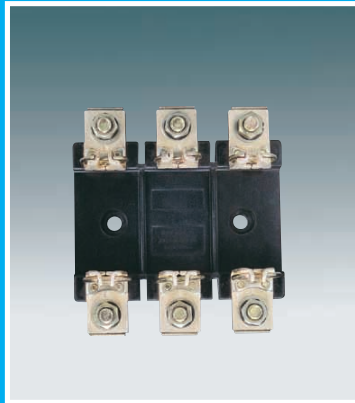




## FUSE HOLDERS





## NS / SM Fuse Holders for HBC fuselinks 20, 32,63 & 125 Amps, 415 V / 660 V AC

**GE Power Controls** moulded fuse holders consisting of fuse carriers & fuse base are available in four ratings for accommodating HBC (High Breaking Capacity) fuselinks. Fuse holders conform fully to IS 13703/IEC 269/BS88.

The NS & SM fuse holders with NS/T & TS range of fuse links, having low powerloss provide protection for wide range of electrical equipments.

### Construction

Fuse holders are made of high grade flame-retardant, non-hygroscopic, phenolic moulding to IS 1300, BS 771 with a hard gloss surface, black finish.




They are simple in construction with minimum number of components. Carrier contacts and base contacts are mounted using locating ridges formed on the mouldings, assuring perfect alignment.

Type NS fuse-carriers have a single piece phosphor bronze clip, while type SM fuse-carriers have a single piece pressed brass spin rivetted contact. The base is also made of a single piece extruded brass tinned contact having adequate size of cable hole to accommodate aluminium cable.



Spring pressure of clips in NS fuse holders and a special high pressure metal backing stirrup in SM holders provide lasting contact surface. The stirrups are not required to carry current. All current carrying parts are electroplated.

The classification based on cable connection, is as follows:

32 A	32 A, 63 A, 125 A	Connection		
NSH	SM32H	Front Connection	Front wiring at both ends	
	SM63H			
	SM125H			
NSB	SM32B	Busbar	Busbar at one end & wiring at the other	
	SM63B			
	SM125B			
NSP		Back connection	Mounting on sheetsteel panel or insulated panel up to 2" thickness	

### Cabling

The maximum and minimum size of cables which can be accommodated for direct pinching, are as shown below:

Fuse Holders	NS		SM	
	Rating	32	63	125
Maximum size (sq. mm)	10	16	35	50 *
Minimum size (sq. mm)	1.5	2.5	4	6

\* 70 Sq. mm with cable socket

For best results crimping or soldered. Direct pinching of cable can be also done but proper care should be taken, viz. cleaning of strands, applying correct tightness to grub screws, etc., to avoid over heating.

### Fuselinks

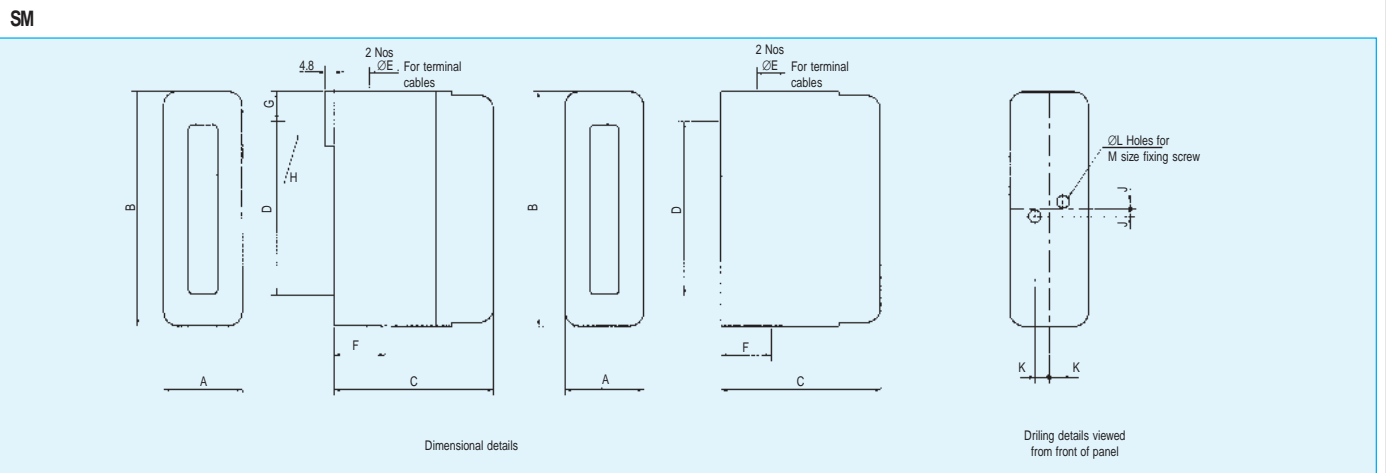
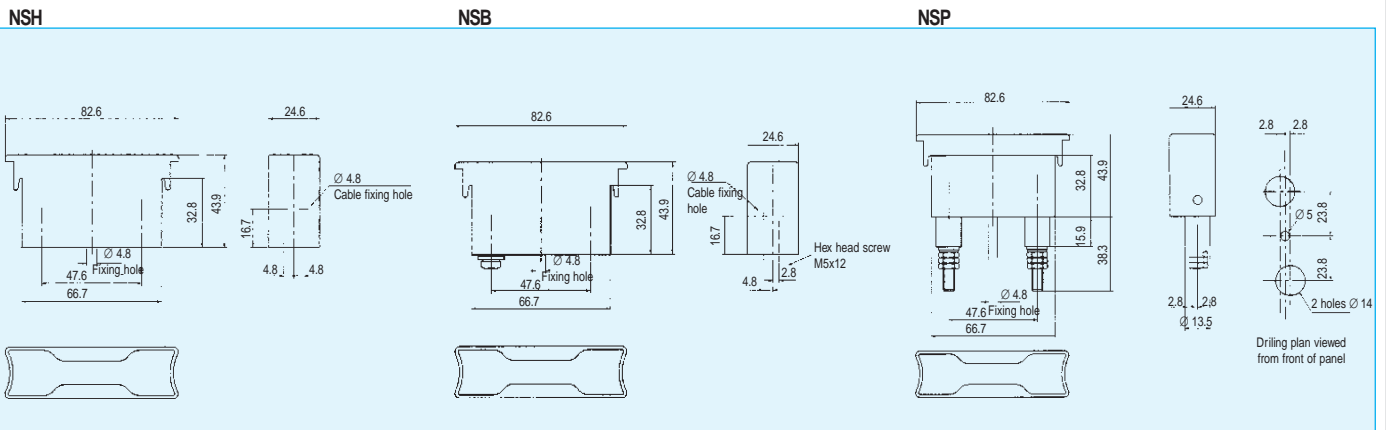
GE Power Controls High Breaking Capacity (HBC) fuse links can be mounted in the fuse holders. The list reference of the fuselinks complying to IS 13703 -1993, type NS, T and TS fuselinks are shown below:

Fuse Holders	Fuselinks		
	NS	T	TS
NS32	NS	-	-
SM32	-	TIA	TSA
SM63	-	TIS	TSS
SM125	-	TCP 80	TSD
		TCP 100	

ISI certified to IS 13703 - Part II / Sec 1 - 1993



## Dimensions in mm



Dimensions (mm) & drilling details viewed from front of panel

Rating Amps	A	B	C	D	E	F	G	H	J	K	L	M
32A	31.8	98.4	65.1	73.0	6.4	21.4	12.7	M6 x 25	3.2	6.3	5.6	M5
63A	34.9	104.8	70.6	73.0	8.7	22.2	13.5	M6 x 25	3.2	6.3	5.6	M5
125A	47.6	130.2	92.1	94.0	11.9	29.4	18.3	M10 x 25	1.1	9.55	7.1	M6

## SAFECLIP Fully shrouded HBC fuse holders 20, 32 & 63 Amps 415 V AC

'SAFECLIP' is a range of compact and safe fuse holders ideal for use in distribution boards and panels. The safe clip fuse holders are designed to accommodate the compact range of offset blade tags fuselinks. This range offers extra protection to wide range of electrical circuits & equipments with significant saving in power loss panel space, downtime & maintenance costs.

Risk of fire, breakdown and downtime in onerous conditions reduced due to the use of flame-retardant phenolic base moulding.



Strength and long life assured in fuse-carriers moulded from tough flameretardant material.





Full shrouding for personnel safety. Unique clip action terminal shrouds lower installed cost of equipment.



Ideal contact and lower watts loss achieved by self-cleaning self-aligning base contacts with stainless steel contact reinforcing stirrups.

Elimination of fuse-carrier contacts allowing the fuse tags to fit directly and securely into the base contacts to ensure greater reliability and lower watts loss.



Downtime and maintenance costs minimised due to fuselink directly clipping in and out of the fuse-carrier. No screws or tools required.

ISI certified to IS 13703 Part II / Sec 1 - 1993.

HBC Fuselinks comply with IS 13703 / IEC 269 / BS 88.

## Application Data

### Cable Protection

GE Power Controls make 'SAFECLIP' fuselinks have a fusing factor not exceeding 1.5 and provide close excess current protection, enabling cables to be fully rated as per IS 3961 (Part-II) - 1967.

### Motor Circuit Protection

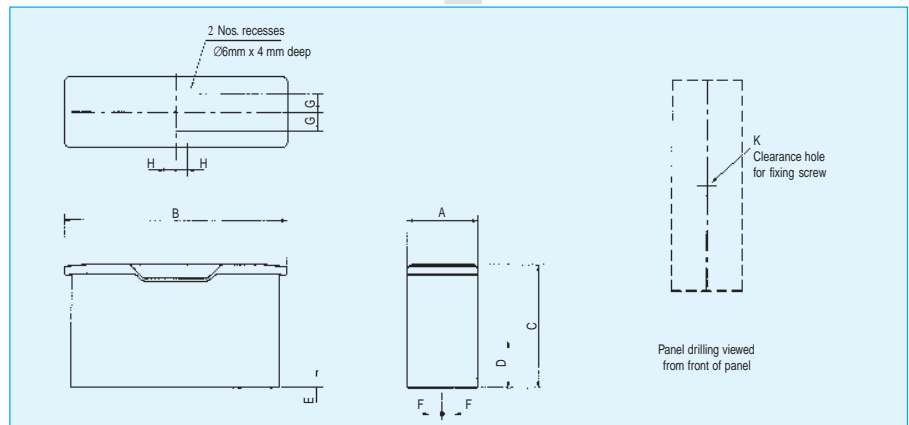
Following fuselink ratings in 'SAFECLIP' fuse holders are recommended to give complete protection including against starting current in the 415V motor circuit as indicated.

Rating Amp.	List No.	Type of Connection	Code Ref.
20	SC 20 H	Front connected	SFF 8510000
32	SC 32 H	Front connected	SFF 8511000
63	SC 63 H	Front connected	SFF 8530000

Fuseholder rating Amp.	Fuselinks List No. prefix	Range of Current ratings Amp.
20	SS	2 - 20
32	NS	2 - 32
63	ES	2 - 63

## Dimensions in mm

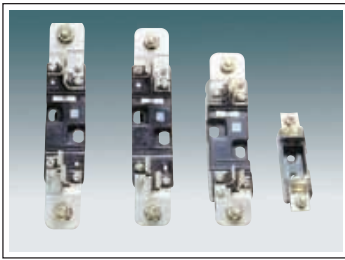


Rating	A	B	C	D	E	F	G	H	J	K
20	25	71	47	18	5	2	8	5	6	M5
32	25	81	47	18	5	2	8	5	6	M5
63	30	96	53	20	5	6	8	5	8	M5

Motor rating kW	Motor F.L.C Amp.	Fuse rating	
		For D.O.L start* Amp.	For assisted start# Amp.
0.37	1.05	4	2
0.55	1.44	6	4
0.75	1.90	6	4
1.1	2.50	10	6
1.5	3.45	16	10
2.2	4.70	16	10
3.0	6.20	20	16
4.0	8.10	25	16
5.5	10.90	32	20
7.5	14.80	40	25
11.0	20.50	50	32
15.0	28.00	63	40
18.5	34.50	-	40
22.0	41.00	-	63

\* D.O.L. = Direct on-line for which the starting condition is assumed to be 5 x F.L.C. for a run-up time of 5 seconds for motors upto 1 kW and 7 x F.L.C. for a run-up time of 10 seconds for larger ones.

# Assisted = Star-Delta starter (or similar means) for which starting condition is assumed to be 2.5 x F.L.C. for motors upto 1 kW, or 3.5 x F.L.C. for larger ones, for a run-up time of 20 seconds.



## TYPE ISG

### DIN Fusebase

G E Power Controls introduces a new range of novel DIN Fusebase to take High Breaking Capacity DIN type fuselinks. These bases have a novel, 'staggered' type of contacts to provide low power consumption and cool running. The base is made of high performance glass reinforced polyester moulding. The simple construction provides ease of mounting and better performance.

### Features:

Fusebases fully conform to IS13703 - 1993 in sizes 00, 1, 2 & 3.

Suitable for G E Power Controls make DIN fuselinks type VS.

Designed with a novel type of staggered contacts for higher contact area, lower temperature rise and lower power loss.

Easy to mount with two screws from the front.

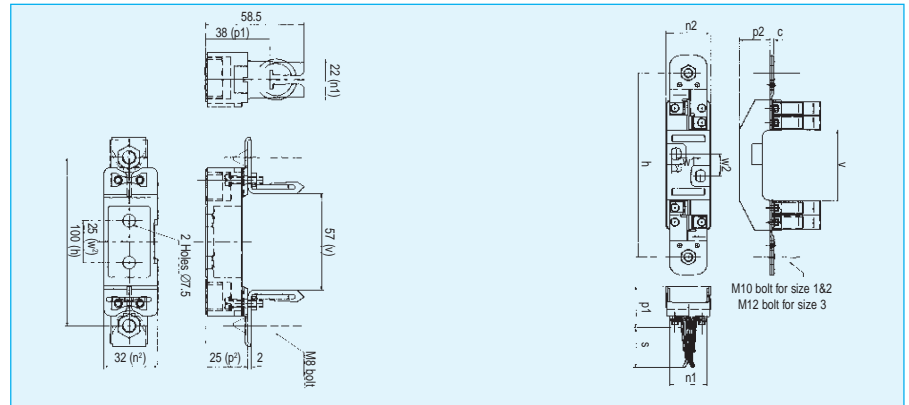
Hard Silver plated contacts for higher life.

Heat resistant and highly insulating glass reinforced polyester moulded base.

Provision for fixing terminal covers for extra safety.

Uniform contact pressure with high short circuit resistance.

Design registered.



### Technical Data :

Rated Voltage : 660V AC

Size	List no.	Catalogue no.	Current rating (amp)	Associated G E Power Controls make fuselink
00	ISG 160	SFF 8410000	160	VSB 160 (6 to 160 A) & VSA (6 TO 63A)
1	ISG 250	SFF 8431000	250	VSF 250 (32 to 250 A)
2	ISG 400	SFF 8441000	400	VSK 400 (200 to 400 A)
3	ISG 630	SFF 8451000	630	VST 630 (315 to 630 A)

### Dimensions;

Size	h	n1	n2	p1	p2	s	v	w1	w2	y	c
1	175.0	42.0	50.0	47.5	34.5	34.0	81.0	30.0	25.0	10.5	3.2
2	200.0	42.0	50.0	47.5	34.5	41.7	81.0	30.0	25.0	10.5	4.0
3	210.0	42.0	50.0	47.5	34.5	45.2	81.0	30.0	25.0	10.5	5.0



3 Pole fuse base ISG 160/3P for use in 3 phase circuits, can accommodate DIN type fuse links of size '000' & '00' type VSA & VSB upto 160A

### Features

Compact in size ( saves panel space compared to 3 single phase fuse bases )

Easy for mounting

Interphase barriers provided for safety

### Technical information

Rated current : 160 A

Rated voltage : 500 V AC

Max power loss : 12 Watts

Ref standard : IS 13703 / IEC 269

Code Ref : 8461000

### Dimensions in mm

