

Electric vehicle power fuses — 500 Vdc, 350-1000 A



Catalog symbols:

- EV40-(amp) 38.1 mm diameter
- EV50-(amp) 50.8 mm diameter
- EV60-(amp) 63.5 mm diameter

Description:

Eaton's Bussmann® series Electric Vehicle (EV) fuses for the protection of high power battery charging and management systems up to 500 Vdc in ratings from 350 to 1000 amps.

Specifications:

Ratings

- Volts - 500 Vdc
- Amps - 350-1000A
- Interrupting rating
 - Max DC - 50 kA
 - Min DC 200%

Agency information:

- Designed to:
 - JASO D622 : 2006
 - Manufactured under an IATF16949 quality system for compliance with automotive requirements
- RoHS compliant
- REACH declaration available upon request

Packaging:

- 38.1mm fuses: 54 per carton
- 50.8mm fuses: 28 per carton
- 63.5mm fuses: 14 per carton

Features:

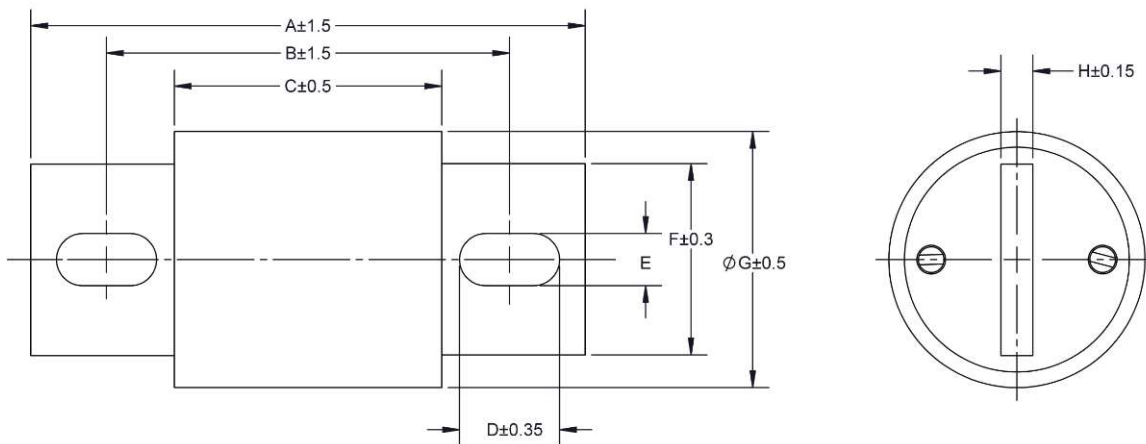
- Higher voltage rating provides overall system efficiency using smaller, more economical conductors while meeting the needs of higher voltage battery packs
- Higher interrupting rating protects high capacity battery packs needed for vehicle acceleration and range requirements
- Up to ten times faster opening under high fault current conditions helps assure reliable protection of circuits and components
- Requires up to 48% less space than conventional high speed fuses to help reduce space and weight
- Data logging system marks each fuse with a serial number and date code for traceability of Critical to Quality characteristics
- To help project the life of the fuse in your application, unique driving profiles and conditions can be simulated to verify proper fuse size and performance under a wide range of driving behaviors
- Operation as low as 200% overload provides back up protection to the battery management system
- Can be applied in parallel to realize greater ampacity within sizing guidelines

Catalog numbers:

Average @ 50Ka / 500Vdc				
Catalog no.	Current Rating I_n (A)	Pre-arcing I^2t (A ² s)	Total I^2t (A ² s)	Power dissipation at 0.5 I_n (W)*
38.1 mm diameter case				
EV40-350-C	350	10,000	39,000	14
EV40-400-C	400	14,000	52,000	15
EV40-450-C	450	21,000	72,000	16
EV40-500-C	500	27,000	90,000	17
EV40-550-C	550	40,000	132,000	17
EV40-600-C	600	50,000	165,000	18
50.8 mm diameter case				
EV50-550-C	550	32,000	122,000	23
EV50-600-C	600	40,000	143,000	24
EV50-700-C	700	62,000	211,000	27
EV50-800-C	800	87,000	286,000	30
63.5 mm diameter case				
EV60-700-C	700	47,000	179,000	32
EV60-800-C	800	76,000	273,000	33
EV60-900-C	900	102,000	345,000	37
EV60-1000-C	1000	142,000	468,000	39

* 50 percent of fuse label amp rating tested at 23°C ± 2°C.

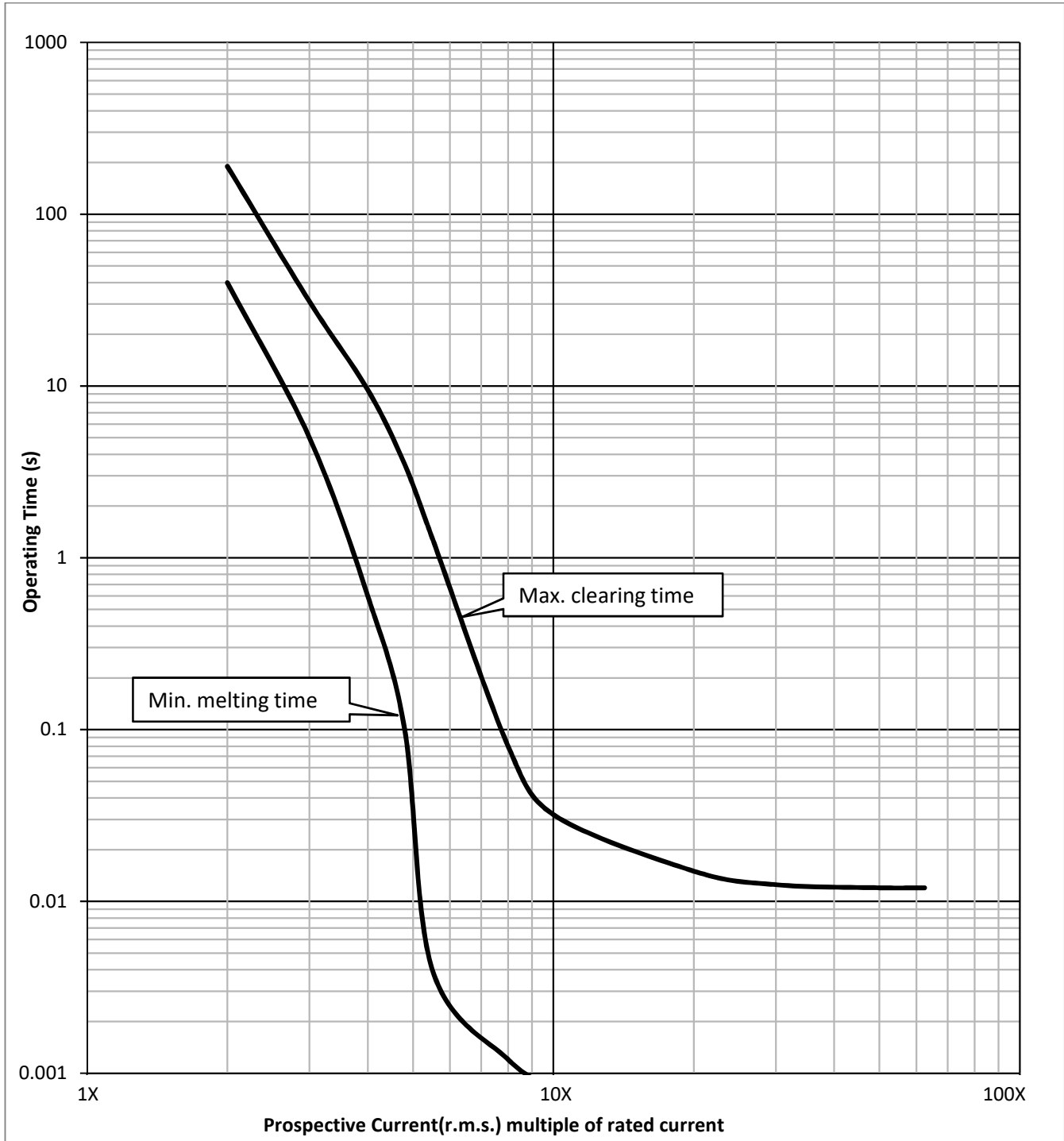
Dimensions† - mm:



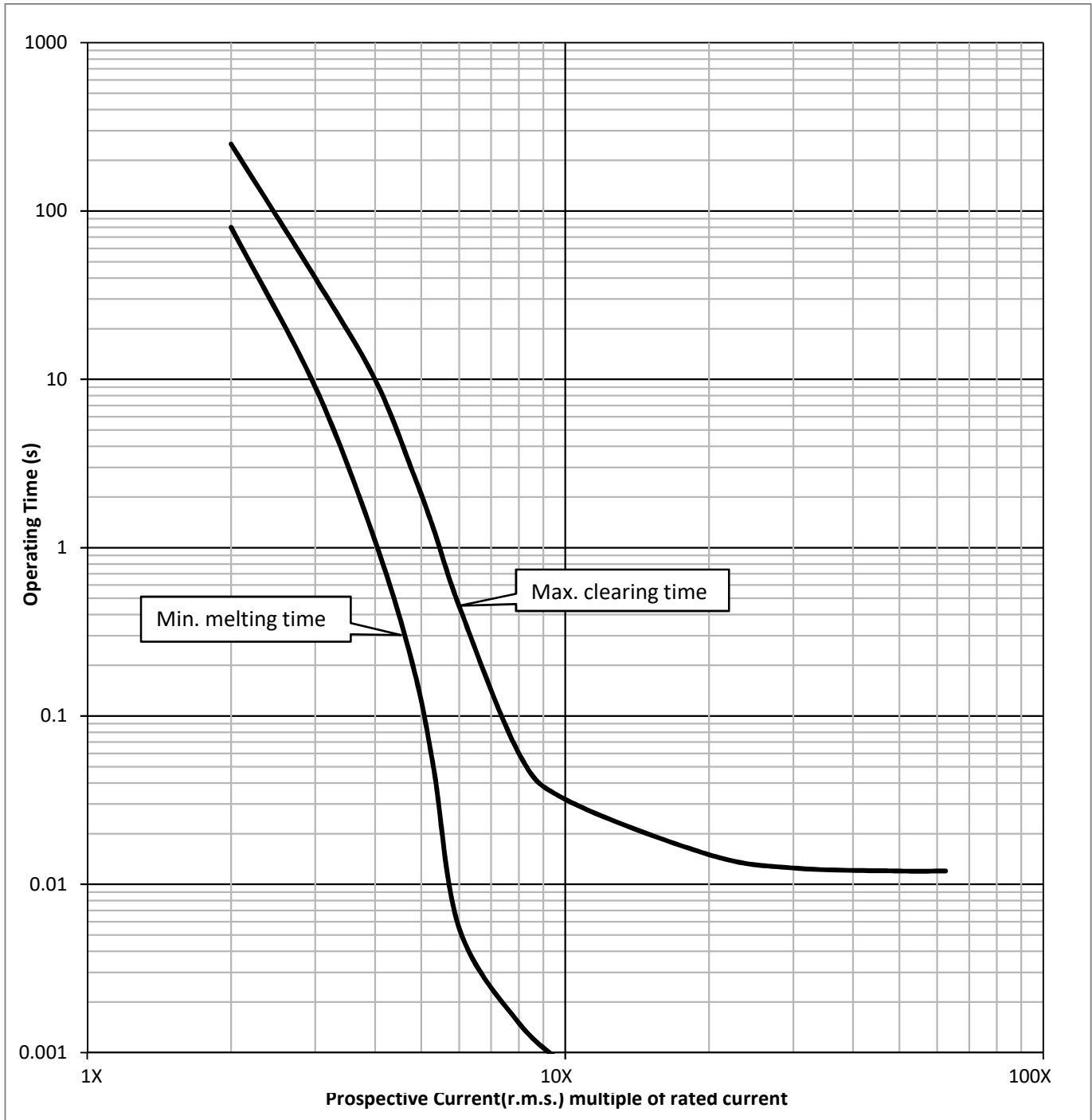
Catalogue number	A	B	C	D	E	F	G	H	J
EV40-Amp-C	110.31	78.28	53.01	19.07	10.34	25.40	38.10	6.35	0.2
EV50-Amp-C	109.91	79.93	53.01	19.86	10.36	37.97	50.80	6.35	0.3
EV60-Amp-C	160.41	106.7	53.01	33.02	13.46	50.80	63.50	9.53	0.3

† Dimension are nominal values.

38.1 mm diameter DC minimum melt / maximum clearing time-current curves - multiple of rated current
 For catalog numbers EV40-350-C to EV40-600-C amp fuses supplied via DC rectifier @500Vdc and time constant (L/R) 2 ms ± 0.5 ms



50.8 mm diameter DC minimum melt / maximum clearing time-current curves - multiple of rated current
 For catalog numbers EV50-550-C to EV50-800-C amp fuses supplied via DC rectifier @500Vdc and time constant (L/R) 2 ms ± 0.5 ms



63.5 mm diameter DC minimum melt / maximum clearing time-current curves - multiple of rated current
 For catalog numbers EV60-700-C to EV60-1000-C amp fuses supplied via DC rectifier @500Vdc and time constant (L/R) 2 ms ± 0.5 ms

