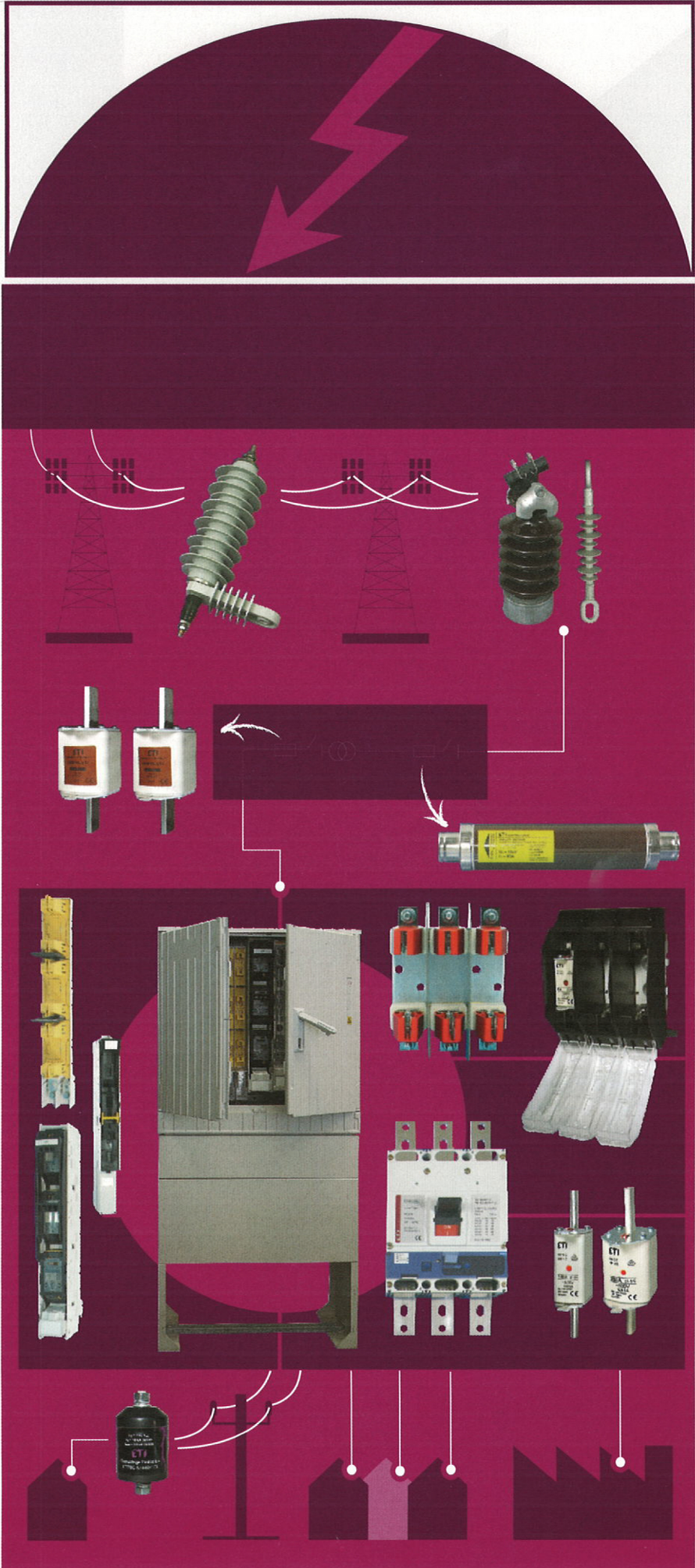


ELECTRIC POWER DISTRIBUTION

ETI provides high-quality solutions for the protection of low and high-voltage electrical installations in the field of electric power distribution. We supply a wide range of high-voltage fuse-links of the type VV, low voltage power circuit breakers ETIBREAK, distribution cabinets KVS, medium voltage surge arresters ETISURGE and ceramic as well as polymeric insulators. The products are internationally certified and carry several quality marks.



Low breaking capacity moulded case circuit breakers

Advantages of low breaking capacity MCCBs

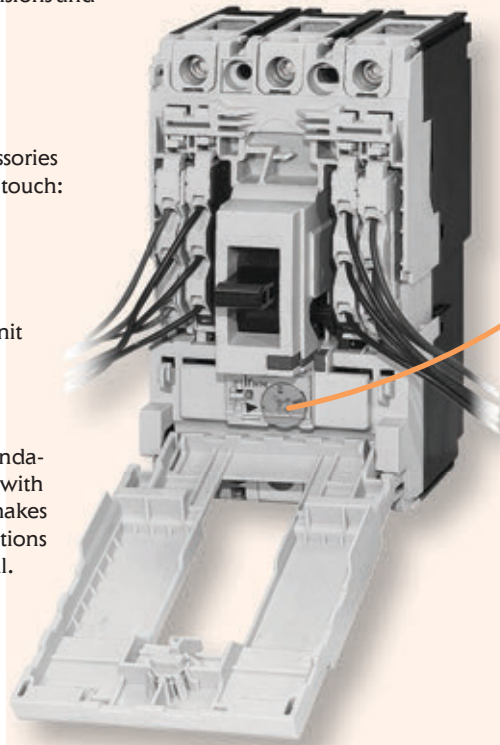
→ New series EB2S of MCCBs has excellent performances with reduced dimensions and new modern design.

→ 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/fixed	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 160/3LF 160A 3p	160	004671811	4		1,00		
EB2S 160/4LF 16A 4p	16	004671814					
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					

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	3p, 4p	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



Accessories for EB25 160

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

Internal accessories – series EB2

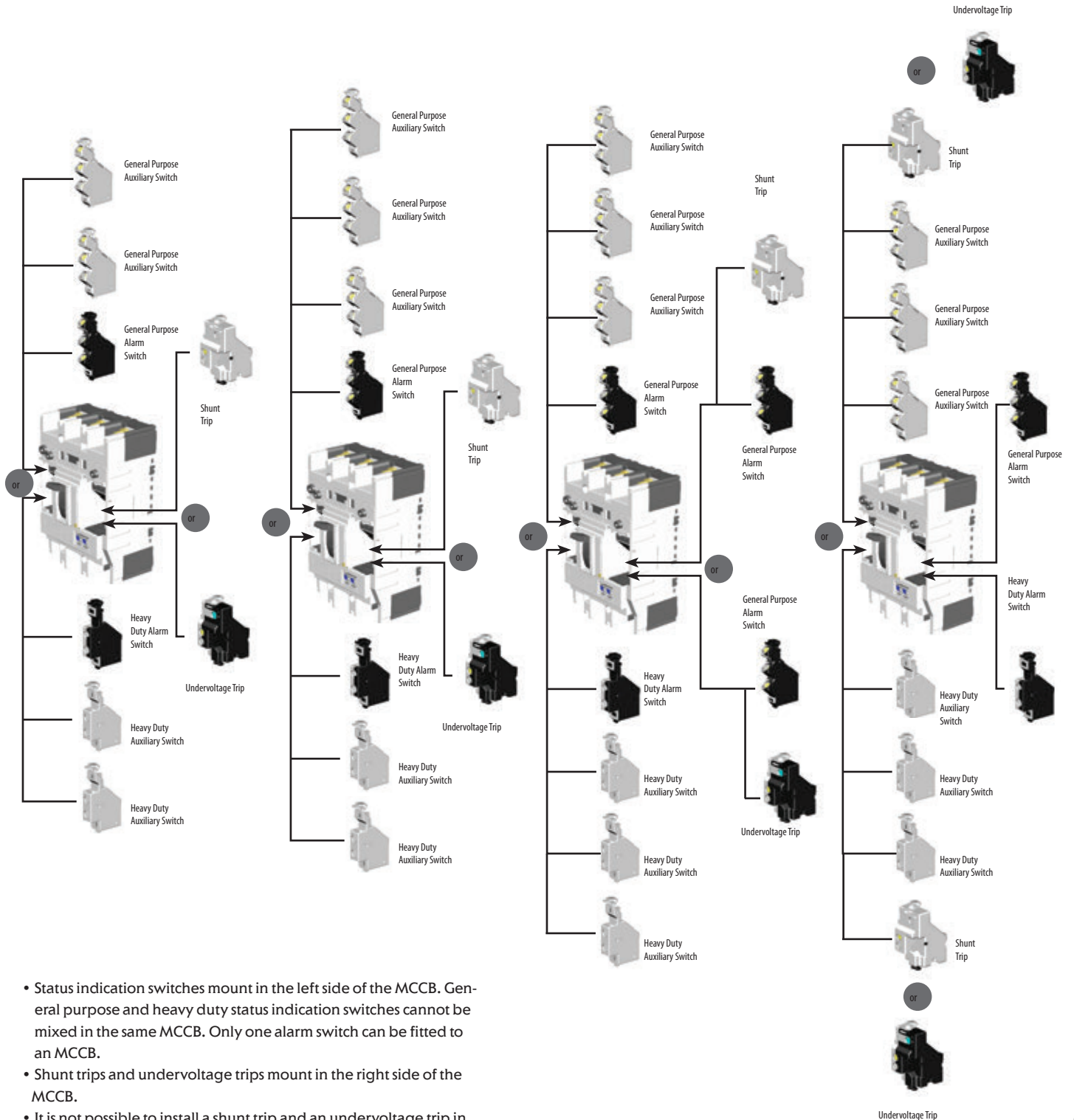
Ampere Frame size (A):

125, 160, 250

400, 630

800, 1000

1250, 1600

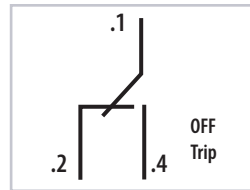


- Status indication switches mount in the left side of the MCCB. General purpose and heavy duty status indication switches cannot be mixed in the same MCCB. Only one alarm switch can be fitted to an MCCB.
- Shunt trips and undervoltage trips mount in the right side of the MCCB.
- It is not possible to 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



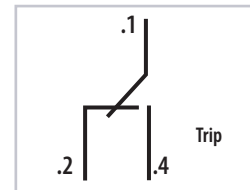
General Purpose Auxiliary Switch



Terminal Designations and Function of General Purpose Auxiliary Switch



General Purpose Alarm Switch



Terminal Designations and Function of General Purpose Alarm Switch

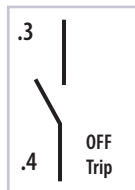
General purpose auxiliaries and alarm switch ratings

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	

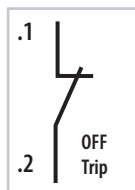
Amperes (A)



Heavy Duty Auxiliary Switch



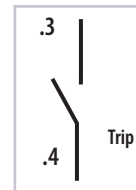
Terminal Designations and Function of Heavy Duty Auxiliary Switch NO contact



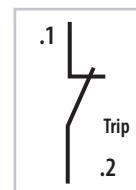
Terminal Designations and Function of Heavy Duty Auxiliary Switch, NC contact



Heavy Duty Alarm Switch



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



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

Ratings of Heavy Duty Auxiliary and Alarm switches

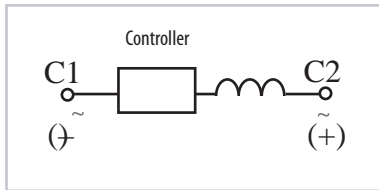
Volts (V)	AC Amperes (A)		Volts (V)	DC Amperes (A)	
	Resistive Load	Inductive Load		Resistive Load	Inductive Load
440	3	3	250	0.5	0.5
240	4	4	125	1	1
110	5	5	48	3	2.5
48	6	6	24	6	2.5



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



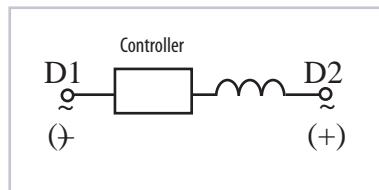
Terminal Designations of Shunt Trips



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

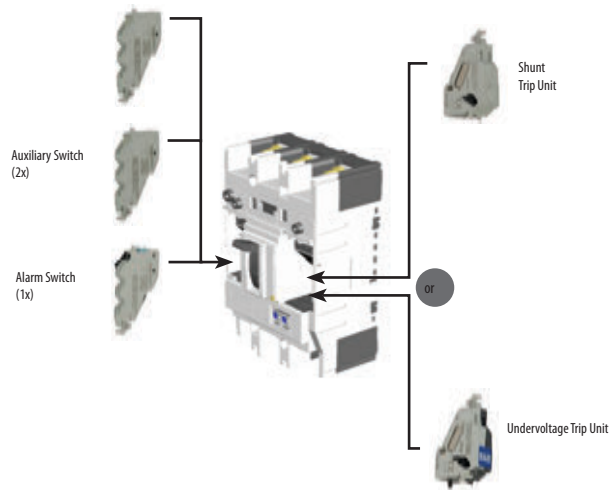
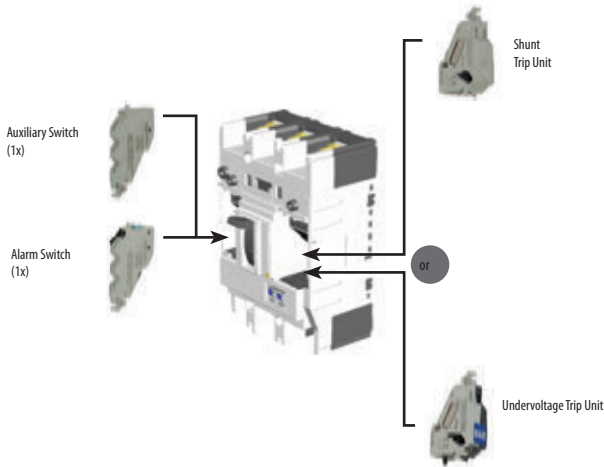


Terminal Designations of Undervoltage Trips

Internal accessories

EB2S 160 F&A

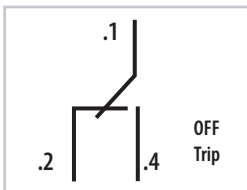
EB2S 250 F&A



- 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

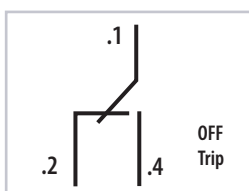
Ratings of Auxiliary switch

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.