

IGS-EL-002(0)

1372

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National Iranian Gas Co.

مدیریت پژوهش و فناوری

Research and Technology Management

امور تدوین استانداردها

Standardization Division

IGS

Iranian Gas Standards

Specification for :

مشخصات فنی :

Fuse Links

فیوزهای برقی

APPROVED

FOREWORD

This standard is intended to be mainly used by **NIGC** and contractors and has been prepared on interpretation of recognized standards , technical documents , knowledge ,backgrounds and experiences in gas industries at national and international levels.

Iranian Gas Standards (**IGS**) are prepared , reviewed and ammended by technical standard committees within NIGC Standardization Div. and submitted to the **NIGC's "STANDARDS COUNCIL"** for approval .

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Any comments from concerned parties on **NIGC** distributed **IGS** are welcome to technical standards committees and will receive serious attention and consideration should a revision to standards is recommended .

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Throughout this standard the following definitions , where applicable , should be followed :

1- "**STANDARDIZATION DIV.**" has been organized to deal with all aspects of industrial standards in NIGC . Therefore , all queries for clarification or amendments are requested to be directed to the mentioned div.

2- "**COMPANY** " : refers to national iranian gas company .

3- "**SUPLIER**" : refers to a firm who will supply the service , equipment or material to igs specification whether as the prime producer or manufacturer or a trading firm .

4- "**SHALL**" : is used where a provision is mandatory.

5- "**SHOULD**" : is used where a provision is advised only.

6- "**MAY**" : is used where a provision is completely discretionary.

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پیشگفتار

- ۱- این استاندارد/دستورالعمل بمنظور استفاده اختصاصی در شرکت ملی گاز ایران و شرکتهای فرعی وابسته تهیه شده است.
- ۲- شرکت ملی گاز ایران در مورد نیازهای عمومی از استانداردهای وزارت نفت (IPS) و در مورد نیازهای اختصاصی از استانداردهای اختصاصی خود (IGS) استفاده می نماید.
- ۳- استانداردهای شرکت ملی گاز ایران (IGS) توسط کمیته های تخصصی استاندارد متشکل از کارشناسان بخش های مختلف و یا مشاور تهیه می شود و توسط شورای استاندارد (منتخب هیئت مدیره شرکت ملی گاز ایران) به تصویب میرسند.
- ۴- در تنظیم متن استانداردهای (IGS) از کلیه منابع شناخته شده استاندارد، اطلاعات فنی - تخصصی مربوط به صنایع گاز دنیا، مشخصات فنی تولیدات سازندگان معتبر جهانی و نیز از نتیجه تحقیقات و تجربیات کارشناسان و متخصصان داخلی بر حسب مورد استفاده می شود. همچنین بمنظور استفاده هر چه بیشتر از تولیدات داخلی قابلیت های سازندگان داخلی نیز مورد توجه قرار میگیرد.
- ۵- استانداردها از طریق پایگاه اینترنتی شرکت * و یالوح فشرده (CD) در اختیار واحدها و کاربران قرار می گیرد .
- ۶- استانداردها بطور متوسط هر ۵ سال یکبار و یادر صورت ضرورت زودتر، مورد بازنگری و بروزرسانی قرار میگیرند. بنابراین کاربران باید همیشه آخرین نگارش را مورد استفاده قرار دهند.
- ۷- هرگونه نظر و یا پیشنهاد اصلاح در مورد استانداردها مورد استقبال و بررسی قرار خواهد گرفت و در صورت تأیید، استاندارد مربوطه نیز مورد تجدیدنظر قرار خواهد گرفت .

تعاریف عمومی

در متن استانداردهای (IGS) از تعاریف و اصطلاحات زیر استفاده میشود.

- ۱- "شرکت" (COMPANY): منظور از شرکت "شرکت ملی گاز ایران" و یا شرکتهای فرعی وابسته میباشد.
- ۲- "فروشنده" (SUPPLIER/VENDOR): به فرد یا موسسه ای اطلاق میگردد که تعهدی رانسبت به شرکت تقبل نموده است.
- ۳- "خریدار" (PURCHASER): منظور از خریدار "شرکت ملی گاز ایران" و یا شرکتهای فرعی وابسته میباشد.
- ۴- "SHALL": در مواردی بکاربرده میشود که انجام خواسته مورد نظر اجباری است
- ۵- "SHOULD": در مواردی بکاربرده میشود که انجام خواسته مورد نظر ترجیحی و درعین حال اختیاری است
- ۶- "MAY": در مواردی بکاربرده میشود که انجام کار به شکل مورد بحث نیز قابل قبول میباشد

IGS-EL-002(0) : 1378 (1999)

National Iranian Gas Co.

IGS

Iranian Gas Standards

Specification for :

Fuse Links

IN THE NAME OF GOD

- 1- Miniature cartridge fuse links. To BS 2950 , ferrule type , non renewal , for the protection of tele communication and light electrical apparatus, grade A (blowing at 2x In) low braking capacity (not exceeding 10 times rated current).

Overall dimensions. Diameter 6.35 mm, length 32 mm.

Supplier : SIBA , DORMAN , GEC . BRUSH and etc.



ITEM	DESCRIPTION
1	50 MA , 1000 VAC-1000 VDC
2	60 MA, 1000 VAC 1000 VDC

3	100 MA, 1000 VAC- 1000 VDC
4	150 MA, 1000VAC-1000 VDC
5	250 MA, 1000 VAC-750 VDC
6	500MA, 750 VAC-350 VDC
7	750 MA, 500 VAC 300 VDC
8	1.0 A, 350 VAC-250 VDC
9	1.5 A , 250 VAC- 250 VDC
10	2.0 A , 250 VAC 250 VDC
11	2.5A , 250 VAC-250 VDC
12	3.0 , 250 VAC-32 VDC
13	4.0A , 250 VAC-32 VDC
14	5.0 A , 250 VAC- 32 VDC
15	6.0A , 250 VAC-32 VDC
16	7.0 A, 150 VAC-32 VDC
17	8.0A, 250 VAC 32 VDC
18	10.A , 250 VAC-32 VDC
19	12 A, 100 VAC-32 VDC
20	15 A, 50 VAC 32 VDC
21	20 A, 32 VAC-32 VDC
22	25 A , 32 VAC-32 VDC

- 2- Miniature cartridge fuse link, to B.S. 4265 and /or IEC 127 ferrule type, non-renewable, for the protection of very quick acting (type , FF) , low breaking capacity (not exceeding ten times rated current).

Overall dimensions : diameter 6.3 mm , length 32 mm .

supplier : SIBA , DORMAN , GEC , BRUSH and etc.



ITEM	DESCRIPTION
23	100 MA, 250 VAC
24	125 MA, 250 VAC

25	500 MA, 250 VAC
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- 3- Miniature cartridge fuse link, to BS 4265 and/or IEC 127 , ferrule type non-renewable for the protection of telecommunication circuits or similar quick- acting (type F), low braking capacity (not exceeding ten times , rated current)

Overall dimensions. Diameter 5mm , length 20 mm

Supplier : SIBA. GEC. BRUSH, DORMAN



ITEM	DESCRIPTION
26	32 MA, 250 V
27	40 MA , 250 V
28	50 MA, 250 V
29	63 MA, 250 V
30	80 MA , 250 V
31	100 MA, 250 V
32	125 MA, 250 V
33	160 MA, 250 V

ITEM	DESCRIPTION
34	200 MA, 250 V
35	250MA , 250 V
36	315 MA, 250 V
37	400 MA, 250 V
38	500 MA, 250 V
39	630 MA, 250 V
40	800 MA, 250V
41	1.0 A, 250 V
42	1.25A, 250 V
43	1.6 A, 250 V
44	2.0 A , 250 V
45	2.5 A , 250 V

46	3.15 A, 250 V
47	4.0 A , 250 V
48	5.0 A, 250 V
49	6.3 A, 250 V
50	8.0 A, 250 V

4- Miniature cartridge fuse link, to BS 4265 and/or IEC 127 , ferrule type non-renewable for the protection of telecommunication circuits or similar. Quick- acting (type F) low braking capacity (not-exceeding ten times rated current)

overall dimensions. Diameter 6.3 mm , length 32 mm

Supplier: SIBA, DORMAN , GEC . BRUSH



ITEM	DESCRIPTION
51	50 MA, 250 V
52	63 MA, 250 V
53	80 MA, 250 V
54	100 MA, 250 V
55	125 MA, 250 V
56	160 MA, 250 V
57	200 MA, 250 V
58	250 MA, 250 V
59	315 MA, 250 V
60	400 MA, 250 V
61	500 MA, 250 V
62	630 MA, 250 V
63	800 MA, 250 V
64	1.0 A, 250 V
65	1.25A, 250 V
66	1.6 A, 250 V
67	2.0 A, 250 V
68	2.5 A, 150 V

69	3.15 A, 150 V
70	4.0 A, 150 V
71	5.0 A, 60 V
72	6.3 A, 60 V
73	8.0 A, 60 V
74	10.0 A, 60 V

- 5- Miniature cartridge fuse link , to BS 4265 and/or IEC 127 , ferrule type non- renewable for the protection of telecommunication circuits or similar

Time lag, surge-proof (type T) low braking capacity (not-exceeding ten times rated current)

Overall dimensions. Diameter 5 mm , length 20 mm

Supplier: SIBA, DORMAN , GEC . BRUSH



ITEM	DESCRIPTION
75	32 MA, 250 V
76	40 MA , 250 V
77	50 MA, 250 V
78	63 MA, 250 V
79	80 MA , 250 V
80	100 MA, 250 V
81	125 MA, 250 V
82	160 MA, 250 V
83	200 MA, 250 V
84	250 MA, 250 V
85	315 MA, 250 V
86	400 MA, 250 V
87	500 MA, 250 V
88	630 MA, 250 V
89	800 MA, 250 V
90	1.0 A, 250 V

91	1.25A, 250 V
92	1.6 A, 250 V
93	2.0 A, 250 V
94	2.5 A, 250 V
95	3.15 A, 250 V
96	4.0 A, 250 V
97	5.0 A, 250 V
98	6.3 A , 250 V
99	10.0 A ,250 V

- 6- Miniature cartridge fuse link , to BS 4265 and/or IEC 127 , ferrule type non renewable , suitable for high inductance and capacitive surge currents and, also suitable for heavy starting current equipments, or similar consisting or a coil spring soldered with allow melting point alloy to a wire , time lag (T type) low breaking capacity (not exceeding ten times rated current).



ITEM	DESCRIPTION
100	10 MA, 250 V
101	32 MA, 250 V
102	100 MA , 250 V
103	125 MA, 250 V
104	150 MA, 250 V
105	175 MA, 250 V
106	187 MA, 250 V
107	200MA , 250V
108	250 MA, 250 V
109	300 MA, 250 V
110	375 MA, 250 V
111	400 MA, 250 V
112	500 MA, 250 V

113	600 MA, 250 V
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ITEM	DESCRIPTION
114	700 MA,250 V
115	750 MA, 250 V
116	800 MA, 250
117	1.0 A, 250 V
118	1.25 A, 250 V
119	1.5 A, 250 V
120	1.6 A, 250 V
121	2.0 A, 250 V
122	2.5 A, 125 V
123	2.8 A, 125 V
124	3.0 A, 125 V
125	3.2 A, 125 V
126	4.0 A, 125 V
127	5.0 A, 250 V
128	6.25 A, 250V
129	7.0 A, 125 V
130	10.0A , 125 V
131	16.0 A, 250 V
132	20.0 A, 32V
133	25.0 A,
134	30.0 A,

7- Miniature cartridge fuse link , to BS 4265 and/or IEC 127 , ferrule type non- renewable for the protection of indoor electric.

Appliances and electronic equipments.

Quick acting (type F) , high braking capacity (not exceeding 1500 A).

Overall dimensions. Diameter 5 mm , length 20 mm

Supplier: SIBA, BRUSH , GEC . DORMAN



ITEM	DESCRIPTION
135	50 MA, 250 V
136	63 MA, 250 V
137	80 MA, 250 V
138	100 MA, 250 V
139	125 MA, 250 V
140	160 MA, 250 V
141	200 MA, 250 V
142	250 MA, 250 V
143	315 MA, 250 V
144	400 MA, 250 V
145	500 MA, 250 V
146	630 MA, 250 V
147	800 MA, 250 V
148	1.0 A, 250 V
149	1.25A , 250 V
150	1.6 A, 250 V
151	2.0 A, 250 V
152	2.5 A, 250 V
153	3.15 A, 250 V

ITEM	DESCRIPTION
154	4.0 A, 250 V
155	5.0 A, 250 V
156	6.3 A,250 V

- 8- Miniature cartridge fuse link (midget type) , to BS 4265 and/or IEC 127 , ferrule type ,non- renewable for the protection of indoor electric appliances and electronic equipments , high braking capacity (not exceeding 1500 A).

Overall dimensions. Diameter 10 mm , length 38 mm

Supplier: SIBA, DORMAN, GEC , BRUSH.



ITEM	DESCRIPTION
157	10 A, quick acting (F type)
158	15 A, 250 V quick acting (F type)
159	20 A , 32 V quick acting (F type)
160	25 A, 32 V quick acting (F type)
161	30 A, 32 V quick acting (F type)
162	40 A, 32 V quick acting (F type)
163	1.6 A , 125 V time delay (T type)
164	20 A, 125 V time delay (T type)
165	30 A , 125 V time delay (T type)
166	40 A, 125 V time delay (T type)

- 9- Fuse holder , base , open type , suitable for miniature cartridge fuse links , up to 20 A (glass and ceramic , type) , one pole , 250 v , to B.S.

Supplier : SIBA , DORMAN , GEC , BRUSH and etc.

ITEM	DESCRIPTION
167	6.3 A , for 5mmx20mm fuse links
168	40 A , for 6.3 mm x 32mm fuse links
169	20 a, for 10 mm x 38 mm fuse links

- 10- Fuse holder base and carrier , enclosed type panel mounted , suitable for mainiature cartridge fuse , link up to 20A , (glass and ceramic type) one pole 250 V.

Supplier : SIBA , DORMAN, GEC , BRUSH and etc.



ITEM	DESCRIPTION
170	6.3 A , for 5mmx20mm fuse links
171	20 A , for 6.35 mm x 32mm fuse links
172	20 A, for 10 mm x 38 mm fuse links

- 11- Fuse holder base and carrier , enclosed and in line type , suitable for miniature cartridge fuse links up to 20 A (glass and ceramic type) one pole , 250 V.

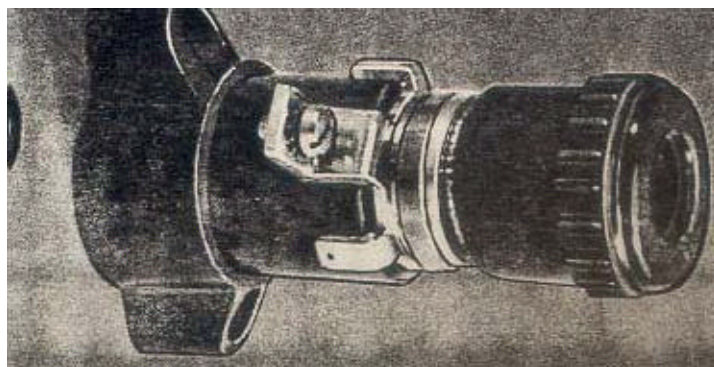
Supplier : SIBA , DORMAN , GEC , BRUSH and etc

ITEM	DESCRIPTION
173	6.3 A , for 5mmx20mm fuse links
174	20 A , for 6.35 mm x 32mm fuse links
175	20 A, for 10 mm x 38 mm fuse links

- 12- Bases , 500 v , for diazed type cartridge fuses , panel board type , clip or clamp terminal connections , porcelain body c/w cover and screw cap, metal parts brass or tinned copper , all made to IEC 269 part 1 and 3 , latest amendment.

Note : recommended for domestic and non industrial applications.

Supplier : SIEMENS, SIBA , DORMAN



ITEM	DESCRIPTION
176	Thread E 27 up to 25 AMP max
177	Thread E 33 up to 63 AMP max

- 13- Diazed type cartridge fuses , 500 V ac porcelain body , tinned copper contacts made to IEC 269 part 1 and 3 latest amendment.

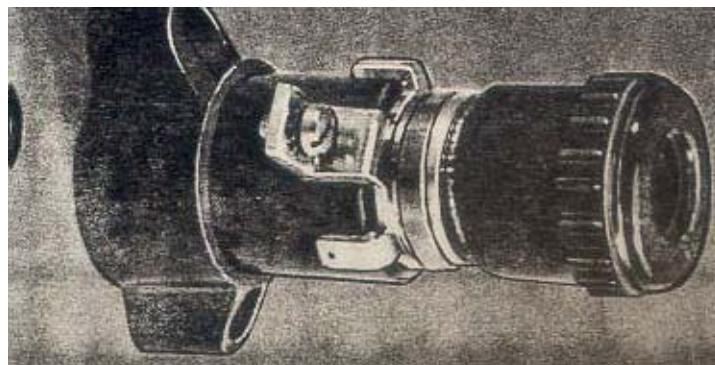
Supplier : SIEMENS , SIBA , DORMAN, and etc.



ITEM	DESCRIPTION
178	4 AMP suitable for E 27
179	6 AMP suitable for E 27
180	10 AMP suitable for E 27
181	16 AMP suitable for E 27
182	20 AMP suitable for E 27
183	25 AMP suitable for E 27
184	30 AMP suitable for E 33
185	50 AMP suitable for E 33
186	63 AMP suitable for E 33

- 14- Screw caps (cartridge holder) , 500 V , suitable for diazed type bases as specified under MESC ,S (10 176 and 10-177) porcelain body , metal parts brass or tinned copper , made to IEC 269 part 1 and 3 latest amendment.

Supplier : SIEMENS , SIBA , DORMAN

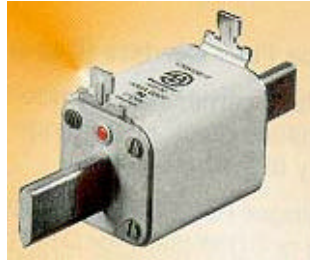


ITEM	DESCRIPTION
187	Thread E 27 up to 25 AMP
188	Thread E 33 up to 63 AMP

- 15- Cartridge fuse links, H.R.C . knife type 500 V AC 220 V DC , in accordance with IEC 269 PART 2 (1973) w/din 43620 and VDE 0636 part 2.

Note : the dimensions shall be in accordance with section I appendix A of IEC 369-2 KA(1973).

Breaking cap. 100 ka AC and 40 KA-DC



ITEM	DESCRIPTION
189	6AMP SIZE 00
190	10AMP SIZE 00
191	16 AMP SIZE 00
192	20 AMP SIZE 00
193	25 AMP SIZE 00
194	32 AMP SIZE 00
195	40 AMP SIZE 00
196	50 AMP SIZE 00
197	63 AMP SIZE 00
198	80 AMP SIZE 00
199	100 AMP SIZE 00
200	80 AMP SIZE 00
201	100 AMP SIZE 00
202	125 AMP SIZE 1
203	160 AMP SIZE 1
204	200 AMP SIZE 1
205	250 AMP SIZE 1
206	200 AMP SIZE 2
207	250 AMP SIZE 2
208	315 AMP SIZE 2

ITEM	DESCRIPTION
209	355 AMP SIZE 2
210	400 AMP SIZE 2
211	425 AMP SIZE 3

- 16- Cartridge fuse links, H,R,C . for motor circuit protection , operation class AM , knife type , 500 v AC , 250 V DC , in accordance with IEC 269 . 2 , (1973) and DIN 43620 and VDE 0636 part 2 .

Note : the dimensions shall be in accordance with section 1 appendix A if IEC 269-2 A (1973) , breaking capacity 100 KA- AC and 40 KA- DC .

Supplier : SIBA, DORMAN , GEC , BRUSH , and etc .

ITEM	DESCRIPTION
212	10 AMP SIZE 00
213	16 AMP SIZE 00
214	20 AMP SIZE 00
215	25 AMP SIZE 00
216	35 AMP SIZE 00
217	40 AMP SIZE 00
218	50 AMP SIZE 00
219	63 AMP SIZE 00
220	80 AMP SIZE 00
221	100 AMP SIZE 00
222	125 AMP SIZE 00
223	160 AMP SIZE 00
224	200 AMP SIZE 00
225	250 AMP SIZE 00
226	315 AMP SIZE 00
227	400 AMP SIZE 00

- 17- Cartridge fuse links , H.R.C. bolted type 500v, AC . 250V DC . In accordance with IEC 269 , part 2 (1973) and B S.88 part 2(1975) class Q1 , ASTA certified at 80K A AC , and 40KA DC .

Note : The dimensions shall be in accordance with section 2 Appendix A of IEC 269-2A (1973)

Overall dimensions: 56 mm max length , max diameter 14.5 mm, fixing centers nom- 44.5 mm.

Supplier : SIBA , DORMAN , GEC. BRUSH. And etc.



ITEM	DESCRIPTION
239	2 AMP DIMENSION REF A ₁
240	4 AMP DIMENSION REF A ₁
241	6 AMP DIMENSION REF A ₁
242	8 AMP DIMENSION REF A ₁
243	10 AMP DIMENSION REF A ₁
244	12 AMP DIMENSION REF A ₁
245	16 AMP DIMENSION REF A ₁
246	20 AMP DIMENSION REF A ₁

Overall dimension : max length 86 mm , diameter max 24mm, fixing centers nom 73 mm.

Note : cartridge fuses up to 20 AMP of size A₂ shall be used only for existing boards.

ITEM	DESCRIPTION
247	2 AMP DIMENSION REF A ₂
248	4 AMP DIMENSION REF A ₂
249	6 AMP DIMENSION REF A ₂
250	10 AMP DIMENSION REF A ₂
251	16 AMP DIMENSION REF A ₂
252	20 AMP DIMENSION REF A ₂

253	25 AMP DIMENSION REF A₂
254	32 AMP DIMENSION REF A₂

Overall dimensions: max length , 91 mm diameter max 27 mm fixing centers nom 73 mm.

ITEM	DESCRIPTION
255	40 AMP DIMENSION REF A₃
256	50 AMP DIMENSION REF A₃
257	63 AMP DIMENSION REF A₃

Overall dimensions : max length 111mm , diameter max, 37 mm fixing centers nom 94mm.

ITEM	DESCRIPTION
258	80 AMP DIMENSION REF A₄
259	100 AMP DIMENSION REF A₄

Overall dimensions : max length 136.50 mm, diameter 34.90 mm , fixing centers 111.00 mm.

ITEM	DESCRIPTION
260	80 AMP DIMENSION REF B₁
261	100 AMP DIMENSION REF B₁

Overall dimensions : max length 138mm, diameter max 42 mm , fixing centers nom.111.00 mm.

ITEM	DESCRIPTION
262	125 AMP DIMENSION REF B₂
263	160 AMP DIMENSION REF B₂
264	200 AMP DIMENSION REF B₂

Overall dimensions : max length 138mm, diameter max 61 mm , fixing centers nom.111.00 mm.

ITEM	DESCRIPTION
265	250 AMP DIMENSION REF B ₃
266	315 AMP DIMENSION REF B ₃

Overall dimensions : max length 138mm, diameter max 66 mm , fixing centers nom.111.00 mm.

ITEM	DESCRIPTION
267	400 AMP DIMENSION REF B ₄

Overall dimensions : max length 122mm, diameter max 66 mm , fixing centers nom.133+(2 x 25.5)mm.

ITEM	DESCRIPTION
268	315 AMP DIMENSION REF C ₁
269	400 AMP DIMENSION REF C ₁

- Protected handle type cartridge H.R.C fuse links, 250V. to BS .88 . part1 (1975), ASTA (1975) , class Q₁ non-renewable , cartridge insulating material , tinned, brass or copper contacts off-set blade tags (contacts)

Note : due to non standardized dimensions of H.R.C . fuse shall only be used for installed boards.

Suppliers: GEC fuse gear (NS type) DORMAN (ns type) , DORMAN (NSD type), BRUSH (F O type).



Overall DIM : 50 mm (max) length , 13mm diameter

ITEM	DESCRIPTION
228	2 AMP
229	6 AMP
230	10 AMP
231	15 AMP
232	20 AMP

Same as above description overall dimensions, diameter 14.5mm length 60 mm.

ITEM	DESCRIPTION
233	2 AMP
234	4 AMP
235	6 AMP
236	10 AMP
237	16 AMP
238	20 AMP

- 18- Cartridge fuse links, H.R.C . for motor protection circuits, bolted type , 500V. A.C. , 250 V D.C. in accordance with IEC 269-2 , 1973 and B.S 88 PT.2, 1975 , class Q1 , ASTA certified at 80 KA , and 40 K.A. DC . The marking on the fuse links shall be either to clause 6-2 of IEC 269-2 1973, or to clause 6.2 of B.S.88 pt , 2, 1975 .

Note : The dimensions shall be in accordance with section II appendix A of IEC 269-2A (1973).

Supplier : SIBA GEC DORMAN BRUSH

ITEM	DESCRIPTION
270	20 M 25 DIMENSIONS REF A ₁
271	20 M 32 DIMENSIONS REF A ₁
272	32 M 40 DIMENSIONS REF A ₂
273	32 M 50 DIMENSIONS REF A ₂

274	32 M 63 DIMENSIONS REF A ₂
275	63 M 80 DIMENSIONS REF A ₃
276	63 M 100 DIMENSIONS REF A ₃

ITEM	DESCRIPTION
277	100 M 125 DIMENSIONS REF A ₄
278	100 M 160 DIMENSIONS REF A ₄
279	100 M 200 DIMENSIONS REF A ₄
280	200 M 250 DIMENSIONS REF A ₄
281	200 M 315 DIMENSIONS REF A ₄
282	315 M 400 DIMENSIONS REF A ₄
283	400 M 500 DIMENSIONS REF A ₄

- 19- Industrial and general , cartridge H.R.C . fuse links 415 V. to BS 88 , part 2 and IEC 269 part 6-1 1975 , class Q1 ASTA , certified at 80 KA 550V AC non renewable cartridge , insulating material tinned brass or copper contacts central tags contacts 2 hole fixing.

Note : The dimensions shall be in accordance with section II appendix A of IEC 269 2A (1973).

Supplier : GEC (TB type) DORMAN (AC type) BRUSH (KO8 type) , MEM (SE type) .

Overall dimensions . length 111.9 mm , diameter 26.20 mm, fixing centers 96.90mm.

ITEM	DESCRIPTION
284	4 AMPS
285	6 AMPS
286	10 AMPS
287	16 AMPS

ITEM	DESCRIPTION
288	20 AMPS

289	25 AMPS
290	32 AMPS
291	35 AMPS
292	40 AMPS
293	50 AMPS
294	63 AMPS

Overall dimensions . length 128 .7 , diameter 26.2mm fixing centers 111.00 mm (k09) (TBC).

ITEM	DESCRIPTION
295	2 AMPS
296	4 AMPS
297	6 AMPS
298	10 AMPS
299	16 AMPS
300	20 AMPS
301	25 AMPS
302	32 AMPS
303	35 AMPS
304	40 AMPS
305	50 AMPS
306	63 AMPS

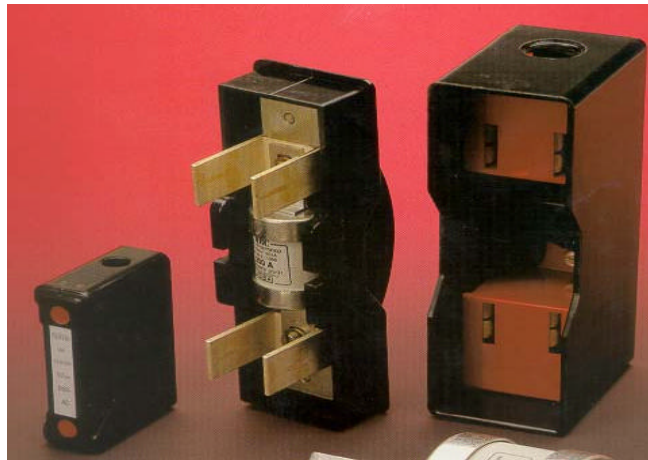
Overall dimensions . length 111.10mm , diameter 41.30mm fixing centers 93.7 mm

ITEM	DESCRIPTION
307	160 AMPS
308	200AMPS

20- H.R.C . fuse holder (carrier and base) 500V AC , 250V DC , to IEC 269 part 1 and 2 or B.S. 88 part 1 and 2 , first supplement to

publication IEC 269-2(1973) appendix A , suitable for H.R.C bolted type cartridge fuses.

Supplier : SIBA . DORMAN . GEC . BRUSH an



Note: front connected.

ITEM	DESCRIPTION
309	20 AMPS MAX BS88 REF A ₁
310	32 AMPS MAX BS88 REF A ₂
311	63 AMPS MAX BS88 REF A ₃
312	100 AMPS MAX BS88 REF A ₄
313	200 AMPS MAX BS88 REF B ₂

Note : back connected

ITEM	DESCRIPTION
314	20 AMPS MAX B.S.88 REF A ₁
315	32 AMPS MAX B.S.88 REF A ₂
316	63 AMPS MAX B.S.88 REF A ₃
317	100 AMPS MAX B.S.88 REF A ₄
318	200 AMPS MAX B.S.88 REF B ₂

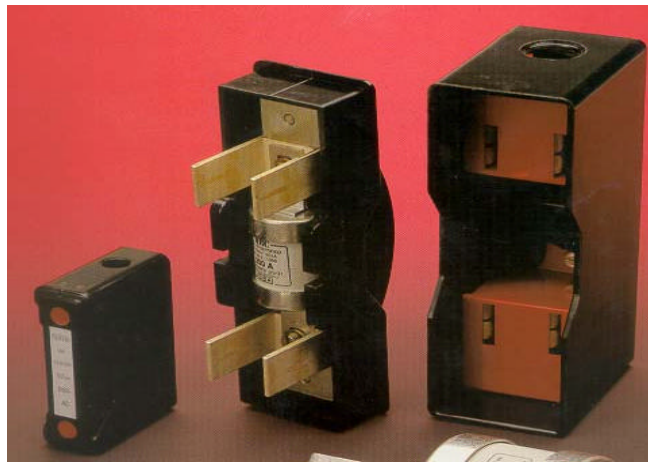
Note : front / back connected

ITEM	DESCRIPTION
319	20 AMPS MAX B.S.88 REF A ₁
320	32 AMPS MAX B.S.88 REF A ₂

321	63 AMPS MAX B.S.88 REF A ₃
322	100 AMPS MAX B.S.88 REF A ₄
323	200 AMPS MAX B.S.88 REF B ₂

- 21- H.R.C. fuse holder, carrier and base 500V AC, front connection , black color phendilc moulding to B.S. 771 (1954) similar to F or NS type fuse links of GEC fuse gear.

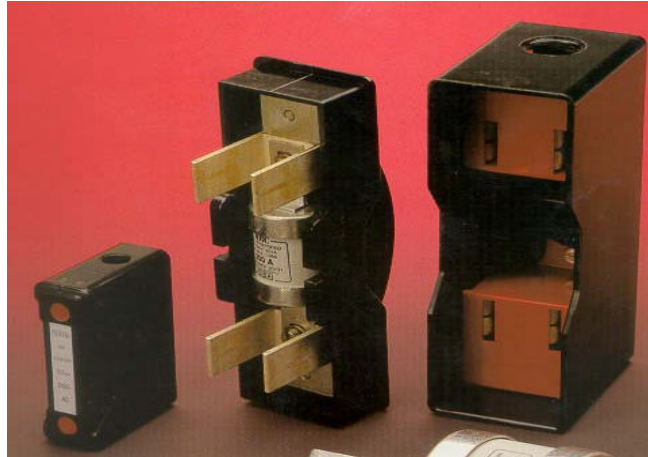
Suppliers : GEC , DORMAN , BRUSH , MEM



ITEM	DESCRIPTION
324	2 TO 20 AMPS MAX
325	32 AMPS
326	63 AMPS
327	100 AMPS

- 22- H.R.C. fuse holder carrier and base 500 V AC. Fornt connection , black color , phendilc mouldings to B.S. 771 (1954) similer for SS type fuse links of GEC fusegear.

Supplier : GEC , DORMAN . BRUSH . SIBA



ITEM	DESCRIPTION
328	2 TO 20 AMPS MAX

23- Cartridge fuse links , H.R.C. ferrule type 500V AC , 250V DC, in accordance with IEC 269-1 (1968) and B.S. 88 part 1 (1975) class Q1 ASTA certified at 80KA AC and 40 KA . DC.

Supplier : SIBA , GEC . DORMAN . BRUSH

Overall dimension: 32 mm length 6.35 mm diameter.



ITEM	DESCRIPTION
329	1 AMPS
330	1.25 AMPS
331	1.5 AMPS
332	2.0 AMPS
333	2.5AMPS
334	3.0 AMPS
335	4.0 AMPS
336	5.0 AMPS
337	6.3 AMPS
338	10 AMPS
339	12AMPS
340	15 AMPS
341	20 AMPS

342	21 AMPS
343	30 AMPS

- 24- Cartridge fuse links , H.R.C. ferrule type 500V AC , 250V DC, in accordance with IEC 269-1 (1968) and B.S. 88 part 1 (1975) class Q1 ASTA certified at 80KA AC and 40 KA . DC

Note: the dimensions shall be in accordance with section III appendix A of IEC 26 9-2A (1973) .

Overall dimensions : 38mm length . 10mm diameter.

Supplier : GEC SIBA , DORMAN, BRUSH and etc .



ITEM	DESCRIPTION
344	1.0 AMPS
345	1.25 AMPS
346	1.6 AMPS
347	2.0 AMPS
348	2.5 AMPS
349	3.0 AMPS
350	4.0 AMPS
351	5.0 AMPS
352	6.3 AMPS
353	10.0 AMPS
354	15.0 AMPS
355	20 AMPS
356	25 AMPS
357	30 AMPS

- 25- Cartridge fuse links , H.R.C. ferrule type 500V AC , 250V DC, in accordance with IEC 269-1 (1968) and B.S. 88 part 1 (1975) class Q1 ASTA certified at 80KA AC and 40 KA . DC , equipped with striker.

Note: the dimensions shall be in accordance with section III appendix A of IEC 26 9-2A (1973) .

Overall dimensions : 51mm length . 14mm diameter.

Supplier : SIBA , GEC , DORMAN, BRUSH and etc .



ITEM	DESCRIPTION
358	1 AMPS
359	2 AMPS
360	3 AMPS
361	4 AMPS
362	5 AMPS
363	6 AMPS
364	7 AMPS
365	8 AMPS
366	9 AMPS
367	10 AMPS
368	12AMPS
369	15 AMPS
370	20 AMPS
371	25 AMPS
372	30AMPS
373	40 AMPS

26- Cartridge fuse links , H.R.C. ferrule type 500V AC , 250V DC, in accordance to IEC 269-1 (1986) and B.S. 88 part 1 (1975) class Q1 ASTA certified at 80KA AC , 40 KA . DC , equipped with striker.

Note: the dimensions shall be in accordance with section III appendix A of IEC 26 9-2A (1973) .

Overall dimensions : 58mm length . 22mm diameter.

Supplier : SIBA , DORMAN, BRUSH , GEC . and etc .



ITEM	DESCRIPTION
374	3 AMPS

375	5AMPS
376	10AMPS
377	15 AMPS
378	20 AMPS
379	25 AMPS
380	30 AMPS
381	40 AMPS
382	50 AMPS
383	60 AMPS
384	80 AMPS
385	100 AMPS
386	125 AMPS

- 27- H.R.C . fuse link , ferrule type 600V AC to NEC CSA (american) standards , with interrupting rating of 10 KA. AC.

Note : to be used only for installed circuits . not for design purposes.



ITEM	DESCRIPTION
386	10 AMPS 127 MM LENGTH X 20 MM DIA
387	30 AMPS 127 MM LENGTH X 20 MM DIA
388	50 AMPS 140 MM LENGTH X 27 MM DIA

- 28- Cartridge fuse links, ferrule type 250V non length , caps ref. To B.S . 1362 (1980) . IEC , 26 part 1.

Note : for use with 3PIN fused plugs and connection unit (flexoutlets).

Supplier: SIBA,DORMAN, BRUSH , GEC. and etc.



ITEM	DESCRIPTION
389	2 AMPS
390	3 AMPS

391	5 AMPS
392	10 AMPS
393	13 AMPS

- 29- Fuse links H.R.C , for semiconductor rectifiers and thyristor circuits protection , fast acting , off set tags two hole fixing , to IEC 269-4(1974) and or B.S . 88 PART 4 (1976) , max peak inverse voltage rating 450V , without trip indicator , dimensions to section 5-10 of B.S.88 part 4 (1976) .

Supplier: DORMAN, GEC , BRUSH, SIBA and etc.



ITEM	DESCRIPTION
394	5 AMPS
395	10 AMPS
396	20 AMPS
397	25 AMPS
398	50 AMPS
399	75 AMPS

ITEM	DESCRIPTION
400	100 AMPS
401	200 AMPS
402	250 AMPS
403	400 AMPS

- 30- Fuse links H.R.C , for semiconductor rectifiers and thyristor circuits protection , ultra fast acting , off set tags two hole fixing , to IEC 269-4(1974) and/or B.S . 88 part 4 (1976) , max .peak inverse voltage rating 1000V , without trip indicator .

Dimensions to section 5-10 of B.S.88 part 4 (1976) .

Supplier: DORMAN , BRUSH , GEC , SIBA , and etc.

ITEM	DESCRIPTION
404	16 AMPS
405	25 AMPS
406	35 AMPS
407	40 AMPS
408	45 AMPS
409	55 AMPS
410	75 AMPS
411	110 AMPS
412	150 AMPS
413	175 AMPS

31- 3.3 KV , H.R.C . fuse links , high voltage non- renewable , ferrule type , with striker pin, to B.S. 2692 and / or DIN 43625.

Overall dimensions : 142 mm length , 25mm diameter.

Supplier : SIBA , DORMAN , BRUSH , GEC and etc.

ITEM	DESCRIPTION
414	3 AMPS

- 11 kv , H.R.C . fuse links , high voltage non-renewable , to IEC 282-1 with striker pin.

ITEM	DESCRIPTION
415	3 AMPS (75/8 X 1) IN
416	20 AMPS (8 X 2.5) IN
417	25 AMPS (8 X 2.5) IN
418	30 AMPS (8 X 2.5) IN

- 20-24 kv , H.R.C. fuse links , high voltage non- renewable , to IEC 282-1 with striker pin .

ITEM	DESCRIPTION
419	6 AMPS (442 X 500mm)
420	25 AMPS

Fuse carrier for 24KV expulsion fuse switch , dropout , for MESC No.

ITEM	DESCRIPTION
421	100 AMPS

Fuse element , for 24 KV expulsion fuse switch , drop- out type K for MESC No.

ITEM	DESCRIPTION
422	6 AMPS

32- Parts for power fuse and C 63KV type SMD 1A cat No. 186706-

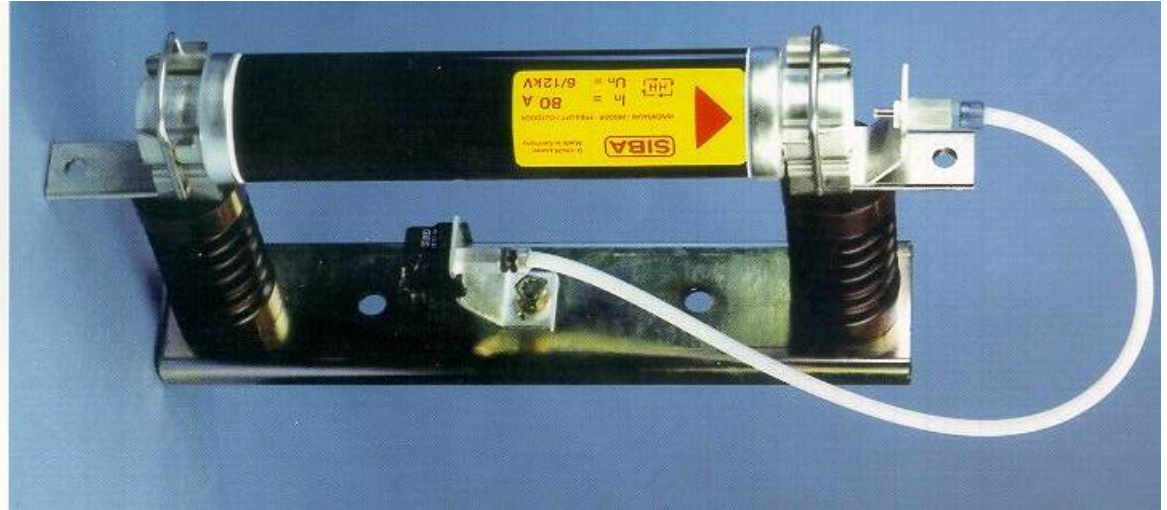
RI

Supplier : S and C electric co 6601 north ridge boulevard chicago illinois 60626 .

Note : used for electric transmission system.

Ref :cocolex contract No.T 14-2064

Location : SARAKHS NEKA GTL.



ITEM	DESCRIPTION
423	Live parts including END 3700R ₃ fittings
424	Fuse 100 AMPS
425	Small round socket 4408 R ₄ (part of handling tools)
426	Universal pole head styce W/male coupling (4464 RI-E)
427	Pole extension W/female 1-3/4 x 8 IN coupling (4495-E)
428	Handling tools container (4447)