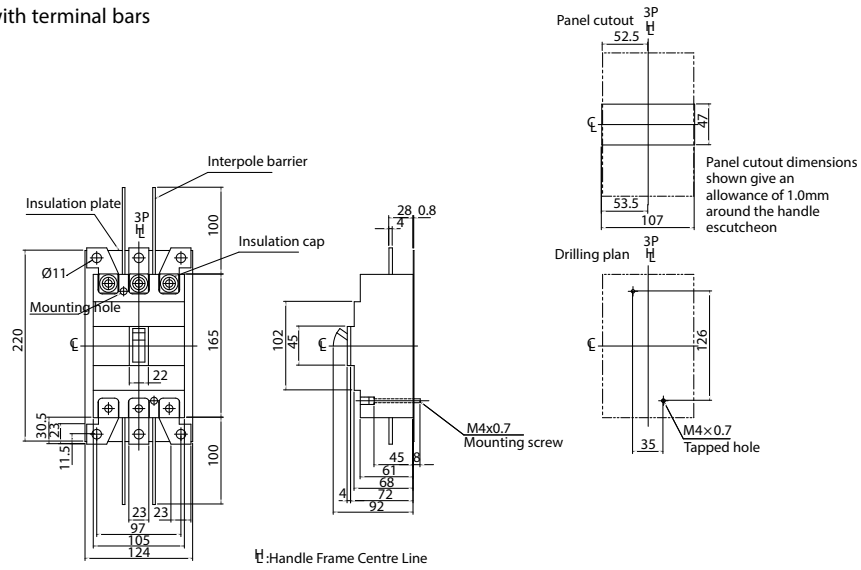


Panel cutout dimensions shown give an allowance of 1.5mm around the handle escutcheon.

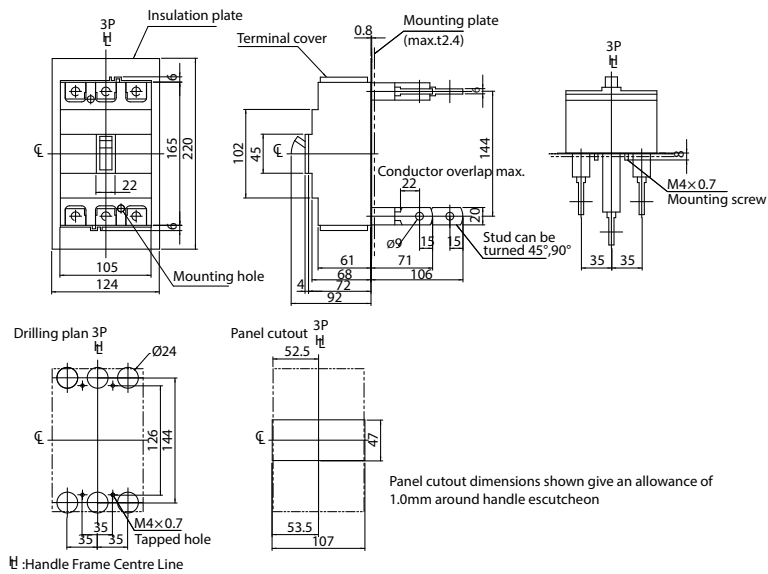
Technical data

EB2 250 1000V

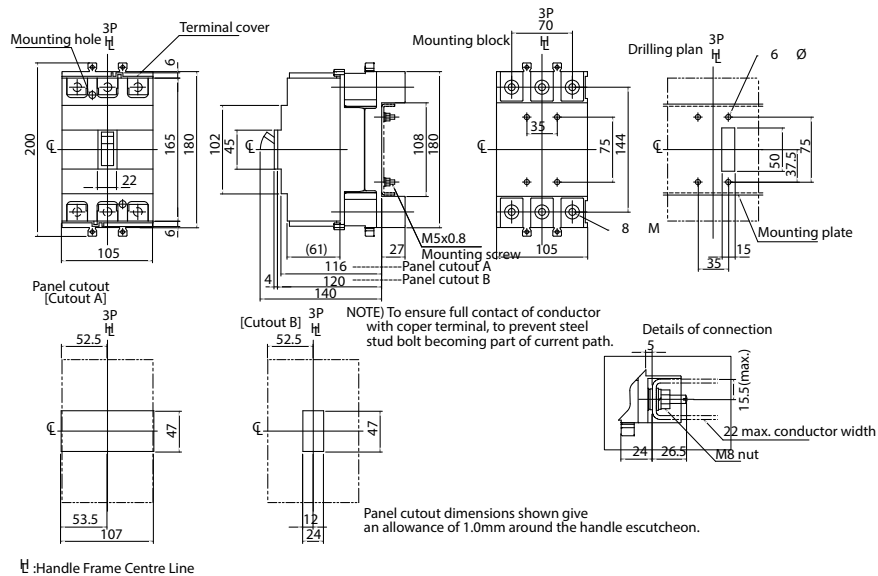
Front connected with terminal bars



Rear connected

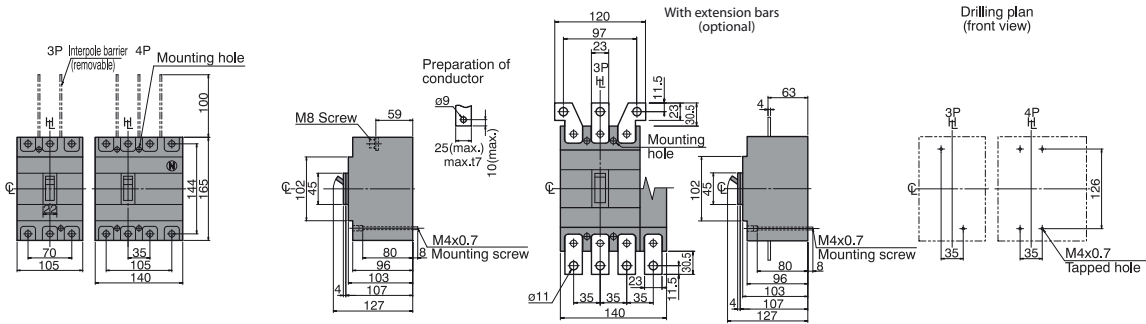


Plug in (PMB)

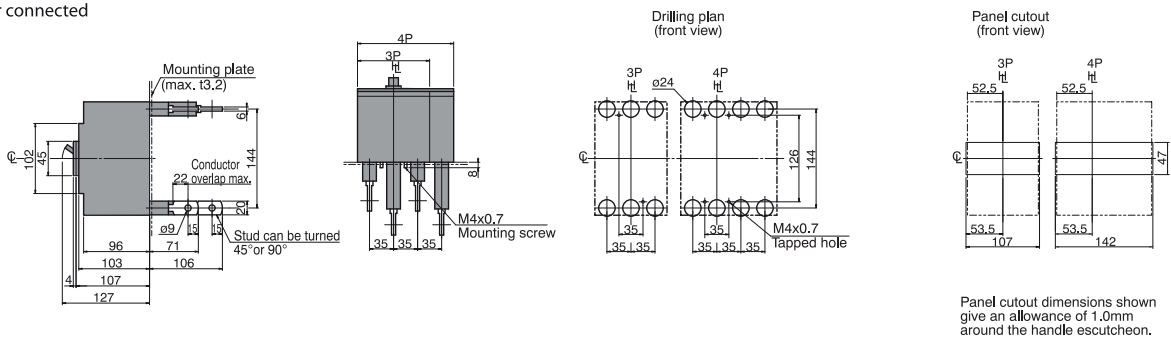


EB2 250/_E (Microprocessor's MCCBs)

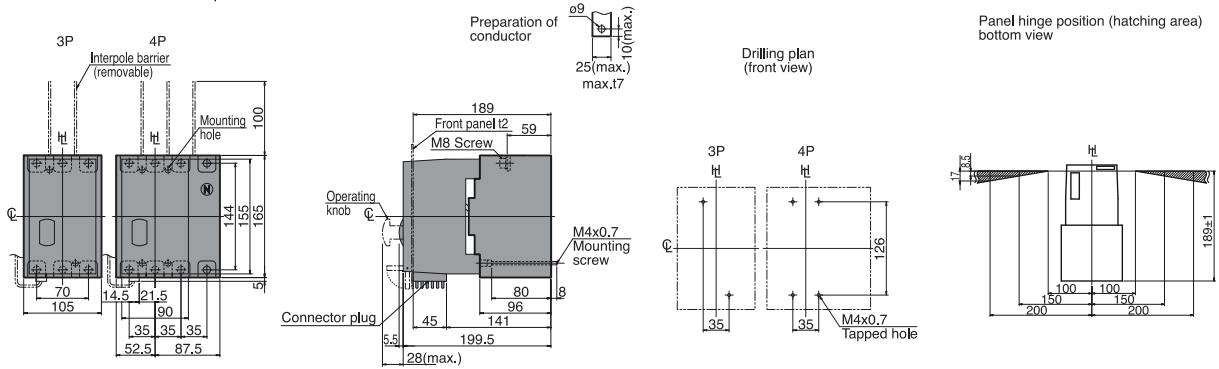
Front connected



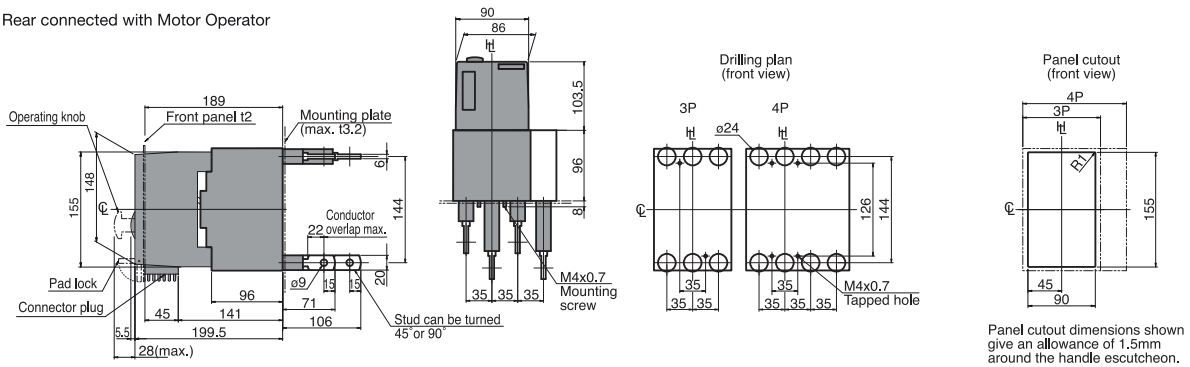
Rear connected



Front connected with Motor Operator



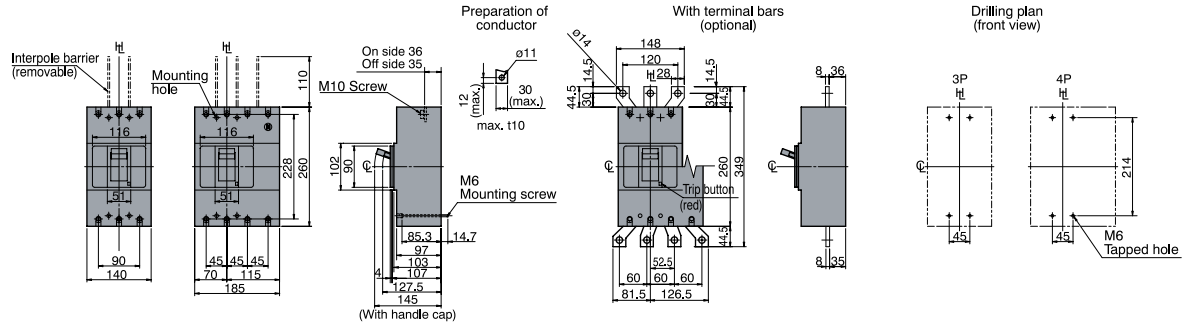
Rear connected with Motor Operator



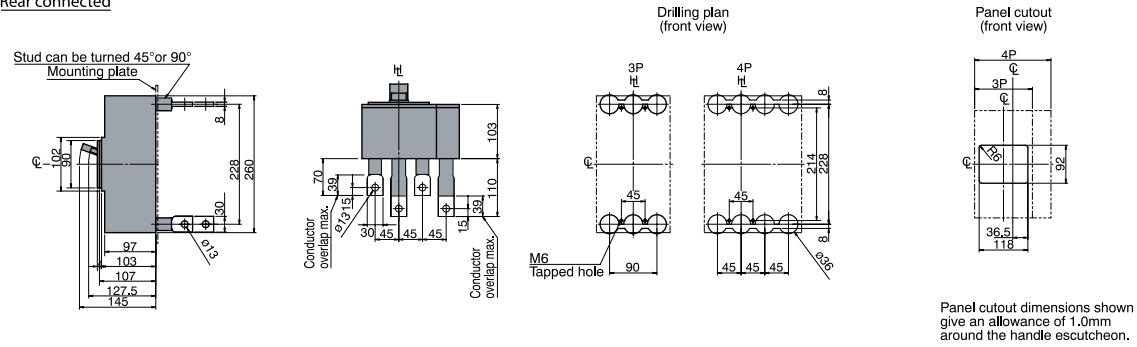
Technical data

EB2 400

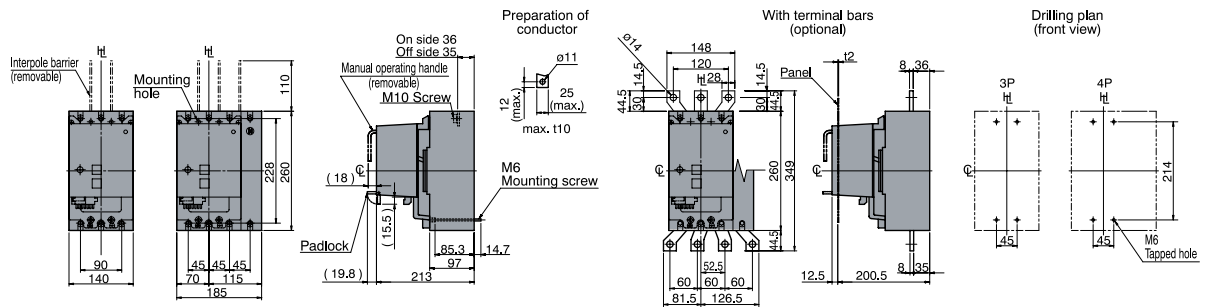
Front connected



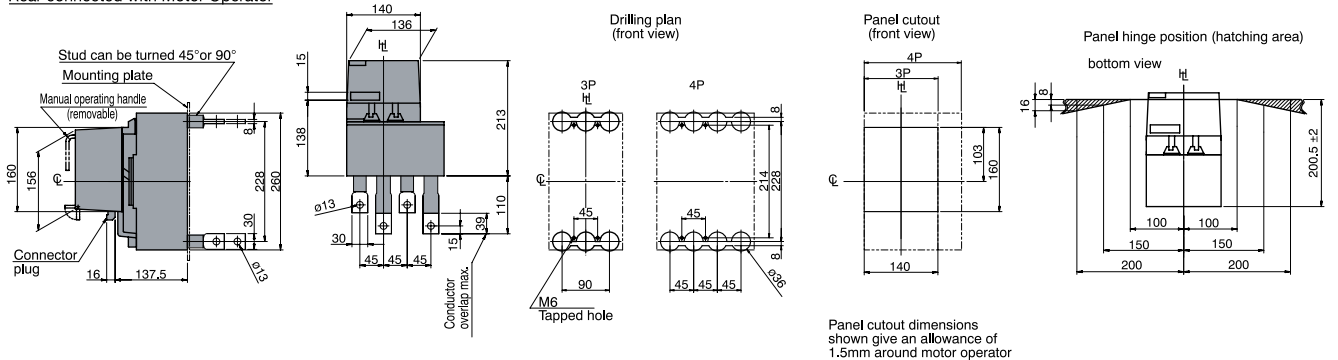
Rear connected



Front connected with Motor Operator

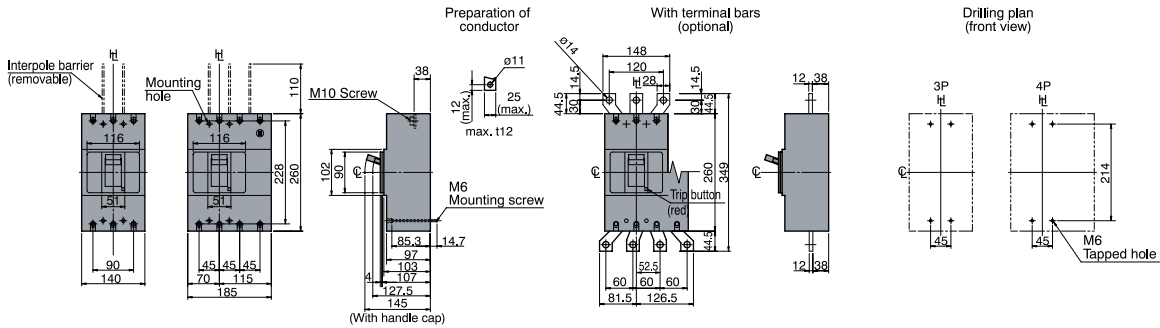


Rear connected with Motor Operator

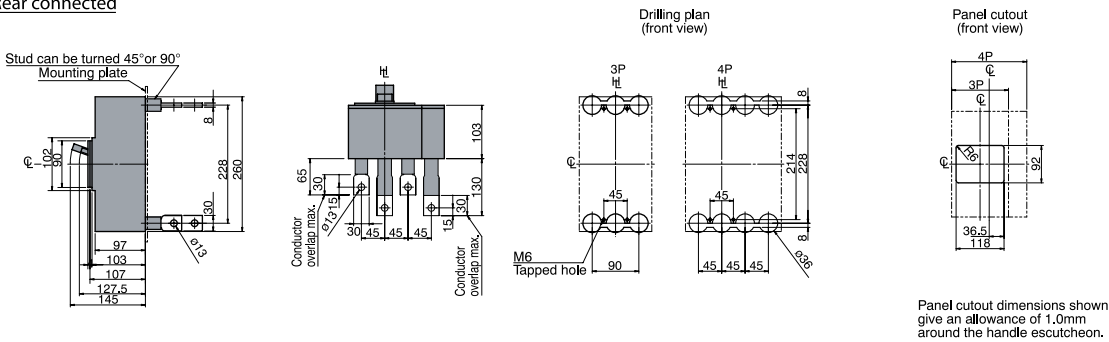


EB2 630

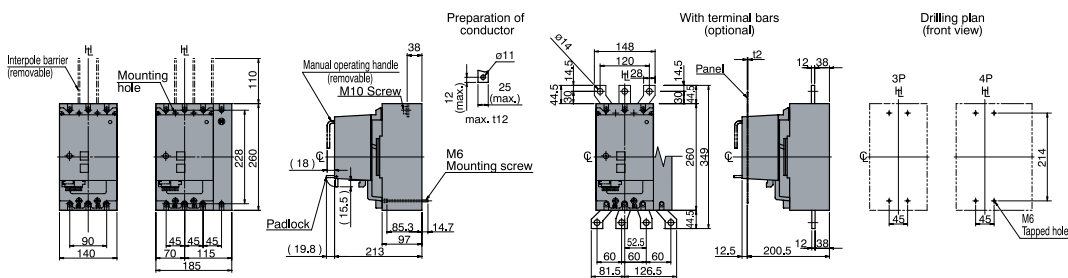
Front connected



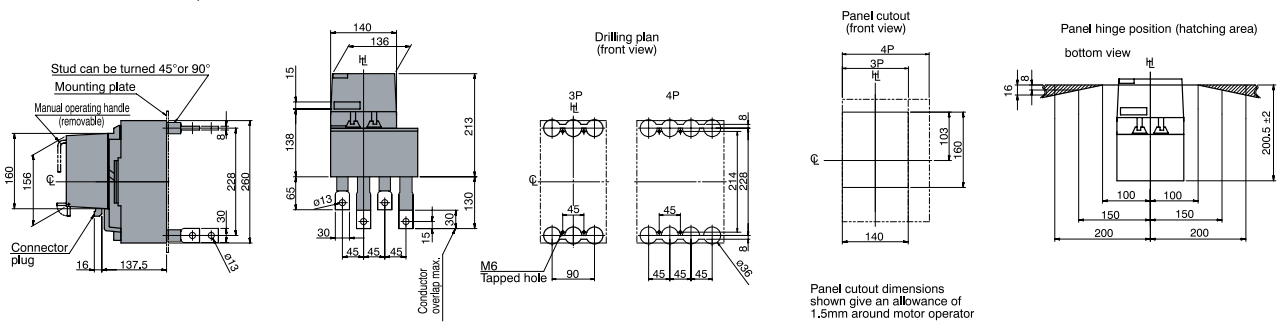
Rear connected



Front connected with Motor Operator



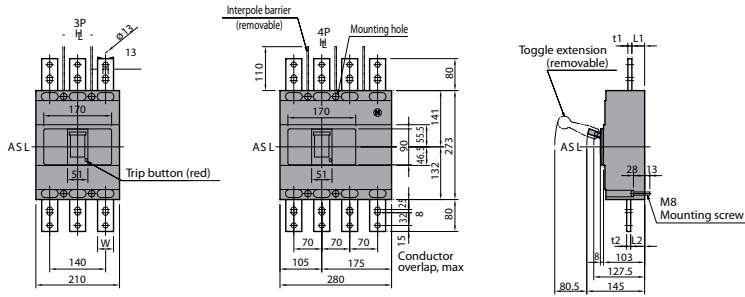
Rear connected with Motor Operator



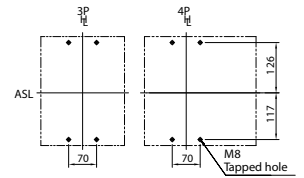
Technical data

EB2 800

Front connected with extension bars (optional)

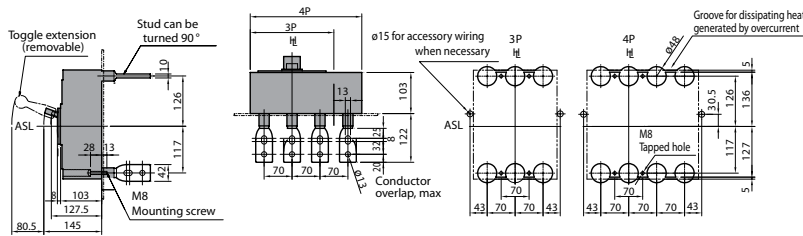


Drilling plan (front view)

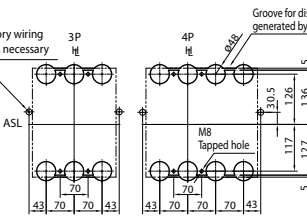


Breaker Type	Rated Current	t1	t2	L1	L2	W
EB2 800 Thermal magnetic	630A	8	8	32	34	40
	800A	10	10	32	35	40
EB2 800 Electronic	630A	8	8	32	36	40
	800A	10	10	32	36	40

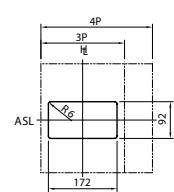
Rear connected



Drilling plan (front view)



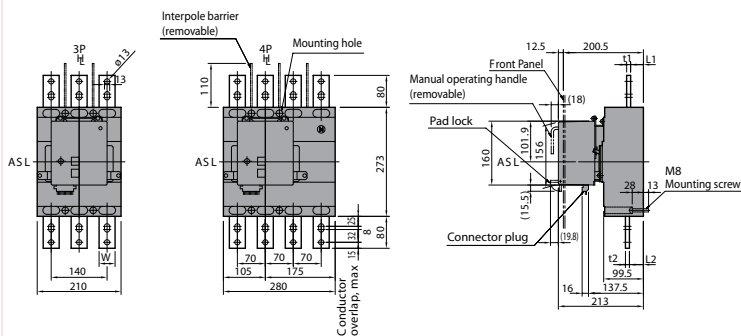
Panel cutout (front view)



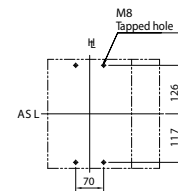
Panel cutout dimensions shown give an allowance of 1.0mm around the handle escutcheon.

Note: Studs are factory installed in horizontal direction both on the line and load sides.

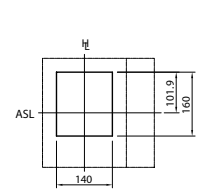
Front connected with Motor Operator



Drilling plan (front view)

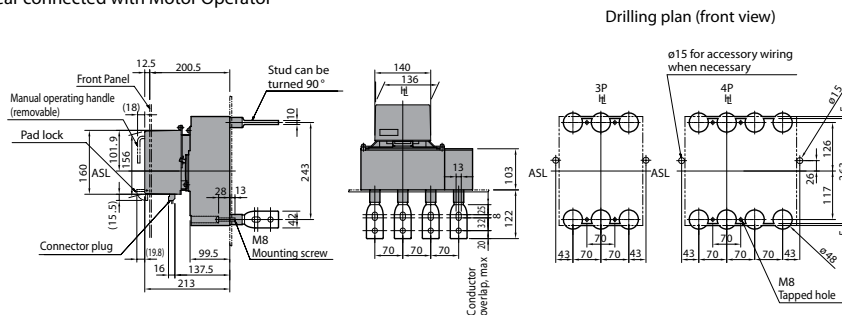


Panel cutout (front view)

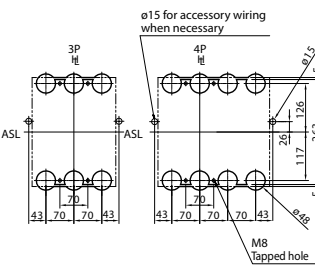


Panel cutout dimensions shown give an allowance of 1.5mm around motor operator.

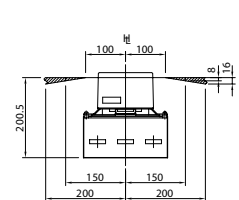
Rear connected with Motor Operator



Drilling plan (front view)



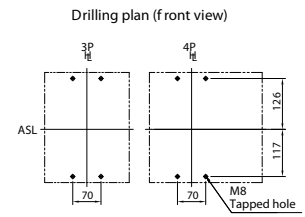
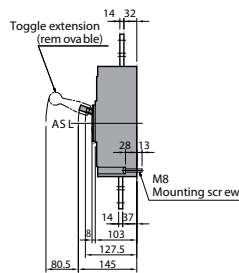
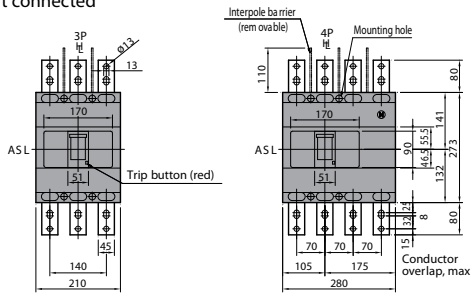
Panel hinge position (hatching area) (bottom view)



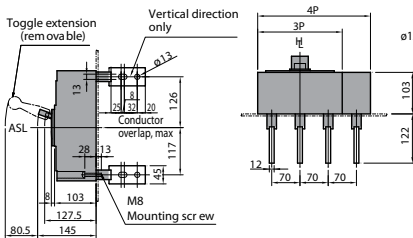
Note: Studs are factory installed in horizontal direction both on the line and load sides.

EB2 1000

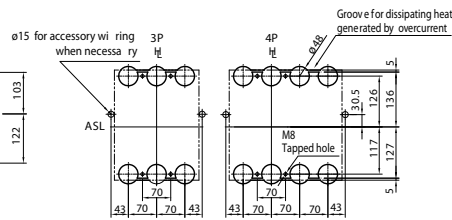
Front connected



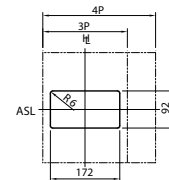
Rear connected



Drilling plan (front view)

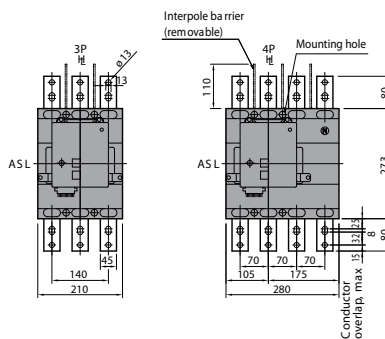


Panel cutout (front view)

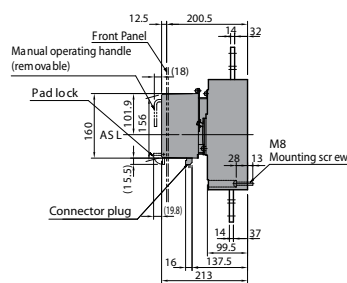


Panel cutout dimensions shown give an allowance of 1.0mm around the handle escutcheon.

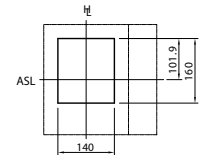
Front connected with Motor Operator



Drilling plan (front view)

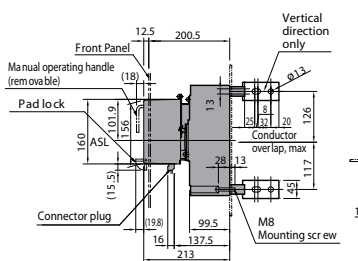


Panel cutout (front view)

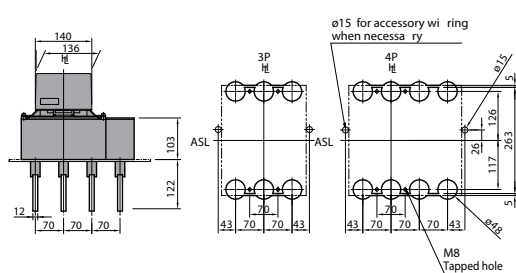


Panel cutout dimensions shown give an allowance of 1.5mm around motor operator.

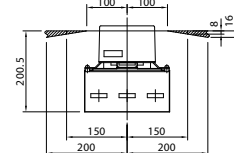
Rear connected with Motor Operator



Drilling plan (front view)



Panel hinge position (hatching area) (bottom view)

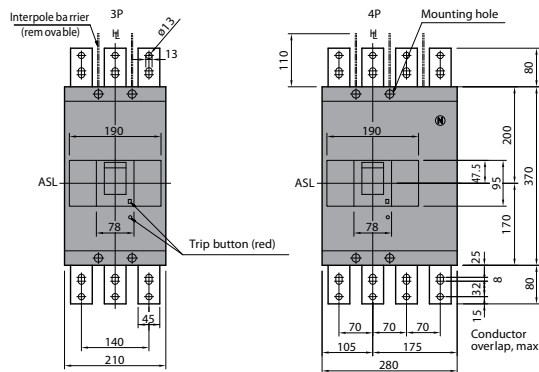


Note: Studs are factory installed in horizontal direction both on the line and load sides.

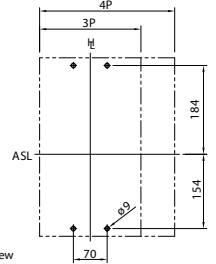
Technical data

EB2 1250

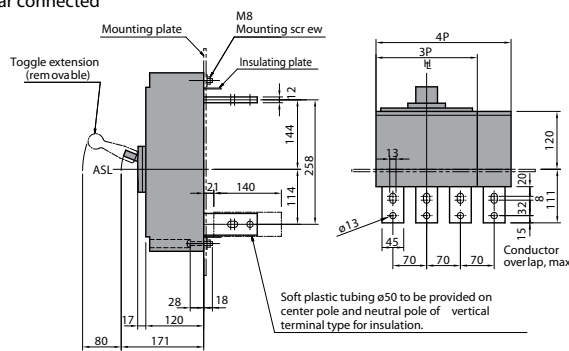
Front connected



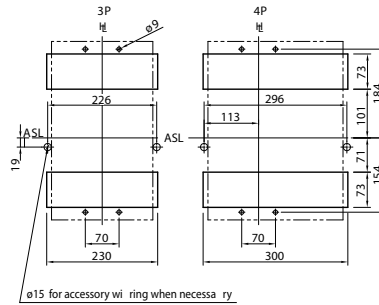
Drilling plan (front view)



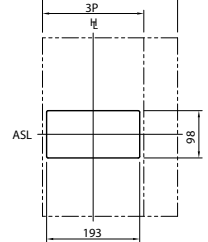
Rear connected



Drilling plan (front view)



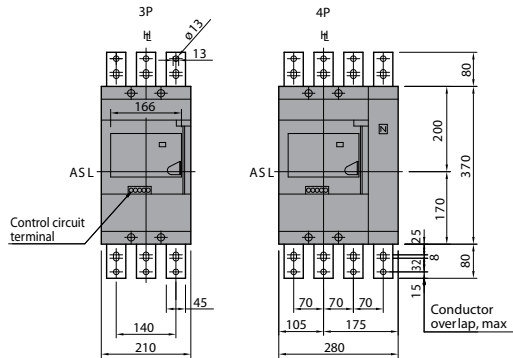
Panel cutout (front view)



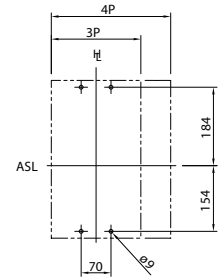
Panel cutout dimensions shown give an allowance of 1.5mm around the handle escutcheon.

Note: Studs are factory installed in horizontal direction both on the line and load sides.

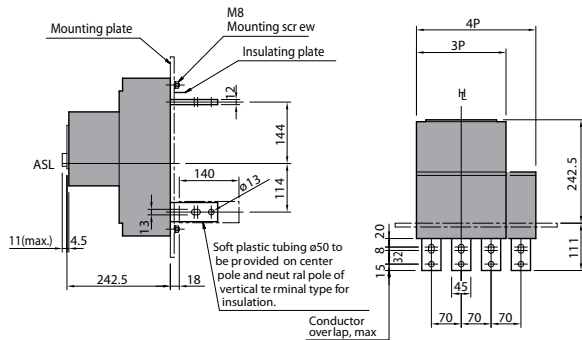
Front connected with Motor Operator



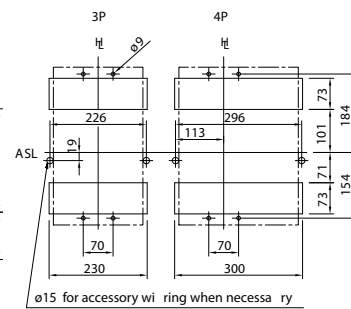
Drilling plan (front view)



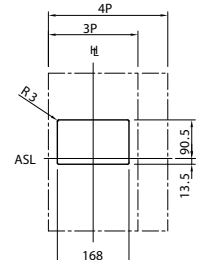
Rear connected with Motor Operator



Drilling plan (front view)



Panel cutout (front view)

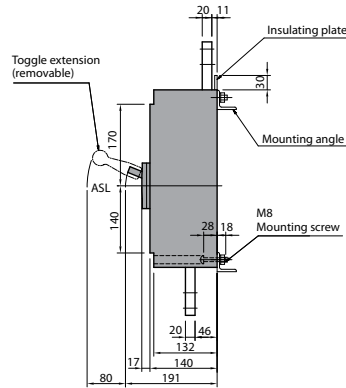
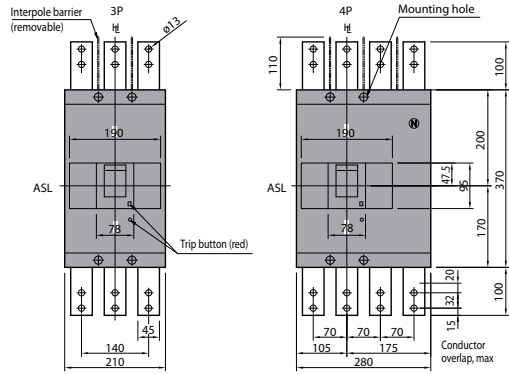


Panel cutout dimensions shown give an allowance of 1.0mm around motor operator.

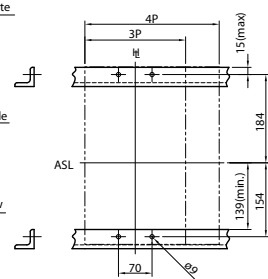
Note: Studs are factory installed in horizontal direction both on the line and load sides.

EB2 1600

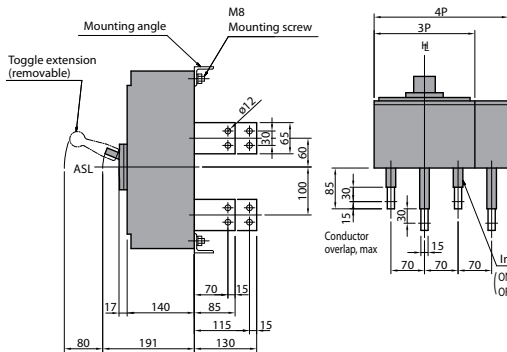
Front connected



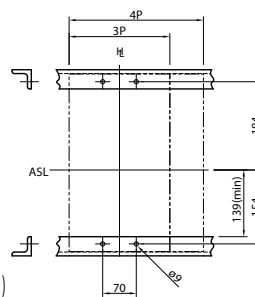
Drilling plan (front view)



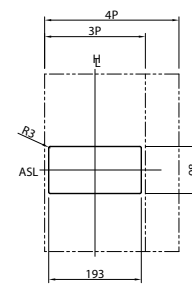
Rear connected



Drilling plan (front view)

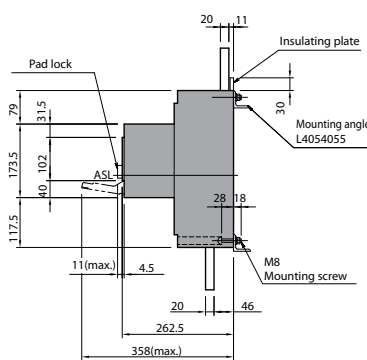
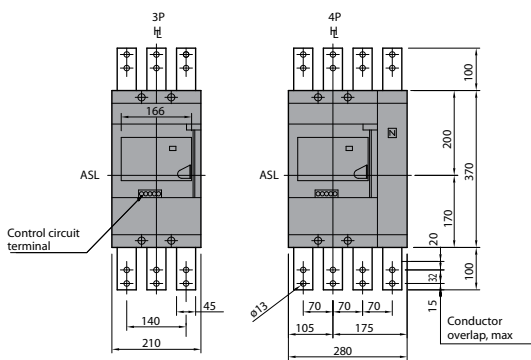


Panel cutout (front view)

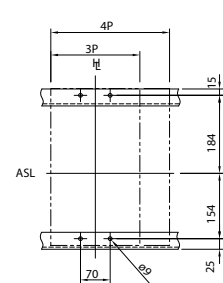


Panel cutout dimensions shown give an allowance of 1.5mm around the handle escutcheon.

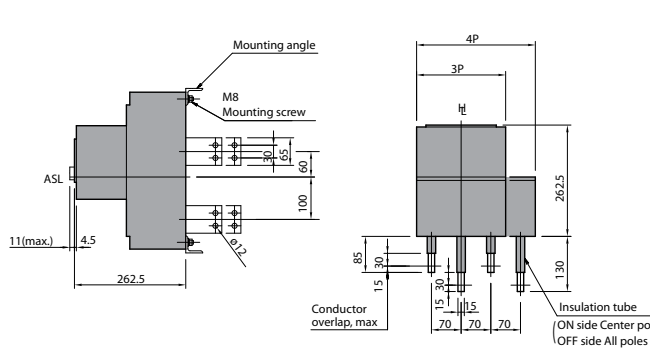
Front connected with Motor Operator



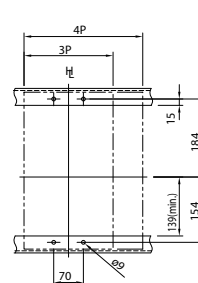
Drilling plan (front view)



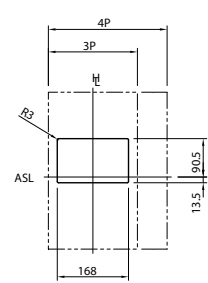
Rear connected with Motor Operator



Drilling plan (front view)



Panel cutout (front view)



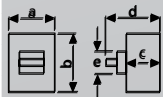
Panel cutout dimensions shown give an allowance of 1.0mm around motor operator.

Technical data

Low breaking capacity moulded case circuit breakers EB2S

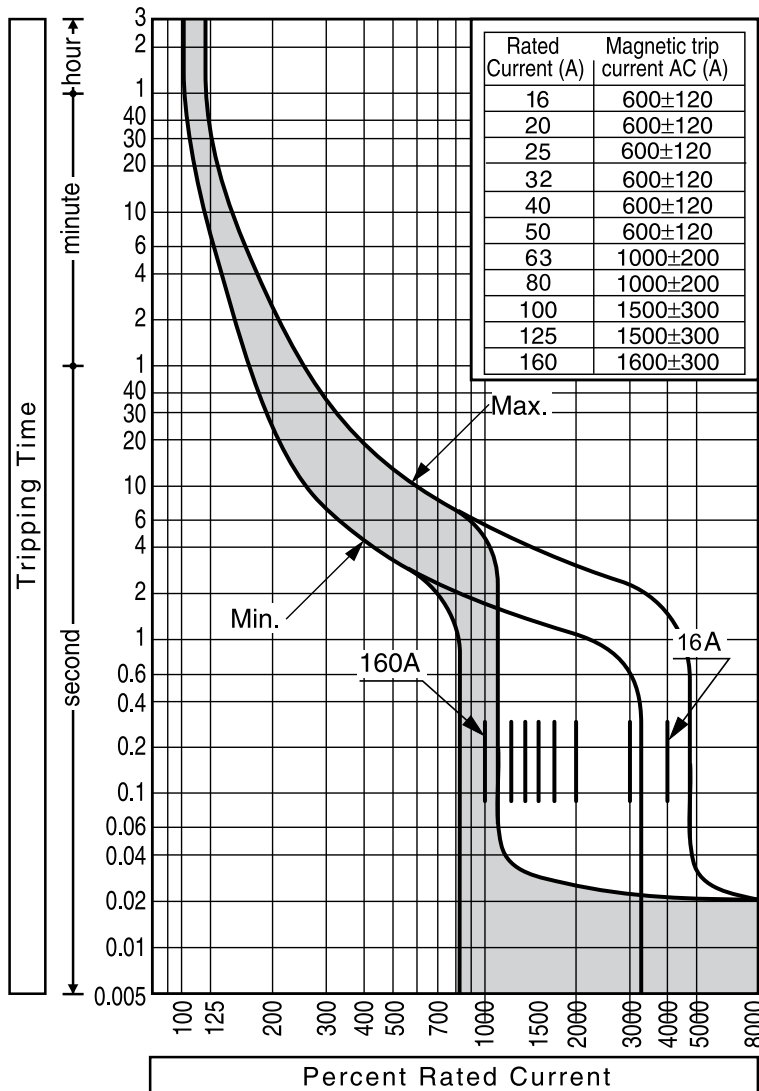
*F - fixed, A - adjustable

Product series	description	unit	condition	EB2S 160 F			EB2S 160 A			EB2S 250 F			EB2S 250 A		
Model-type				LF	SF	HF	LA	SA	HA	LF	SF	HF	LA	SA	HA
Number of poles				3, 4											
Nominal current ratings															
	I_n	(A)	50°C	16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160			25, 40, 63, 80, 100, 125, 160			200, 250			200, 250		
Electrical characteristics															
Rated insulation voltage	U_i	(V)		690	690	690	690	690	690	690	690	690	690	690	690
Rated impulse withstand voltage	U_{imp}	(kV)		8	8	8	8	8	8	8	8	8	8	8	8
Ultimate breaking capacity (IEC, JIS, AS/NZS)	I_{cu}	(kA)	690V AC	-	-	6	-	-	6	-	-	4	-	-	4
			525V AC	6	7,5	10	6	7,5	10	6	10	25	6	7,5	10
			440V AC	10	15	25	10	15	25	10	15	30	10	15	30
			380/400/415V AC	16	25	40	16	25	40	16	25	40	16	25	40
			240V AC	25	35	50	25	35	50	25	35	85	25	35	85
			250V DC	13	20	25	13	20	25	13	15	25	13	15	25
			125V DC	20	30	40	20	30	40	20	25	40	20	25	40
Service breaking capacity (IEC, JIS, AS/NZS)	I_{cs}	(kA)	690V AC	-	-	3	-	-	3	-	-	2	-	-	2
			525V AC	3	4	7,5	3	4	7,5	3	7,5	13	3	6	7,5
			440V AC	5	7,5	13	5	7,5	13	5	12	15	5	12	15
			380/400/415V AC	8	13	20	8	13	20	8	19	20	8	19	20
			240V AC	13	18	25	13	18	25	13	27	43	13	27	43
			250V DC	7	10	13	7	10	13	7	12	13	7	12	13
			125V DC	10	15	20	10	15	20	10	19	20	10	19	20
Rated short-circuit making capacity	I_{cm}	(kA)	peak	33	33	33	33	33	33	33	33	33	33	33	33
Rated short-circuit withstand current	I_{cw}	(kA)	rms	-	-	-	-	-	-	-	-	-	-	-	-
Protection															
Fixed thermal, fixed magnetic						✓			-		✓				-
Adjustable thermal, fixed magnetic						-			✓		-				-
Adjustable thermal, adjustable magnetic						-			-		-				✓
Utilization category						A			A		A				A
Outline dimensions															
	height (b)	(mm)		130			130			165			165		
	width (a)	(mm)	3 pole	75			75			105			105		
	width (a)	(mm)	4 pole	100			100			140			140		
	depth (c)	(mm)		68			68			68			68		
	depth (d)	(mm)		93			93			95			95		
	toggle cutout (e)	(mm)		45			45			45			45		
Weight	(kg)		3 pole	0.8			0.8			1.5			1.5		
			4 pole	1.0			1.0			1.9			1.9		
Operation															
Direct Opening Action						✓			✓		✓				✓
Trip button						✓			✓		✓				✓
Suitable for isolation						✓			✓		✓				✓
Standards				IEC 60947-2, EN 60947-2											



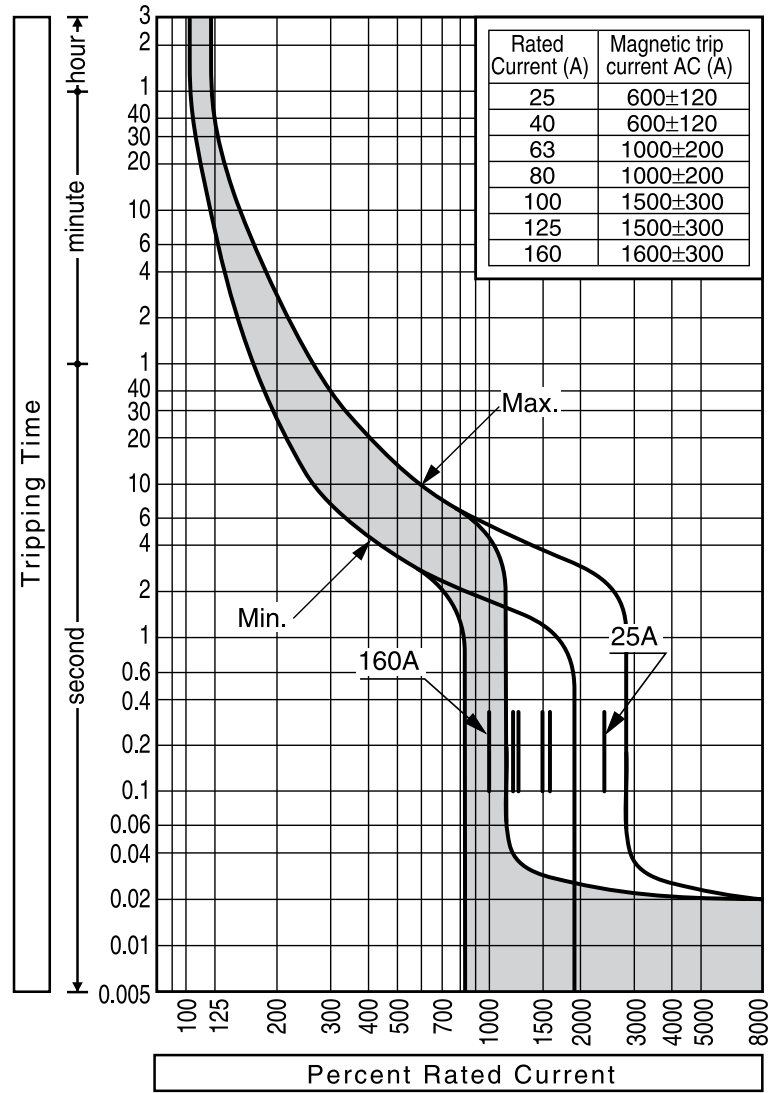
I-t

EB2S 160 LF, EB2S 160 SF, EB2S 160 HF

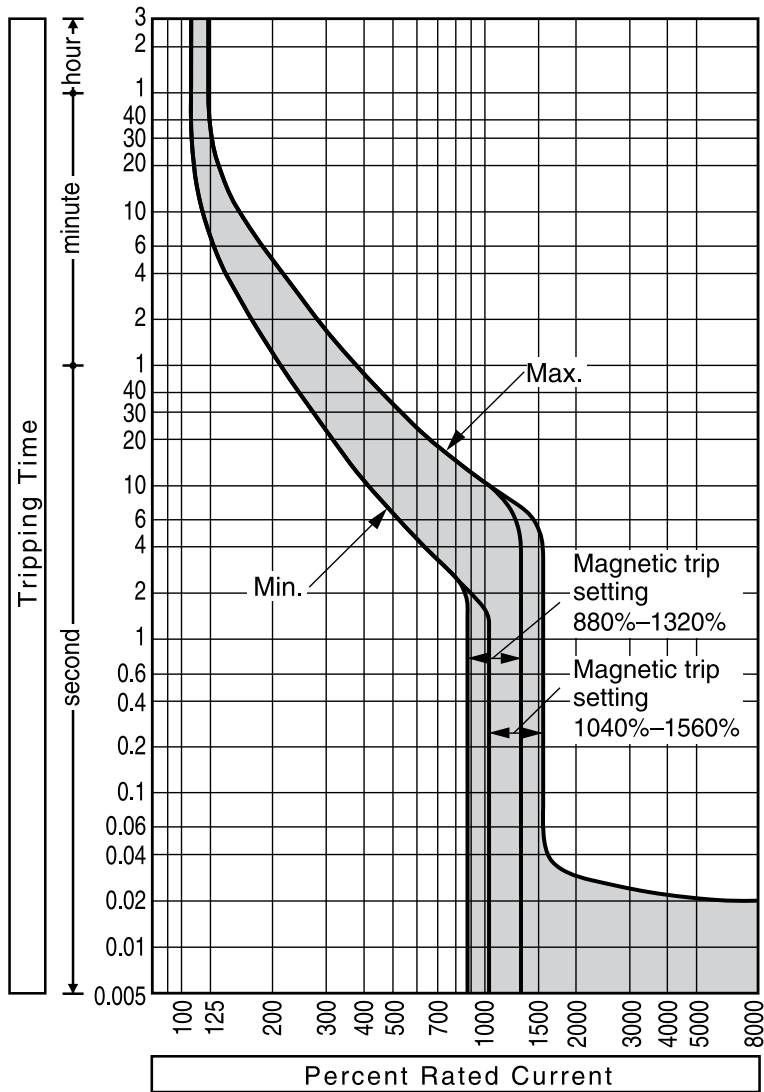


ETIBREAK

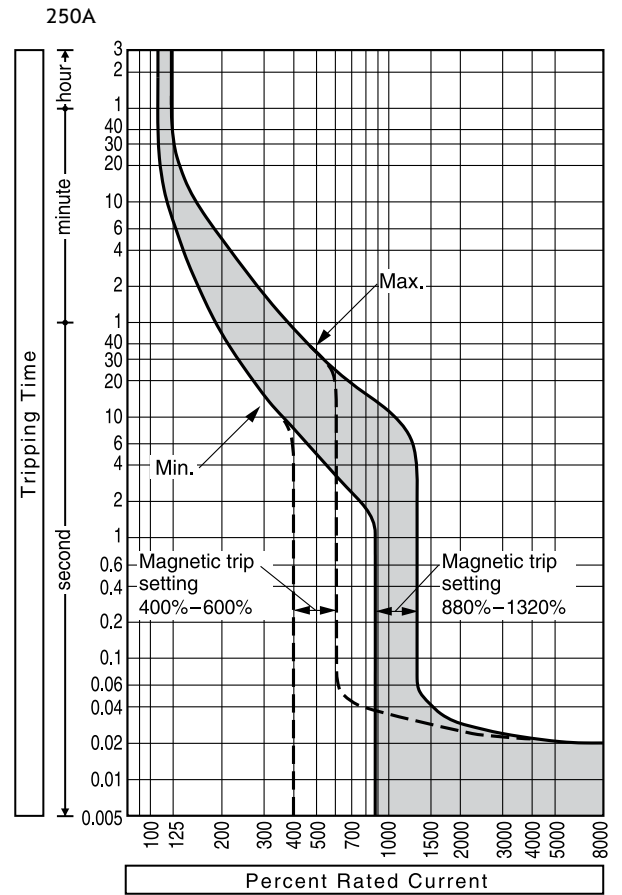
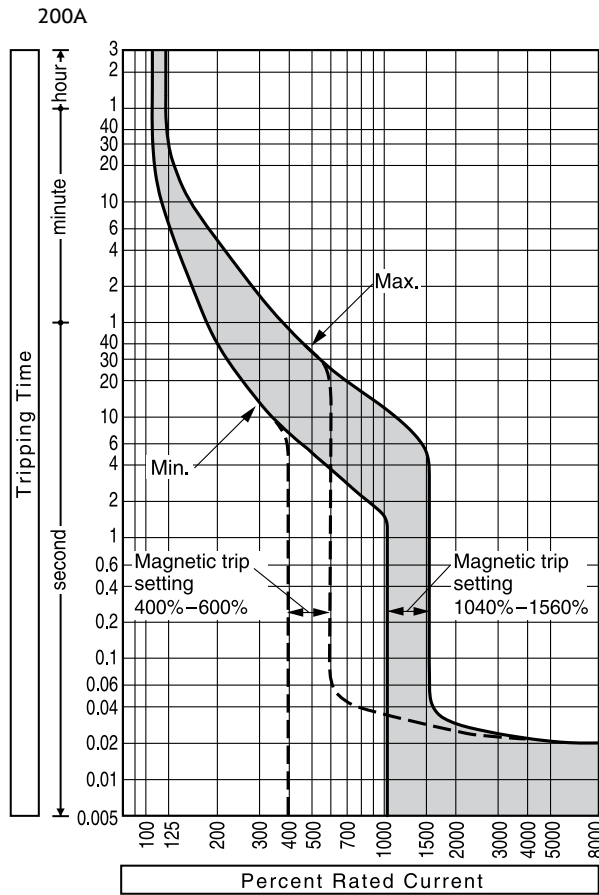
EB2S 160 LA, EB2S 160 SA, EB2S 160 HA



EB2S 250 LF, EB2S 250 SF, EB2S 250 HF



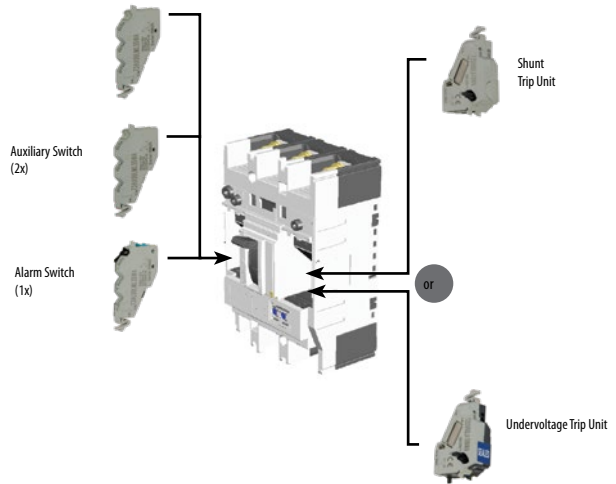
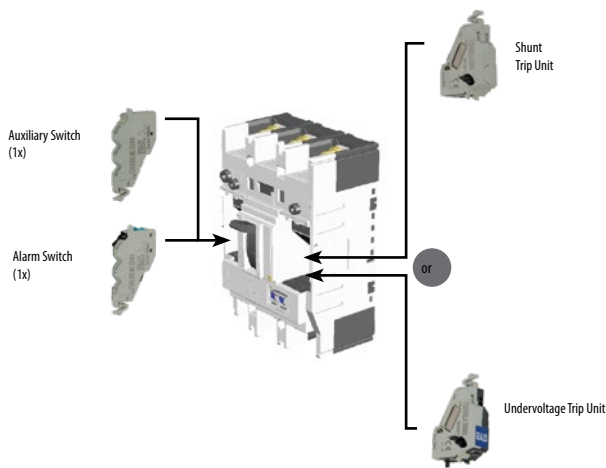
EB2S 250 LA, EB2S 250 SA, EB2S 250 HA



Internal accessories

EB2S 160 F&A

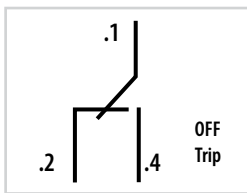
EB2S 250 F&A



- Status indication switches mount in the left side of the MCCB.
- Only one alarm switch can be fitted to an MCCB.



Auxiliary Switch



Terminal designations and function

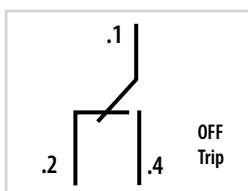
Ratings of Auxiliary switch

Volts (V)	AC Amperes (A)		DC Amperes (A)	
	Resistive Load	Inductive Load	Resistive Load	Inductive Load
480	-	-	-	-
250	3	2	0.4	0.05
125	3	2	3	2

The inductive load means power factor of no smaller than 0.4 and time constant of no larger than 7 ms.



Alarm Switch



Terminal designations and function

Ratings of Alarm switch

Volts (V)	AC Amperes (A)		DC Amperes (A)	
	Resistive Load	Inductive Load	Resistive Load	Inductive Load
480	-	-	-	-
250	3	2	0.4	0.05
125	3	2	3	2

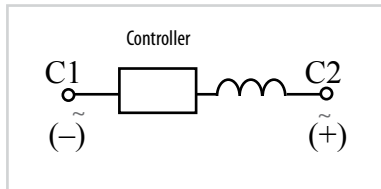
The inductive load means power factor of no smaller than 0.4 and time constant of no larger than 7 ms.

Technical data



Shunt Trip Unit

Ratings of Shunt Trip			
Rated Voltage	Voltage AC		Voltage DC
	200-240	380-450	24
Excitation Current (A)	0.014	0.0065	0.03



Terminal Designations of Shunt Trips

The permissible voltage is from 85% to 110% of the rated voltage for AC or 75% to 125% thereof for DC.

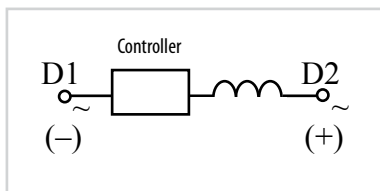
Ensure that the voltage does not drop exceeding the permissible voltage range when SHT is actuated.

Breaker contacts usually start opening within 30 ms after the rated voltage is applied to the breaker.



Undervoltage Trips

Rated Voltage	Power supply capacity (VA)		Excitation current (mA)
	Voltage AC		Voltage DC
	200-240	380-450	24
Power Supply Capacity (A)	2.8	2.3	23



Terminal Designations of Undervoltage Trips

External accessories



Features

- Installation and removal ease: Simply rotate two knobs allows the motor operator to be installed on or removed from the breaker.
- High-speed, stable actuation: The operating time as short as up to 0.1 second makes it possible to use the motor operators for synchronized closing of breakers.
- Silent operation: MO2S use a direct drive system, providing operational silence.
- "Lock-in off" capability: This capability allows the breaker to be padlocked in the OFF state. Up to three padlocks with a 5 to 8 mm hasp diameter can be used. Padlocks are not supplied.

Ratings and specifications	
Rated operational voltage (1*)	230-240V AC 24V DC
Peak steady-state/starting current, A (2*)	230-240V AC 3.5/7 24V DC 18/26
Operation method	Motor driven (direct drive system)
Operating time, s at rated voltage	ON 0.1 OFF/RESET 0.1 (3*, 4*)
Operating switch ratings	100V 0.1A (open voltage/current: 44V/4 mA) (*5)
Power supply required	300VA or higher
Dielectric withstand voltage (for one minute)	1500V AC(1000V AC -> 24V DC)
Weight	1.4kg

1*: Permissible operating range is 85% to 110%.

2*: The currents shown are at the maximum rated operational voltage.

3*: The operating time is the value when the rated operational voltage is supplied. Allow the longer time for the motor operator to complete the operation.

4*: The motor operator is of a short time duty. Do not subject it to more than 10 continuous ON-OFF operations. If this occurs, allow the motor operator to cool for at least 15 minutes.

5*: When the rated operational voltage is DC24V the open voltage will be DC22V.

Motorized operation

The motor operator has an input-signal self-hold circuit; closing the ON or OFF switch (see circuit diagrams shown below) momentarily allows activating the motor operator. To reset the tripped breaker to the OFF position, close the OFF (RESET) switch. The voltage presence LED indication is on when the power is supplied to the motor operator.

■ Auto reset feature (optional)

The auto reset feature allows the breaker to be automatically reset approx. 1.5 seconds after the breaker trips open. This option contains auto-reset switches and does not require to use auxiliary or alarm switches installed in the breaker.

Note : that after the thermal OCR trips a thermal-magnetic breaker, the breaker cannot be immediately closed though it can be auto-reset. Wait for a few minutes after the tripping and provide a close signal to the breaker. This option resets the tripped breaker automatically, regardless of the cause of the tripping.

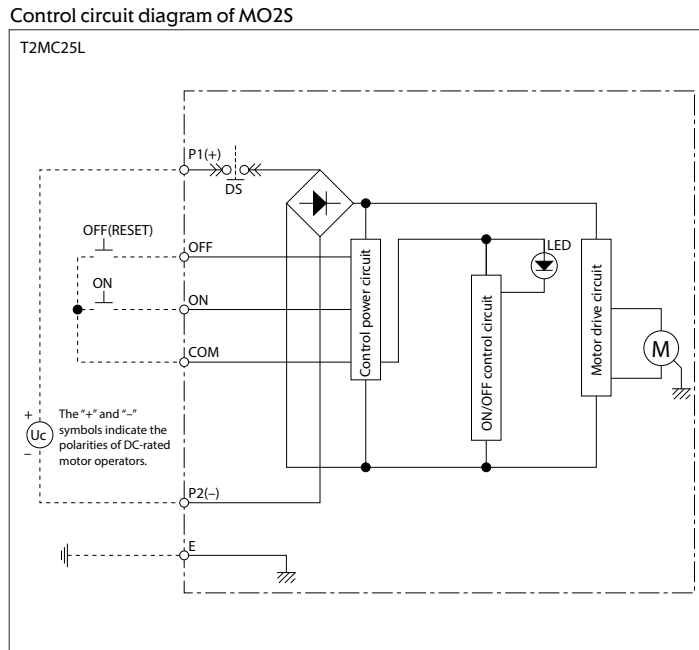
Manual operation

Pull the operating handle out. Rotating the handle counterclockwise turns ON the breaker and clockwise turns OFF or resets the breaker.

Operation precautions

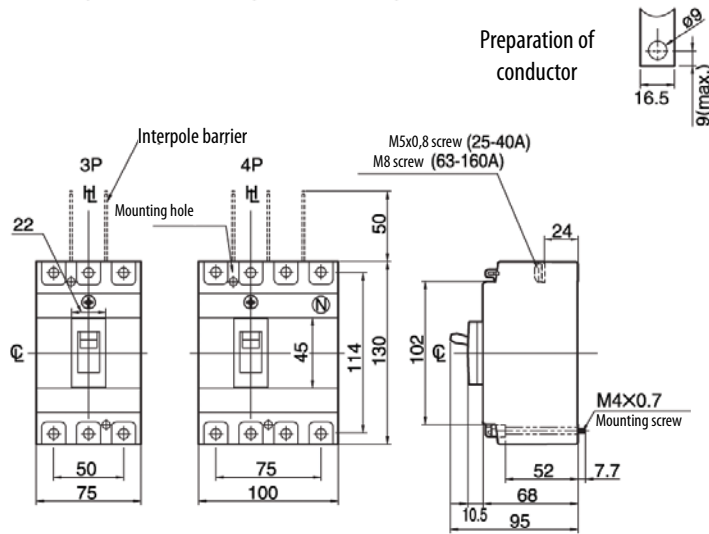
1. Ensure that the actual operation voltage ranges from 85% to 110% of the rated one.
2. Use operation switches whose ratings and power capacity is as specified in the "Ratings and Specifications" table on the previous page.
3. Use noise filters if the control power supply of the motor operator is shared by peripheral devices. Otherwise, power supply noise may cause malfunction of the peripheral devices.
4. When the motors are used in conjunction with the mechanical interlock the electrical interlock should be provided between the motors in order to avoid the simultaneous closing. The followings are the available electrical interlock cables.

Technical data



Dimensions

EB2S 160 F & A



EB2S 250 F & A

