Electric vehicle power fuses — 500 Vdc, 20-50 A



Catalog symbol:

- EV10-(amp) ferrule
- EV10-(amp)-B axial bolt-on
- EV10-(amp)-T flush bolt-on
- EV10-(amp)-1P PCB terminal

Features:

- Compact 10x38 mm size is easily mounted with multiple terminal options.
- Higher voltage rating provides overall system efficiency using smaller, more economical conductors while meeting the needs of higher voltage battery packs.
- Higher interrupting rating protects high capacity battery packs needed for vehicle acceleration and range requirements.
- Operation as low as 135% overload provides full range protection for overload and high fault current conditions.
- Can be selectively coordinated with upstream battery and charging circuit fuses.

Agency information

- Designed to:
  - JASO D622
  - ISO 8820-8
- Manufactured under ITAF16949 quality system for compliance with automotive requirements
- RoHS compliant
- REACH declaration available upon request

Packaging

- EV10-(amp) ferrule fuses
  - 10 per carton
  - 500 per container
- EV10-(amp)-P PCB fuses
  - 10 per carton
  - 480 per container
- EV10-(amp)-B axial bolt-on fuses
  - 270 per container
- EV10-(amp)-T flush bolt-on fuses
  - 270 per container

Description:

Eaton's Bussmann series Electric Vehicle (EV) full range fuses for the® protection of auxiliary electrical systems up to 500 Vdc in ratings from 20 to 50 amps.

Specifications:

Ratings

- Volts: 500 Vdc
- Amps: 20 - 50 A
- Interrupting rating
  - Max DC – 20 kA
  - Min DC 135%

Time constant: 2 ± 0.5ms

Work temperature: -40 ~ 125°C

Altitude: ≤ 2000m

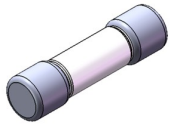
Installation Suggestion:

Suggest to use screw and washer assembled. Flange screw is not recommended.

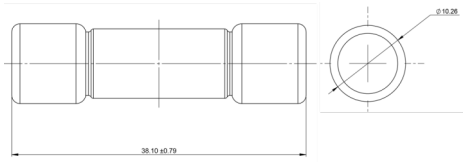
Terminal Type	-T	-2T	-3T	-MT	-B
Screw Type	M5	M6	M6	M4	M4
Tightening Torque (Nm)	4.5 ± 1	6 ± 1	6 ± 1	2 ± 0.5	2 ± 0.5

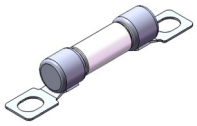
Electric vehicle power fuses — 500 Vdc, 20-50 A

Dimension: -mm

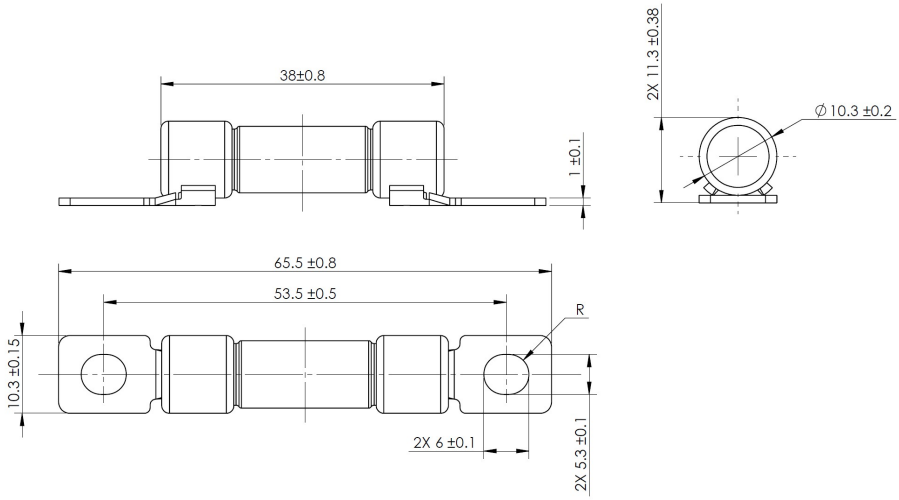


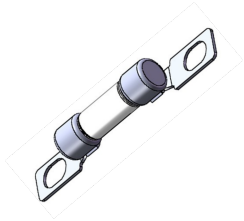
EV10-XX-C



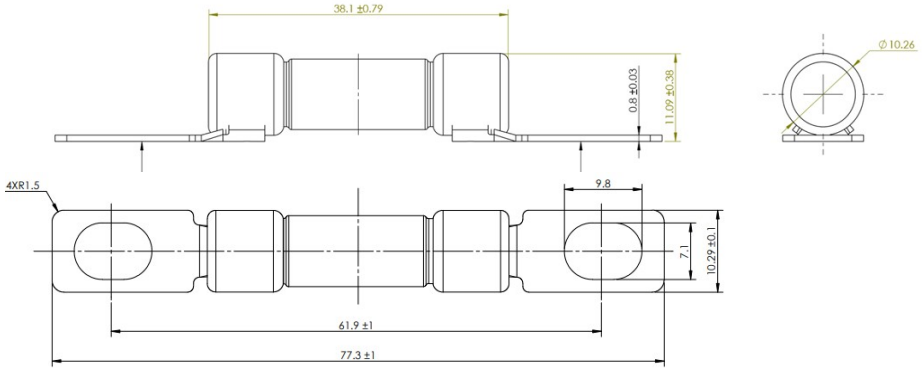


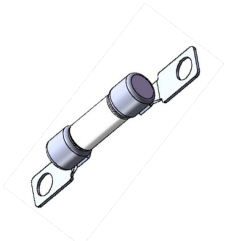
EV10-XX-T-C



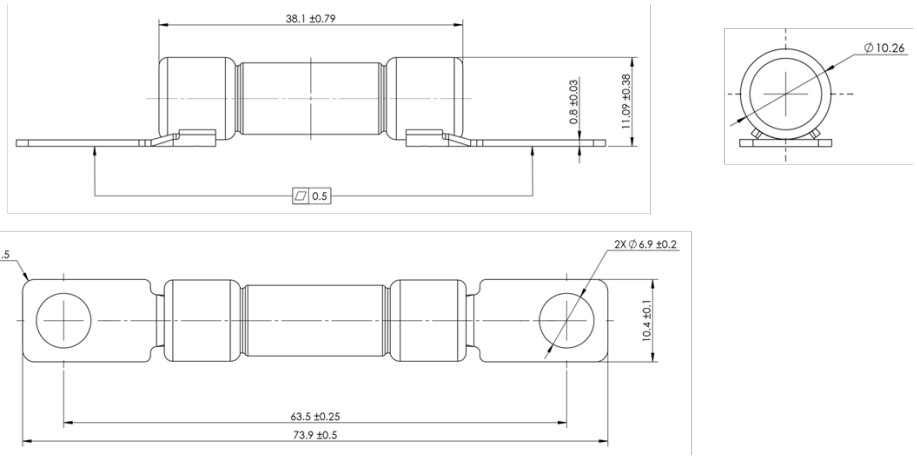


EV10-XX-2T-C



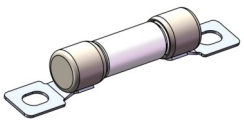


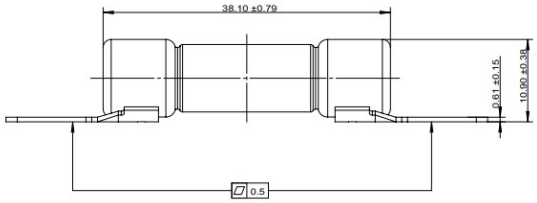
EV10-XX-3T-C



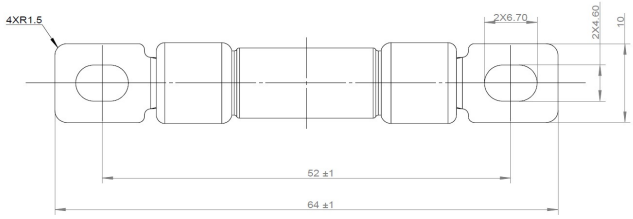
Electric vehicle power fuses — 500 Vdc, 20-50 A

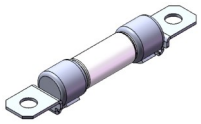
Dimension: -mm

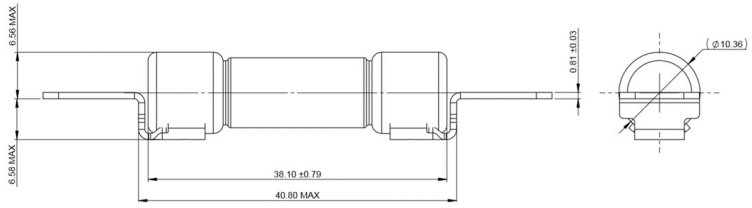




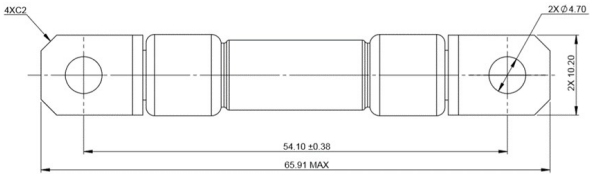
EV10-XX-MT-C

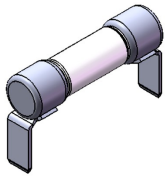




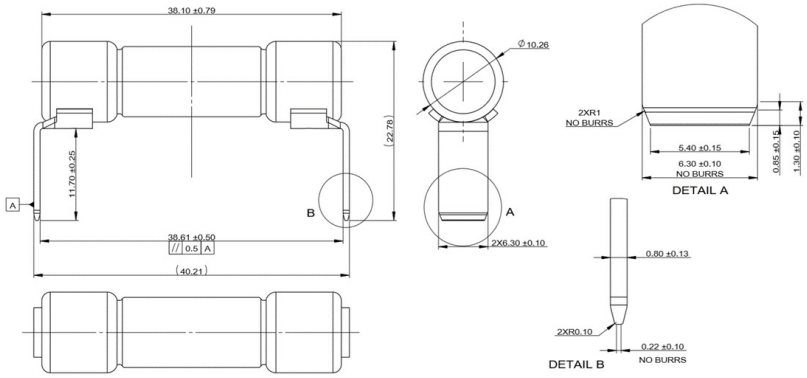


EV10-XX-B-C



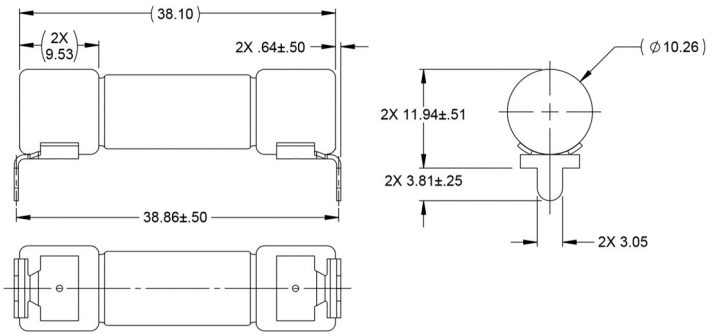


EV10-XX-P-C





EV10-XX-1P-C



Electric vehicle power fuses — 500 Vdc, 20-50 A

Catalog Number List

Ferrule	-T	-2T	-3T	-MT	-B	-P	-1P
EV10-20-C *	EV10-20-T-C	EV10-20-2T-C	EV10-20-3T-C *	EV10-20-MT-C *	EV10-20-B-C	EV10-20-P-C *	EV10-20-1P-C *
EV10-25-C *	EV10-25-T-C	EV10-25-2T-C	EV10-25-3T-C *	EV10-25-MT-C *	EV10-25-B-C	EV10-25-P-C *	EV10-25-1P-C *
EV10-30-C	EV10-30-T-C	EV10-30-2T-C	EV10-30-3T-C *	EV10-30-MT-C	EV10-30-B-C	EV10-30-P-C *	EV10-30-1P-C
EV10-40-C	EV10-40-T-C	EV10-40-2T-C	EV10-40-3T-C *	EV10-40-MT-C	EV10-40-B-C	EV10-40-P-C *	EV10-40-1P-C
EV10-50-C	EV10-50-T-C	EV10-50-2T-C	EV10-50-3T-C *	EV10-50-MT-C	EV10-50-B-C	EV10-50-P-C *	EV10-50-1P-C

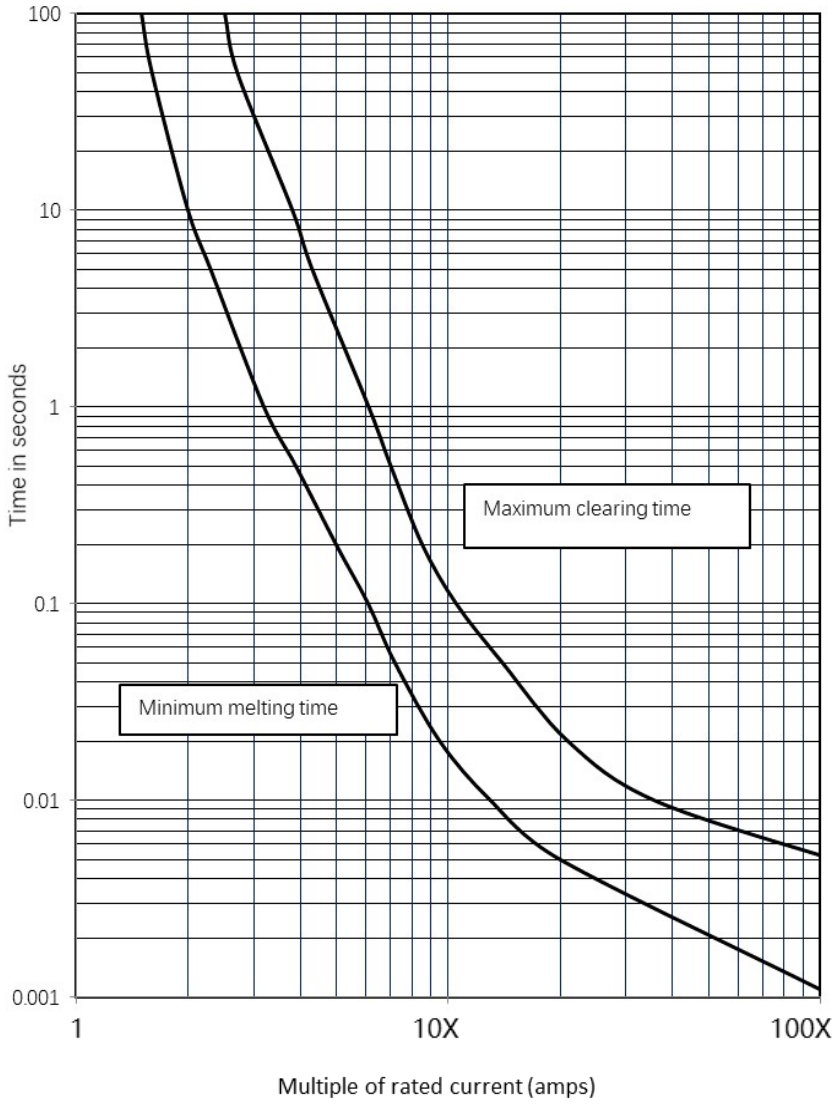
Remark: for the part with " * ", please check with Bussmann sales.

Technical Parameter

Voltage Rating (V)	Current Rating (A)	Pre-arcing I^2t (A^2S)	Total I2t (A2s)	Power Loss at In (W)	Power Loss at 0.5In (W)
500Vdc	20	240	390	3.4	0.7
	25	350	580	4.3	0.9
	30	750	1,200	4.3	0.9
	40	1,690	2,700	5.3	1.1
	50	2,820	4,500	6.6	1.3

T-C Curves for 20-50A

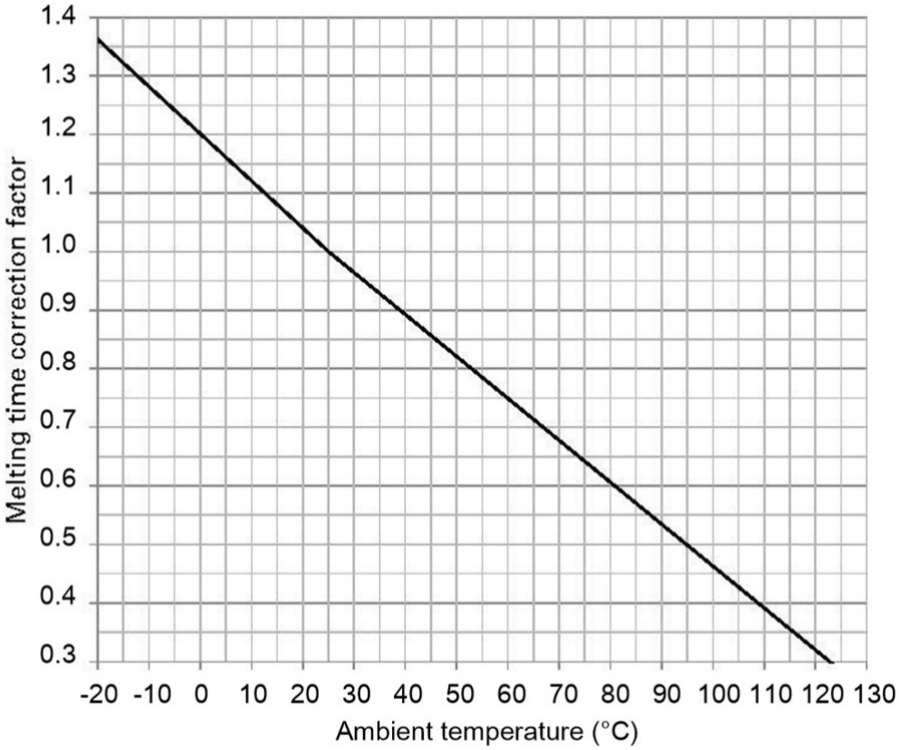
DC minimum melt / maximum clearing time-current curves — multiple of rated current
For catalog numbers EV10-20-C to EV10-50-C amp fuses supplied via DC rectifier @500Vdc and time contact (L/R) 2ms±0.5ms



Electric vehicle power fuses — 500 Vdc, 20-50 A

Correction Factors

Melting time correction factors



Power loss correction factors

