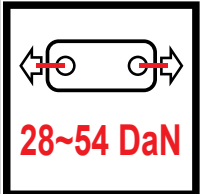
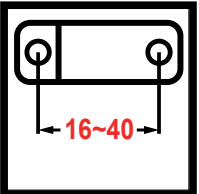




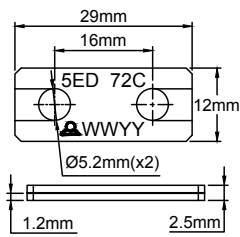
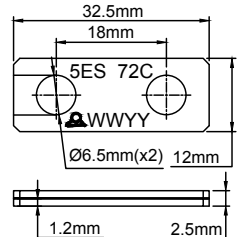
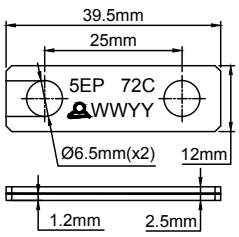
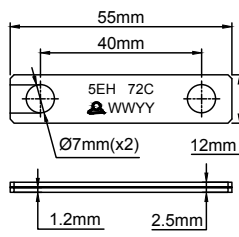


Copper fusible links with eutectic alloys, for medium loads



Because of permanent improvement of our products, drawings, descriptions, features used on these data sheets are for guidance only and can be modified without prior advice

Material	Max load	Hole distances	Thickness	Types
Copper	 28~54 DaN	 16~40	1.2mm	5EP, 5ES, 5ED, 5EH

			
			
5ED	5ES	5EP	5EH

These fusible links have a **medium response time**, between 3 minutes 25 seconds and 3 minutes 30 seconds, for a temperature rise rate of 20°C/min from 25°C, and their thickness of metal is thicker than brass models to gives them sufficient strength for their **use in multiplied mechanisms** supporting a maximum stress of 300DaN. The use of red copper instead of brass provides a better corrosion resistance but **substantially increases the price**.

Material: Electrolytic copper

Surface Protection: No special surface protection

ROHS compliance: These fusible links are available in two versions

- Non-ROHS compliant, using traditional alloys containing lead and cadmium, for temperatures 68°C (155°F); 72°C (162°F); 96°C (205°F); 103°C (218°F); 120°C (248°F).
- ROHS compliant, using ternary alloys based on bismuth, tin and indium, (the high cost of indium makes these models 2 to 3 times more expensive than non-Rohs types) for temperatures 60°C (140°F); 72°C (162°F); 79°C (174°F); 109°C (228°F); 117°C (242°F)

Identification: Model, temperature in °C and date of manufacture are stamped on each fusible link

Tests:

- Mechanical resistance at ambient temperature: 100% in production
- Trip temperature under static load: by statistical sampling
- Trip time in temperature rise under load according to ISO 10294-4: by statistical sampling.
- Holding load 1h at 60°C or 90°C: compliant and verified by statistical sampling in production (Test according to ISO 10294-4)
- Triggering under minimum load: compliant and verified by statistical sampling in production (Test according to UL33)

Salt spray resistance: According to ISO9227-2012, subjected to a mist formed of 20% by weight of sodium chloride in distilled water, at 35°C for 5 days (120h), the fusible links retain their aptitude for the function, in the response times specified by the standard.

Type	5ED	5ES	5EP	5EH
Welding surface (mm²)	280	290	370	545
Maximum permissible permanent load * (DaN)	28	29	37	54
Minimum triggering load	4N	4N	4N	4N
Mechanical breaking load at 25°C	165	165	165	165
Response time according to ISO 10294-4 under maximum load **	3 min. 30 sec.	3 min. 30 sec.	3 min. 25 sec.	3 min. 30 sec.

* Maximum permanent load depends on alloy composition and ambient temperature on 72°C fusible links. Values are given for guidance only, and for a 72°C non ROHS eutectic alloy. **Alloys with temperatures below 72°C and those that are ROHS compliant, generally have a high proportion of Indium, which greatly reduces the mechanical strength.**

In addition, maximum permanent loads are limited to 1/3 of the mechanical breaking load at 25°C.

** Values measured in our own testing equipment. Testing conditions and equipment comply with ISO10294-4 and ISO DIS 21925-1 2017, fig. C1

Main references (Non-ROHS)

Temperature	Model	Reference	Model	Reference	Model	Reference	Model	Reference
68°C (155°F)	5EP	5EP0680CB0000000	5ES	5ES0680CB0000000	5ED	5ED0680CB0000000	5EH	5EH0680CB0000000
72°C (162°F)	5EP	5EP0720CB0000000	5ES	5ES0720CB0000000	5ED	5ED0720CB0000000	5EH	5EH0720CB0000000
96°C (205°F)	5EP	5EP0960CB0000000	5ES	5ES0960CB0000000	5ED	5ED0960CB0000000	5EH	5EH0960CB0000000
103°C (218°F)	5EP	5EP1030CB0000000	5ES	5ES1030CB0000000	5ED	5ED1030CB0000000	5EH	5EH1030CB0000000
120°C (248°F)	5EP	5EP1200CB0000000	5ES	5ES1200CB0000000	5ED	5ED1200CB0000000	5EH	5EH1200CB0000000

Main references (ROHS compliant)

Temperature	Model	Reference	Model	Reference	Model	Reference	Model	Reference
60°C (140°F)	5EP	5EP0600CB0R00000	5ES	5ES0600CB0R00000	5ED	5ED0600CB0R00000	5EH	5EH0600CB0R00000
72°C (162°F)	5EP	5EP0720CB0R00000	5ES	5ES0720CB0R00000	5ED	5ED0720CB0R00000	5EH	5EH0720CB0R00000
79°C (174°F)	5EP	5EP0790CB0R00000	5ES	5ES0790CB0R00000	5ED	5ED0790CB0R00000	5EH	5EH0790CB0R00000
109°C (228°F)	5EP	5EP1090CB0R00000	5ES	5ES1090CB0R00000	5ED	5ED1090CB0R00000	5EH	5EH1090CB0R00000
117°C (242°F)	5EP	5EP1170CB0R00000	5ES	5ES1170CB0R00000	5ED	5ED1170CB0R00000	5EH	5EH1170CB0R00000