

# Ferrule fuse-links 10x38 aM 400 to 690VAC

## Ferrule fuse-links 10x38 aM 400 to 690VAC

LOW VOLTAGE IEC FUSES

IEC CYLINDRICAL FUSE-LINKS



Mersen aM and gG fuse-links cover a wide range of physical sizes and ampere ratings for 400, 500, and 690VAC for protection in electrical distribution circuits and various industrial applications. Most ratings are available in size 8x31 and size 10x38 with an optional indicator, and in size 14x51 and 22x58 with an optional striker to activate an auxiliary contact. Size 10x38 is also available with striker. All cylindrical fuse-links have ceramic bodies and silver-plated contacts.

Cylindrical fuse-links “aM” are partial range fuses. They protect electrical devices in case of unacceptable high short-circuit against destruction due high current limiting and low thermal let-through values. They cut off currents more than  $6.3I_n$  until the maximum breaking capacity (rated breaking capacity). Cylindrical fuse-links “aM” are mainly used for the protection of installation switch gear in motor circuit currents. For classification of the cylindrical fuse-links the nominal current of the fuse-link can be selected respective to the nominal current of the motor.

Our technology and process was designed to ensure highly reliable technical performance.

### TECHNICAL DATA OVERVIEW

|                      |                      |
|----------------------|----------------------|
| Voltage Range AC     | 400 ... 690 VAC      |
| Ampere Range (A)     | 0.16 ... 32 A        |
| Speed/Characteristic | aM                   |
| I.R. AC (IEC)        | 120 kA               |
| Body Material        | Ceramic              |
| Body Style           | cylindrical          |
| Contact Materials    | Silver plated copper |
| Product Size         | 10x38 mm             |

### FEATURES & BENEFITS

- Reduced size
- Visual indication of fuse operation
- Safest and most reliable protection system
- Optional indicator

### APPLICATIONS

- aM type for protection of motors, transformers and other loads with in-rush currents.

### STANDARDS

- IEC 60269-1 & -2 (electrically only for the range with striker)
- Approved by various shipping organizations



# Ferrule fuse-links 10x38 aM 400 to 690VAC

## PRODUCT RANGE

### Size 10,3x38 aM 400/500VAC without indicator



FR10AM40V32

| Catalog number | Reference number | Rated voltage AC (IEC) | Rated current I <sub>n</sub> | Rated breaking capacity AC | Power dissipation at I <sub>n</sub> | Weight |
|----------------|------------------|------------------------|------------------------------|----------------------------|-------------------------------------|--------|
| FR10AM50V0.16  | E214617          | 500 V                  | 0.16 A                       | 120 kA                     | 0.07 W                              | 8.3 g  |
| FR10AM50V0.25  | M215130          | 500 V                  | 0.25 A                       | 120 kA                     | 0.08 W                              | 8.3 g  |
| FR10AM50V0.5   | W216150          | 500 V                  | 0.5 A                        | 120 kA                     | 0.07 W                              | 8.3 g  |
| FR10AM50V1     | F217171          | 500 V                  | 1 A                          | 120 kA                     | 0.1 W                               | 8.3 g  |
| FR10AM50V2     | H218714          | 500 V                  | 2 A                          | 120 kA                     | 0.14 W                              | 8.3 g  |
| FR10AM50V4     | W219232          | 500 V                  | 4 A                          | 120 kA                     | 0.28 W                              | 8.3 g  |
| FR10AM50V6     | F222208          | 500 V                  | 6 A                          | 120 kA                     | 0.38 W                              | 8.3 g  |
| FR10AM50V8     | Z201295          | 500 V                  | 8 A                          | 120 kA                     | 0.55 W                              | 8.3 g  |
| FR10AM50V10    | Y211552          | 500 V                  | 10 A                         | 120 kA                     | 0.62 W                              | 8.3 g  |
| FR10AM50V12    | A213601          | 500 V                  | 12 A                         | 120 kA                     | 0.82 W                              | 8.3 g  |
| FR10AM50V16    | F214618          | 500 V                  | 16 A                         | 120 kA                     | 0.87 W                              | 8.3 g  |
| FR10AM50V20    | X216151          | 500 V                  | 20 A                         | 120 kA                     | 1.05 W                              | 8.3 g  |
| FR10AM40V25    | G217172          | 400 V                  | 25 A                         | 120 kA                     | 1.2 W                               | 8.3 g  |
| FR10AM40V32    | J218715          | 400 V                  | 32 A                         | 120 kA                     | 1.8 W                               | 8.3 g  |

### Size 10,3x38 aM 400/500VAC with indicator



FR10AM40V25I

| Catalog number | Reference number | Rated voltage AC (IEC) | Rated current I <sub>n</sub> | Rated breaking capacity AC | Power dissipation at I <sub>n</sub> | Weight |
|----------------|------------------|------------------------|------------------------------|----------------------------|-------------------------------------|--------|
| FR10AM50V1I    | X219233          | 500 V                  | 1 A                          | 120 kA                     | 0.1 W                               | 8.3 g  |
| FR10AM50V2I    | G222209          | 500 V                  | 2 A                          | 120 kA                     | 0.14 W                              | 8.3 g  |
| FR10AM50V4I    | K200753          | 500 V                  | 4 A                          | 120 kA                     | 0.28 W                              | 8.3 g  |
| FR10AM50V6I    | K201811          | 500 V                  | 6 A                          | 120 kA                     | 0.38 W                              | 8.3 g  |
| FR10AM50V8I    | Z211553          | 500 V                  | 8 A                          | 120 kA                     | 0.55 W                              | 8.3 g  |
| FR10AM50V10I   | H213102          | 500 V                  | 10 A                         | 120 kA                     | 0.62 W                              | 8.3 g  |
| FR10AM50V12I   | D214110          | 500 V                  | 12 A                         | 120 kA                     | 0.82 W                              | 8.3 g  |
| FR10AM50V16I   | P215132          | 500 V                  | 16 A                         | 120 kA                     | 0.87 W                              | 8.3 g  |
| FR10AM50V20I   | V216655          | 500 V                  | 20 A                         | 120 kA                     | 1.05 W                              | 8.3 g  |
| FR10AM40V25I   | L217682          | 400 V                  | 25 A                         | 120 kA                     | 1.2 W                               | 8.3 g  |

### Size 10,3x38 aM 400VAC with striker

| Catalog number | Reference number | Rated voltage AC (IEC) | Rated current I <sub>n</sub> | Rated breaking capacity AC | Power dissipation at I <sub>n</sub> | Weight |
|----------------|------------------|------------------------|------------------------------|----------------------------|-------------------------------------|--------|
| FR10AM40V2P    | Z084984          | 400 V                  | 2 A                          | 100 kA                     | 0.18 W                              | 9.2 g  |
| FR10AM40V4P    | Y085259          | 400 V                  | 4 A                          | 100 kA                     | 0.2 W                               | 9.2 g  |
| FR10AM40V6P    | W085257          | 400 V                  | 6 A                          | 100 kA                     | 0.21 W                              | 9.2 g  |
| FR10AM40V8P    | A084985          | 400 V                  | 8 A                          | 100 kA                     | 0.29 W                              | 9.2 g  |
| FR10AM40V10P   | B084986          | 400 V                  | 10 A                         | 100 kA                     | 0.36 W                              | 9.2 g  |
| FR10AM40V12P   | X085258          | 400 V                  | 12 A                         | 100 kA                     | 0.43 W                              | 9.2 g  |
| FR10AM40V16P   | C084757          | 380 V                  | 16 A                         | 100 kA                     | 0.57 W                              | 9.2 g  |
| FR10AM40V20P   | V085256          | 380 V                  | 20 A                         | 100 kA                     | 0.72 W                              | 9.2 g  |
| FR10AM25V25P   | A076038          | 250 V                  | 25 A                         | 100 kA                     | 1.2 W                               | 9.2 g  |
| FR10AM25V32P   | B076039          | 250 V                  | 32 A                         | 100 kA                     | 1.6 W                               | 9.2 g  |

MERSEN reserves the right to change, update or correct, without notice, any information contained in this datasheet.

# Ferrule fuse-links 10x38 aM 400 to 690VAC

## PRODUCT RANGE

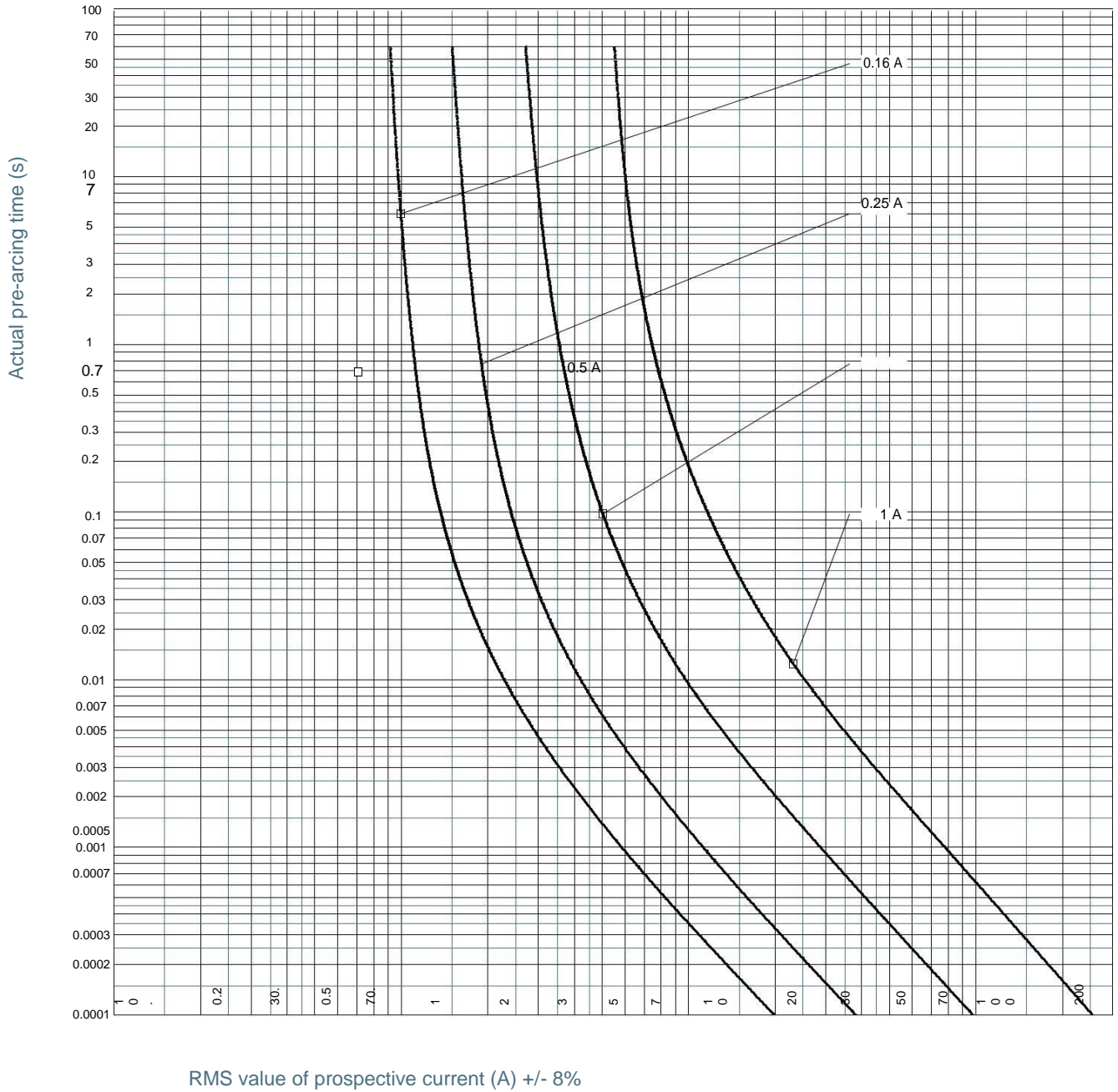
### Size 10,3x38 aM 690VAC without indicator

| Catalog number | Reference number | Rated voltage AC (IEC) | Rated current I <sub>n</sub> | Rated breaking capacity AC | Power dissipation at I <sub>n</sub> | Weight |
|----------------|------------------|------------------------|------------------------------|----------------------------|-------------------------------------|--------|
| FR10AM69V1     | H302779          | 690 V                  | 1 A                          | 120 kA                     | 0.1 W                               | 8.3 g  |
| FR10AM69V2     | J302780          | 690 V                  | 2 A                          | 120 kA                     | 0.14 W                              | 8.3 g  |
| FR10AM69V4     | K302781          | 690 V                  | 4 A                          | 120 kA                     | 0.28 W                              | 8.3 g  |
| FR10AM69V6     | L302782          | 690 V                  | 6 A                          | 120 kA                     | 0.38 W                              | 8.3 g  |
| FR10AM69V8     | M302783          | 690 V                  | 8 A                          | 120 kA                     | 0.55 W                              | 8.3 g  |
| FR10AM69V10    | N302784          | 690 V                  | 10 A                         | 120 kA                     | 0.62 W                              | 8.3 g  |
| FR10AM69V12    | P302785          | 690 V                  | 12 A                         | 120 kA                     | 0.78 W                              | 8.3 g  |

# Ferrule fuse-links 10x38 aM 400 to 690VAC

## TIME CURRENT CHARACTERISTIC CURVES

Size 10x38 500V aM without striker

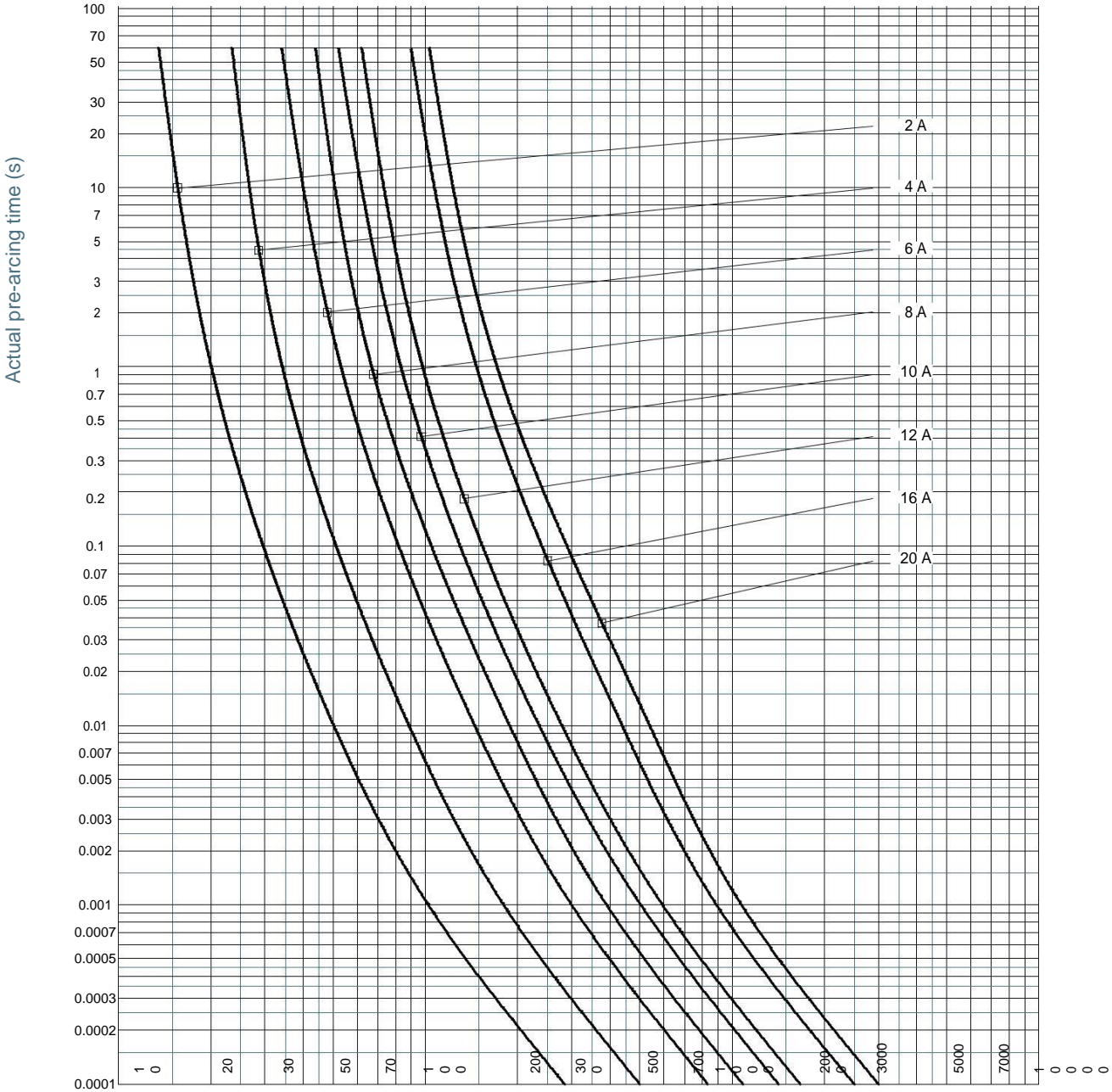


RMS value of prospective current (A) +/- 8%

# Ferrule fuse-links 10x38 aM 400 to 690VAC

## TIME CURRENT CHARACTERISTIC CURVES

Size 10x38 500V aM without striker



RMS value of prospective current (A) +/- 8%

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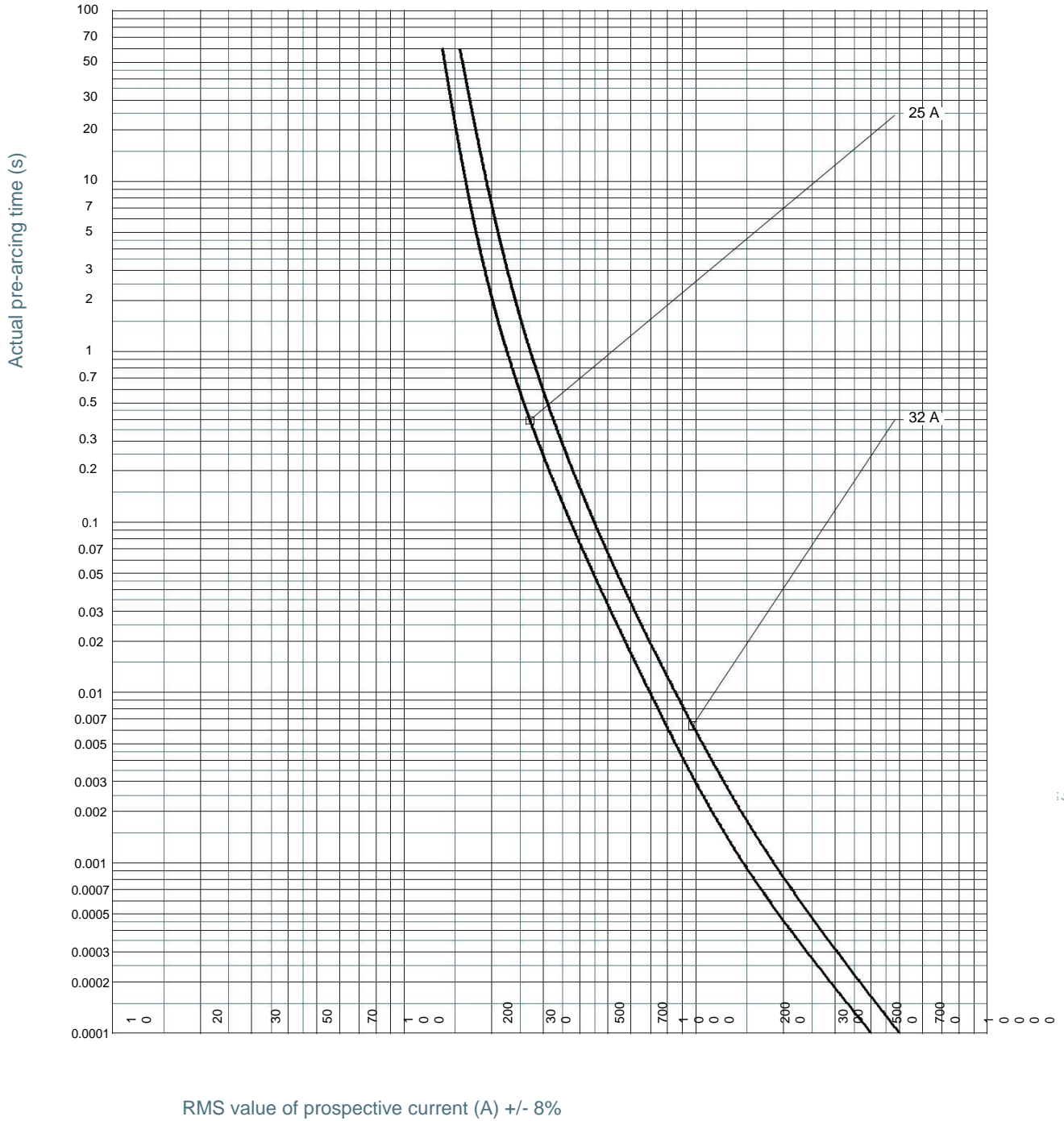
MERSEN reserves the right to change.



# Ferrule fuse-links 10x38 aM 400 to 690VAC

## TIME CURRENT CHARACTERISTIC CURVES

Size 10x38 400V aM without striker



RMS value of prospective current (A) +/- 8%

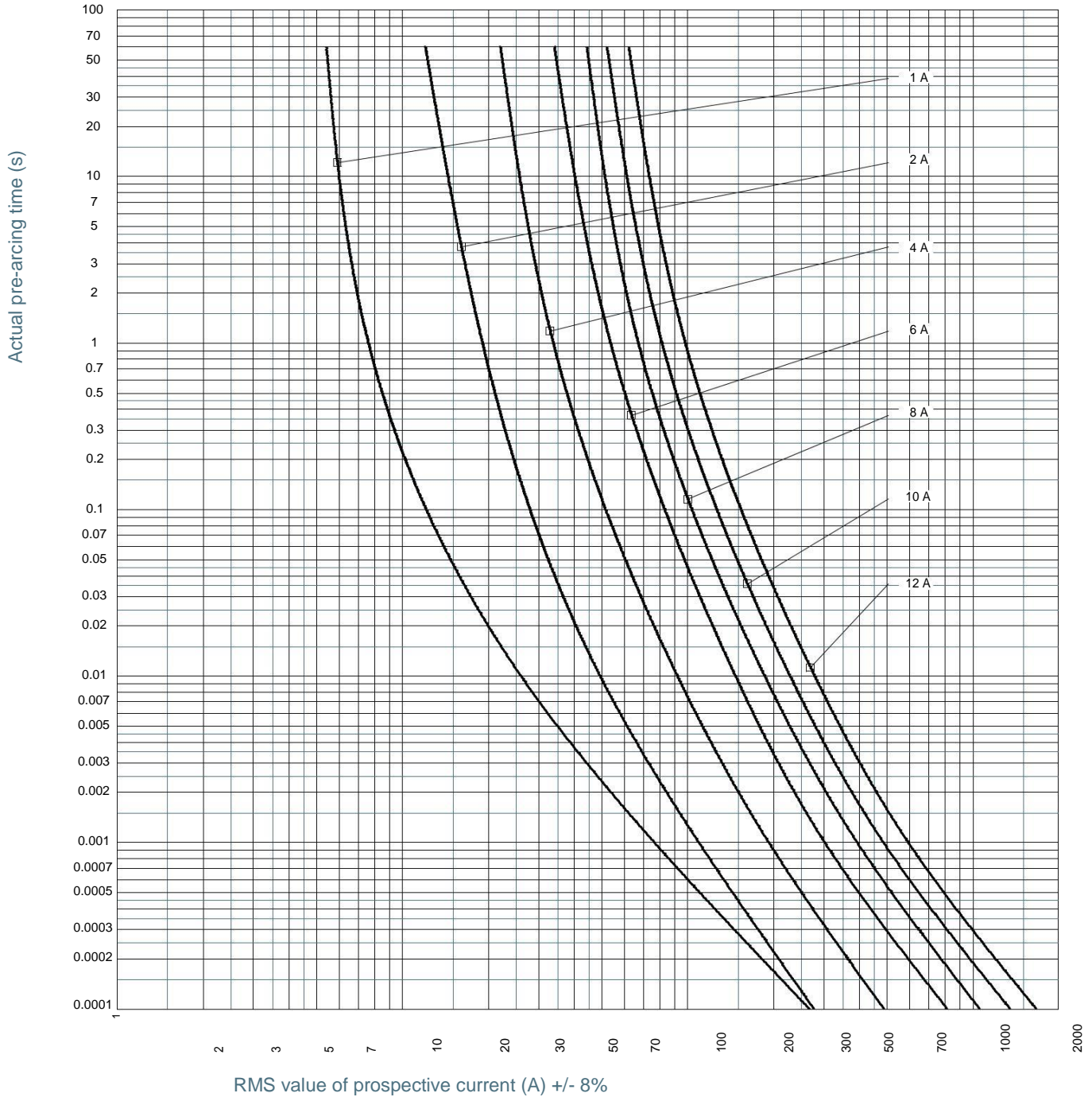
Information

MERSEN reserves the right to change.

# Ferrule fuse-links 10x38 aM 400 to 690VAC

## TIME CURRENT CHARACTERISTIC CURVES

Size 10x38 690V aM without striker

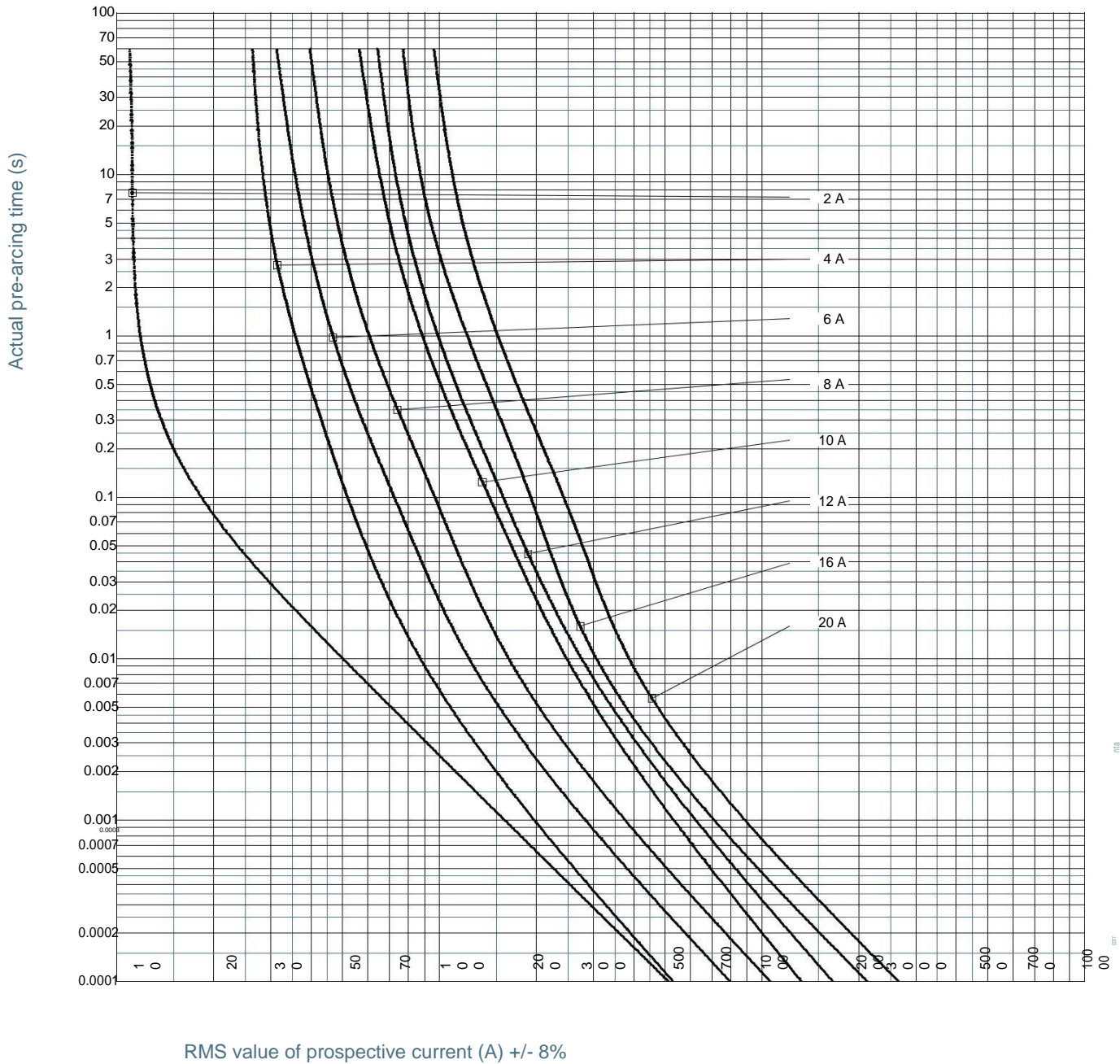


or correct, without notice, any information contained in this datasheet.

# Ferrule fuse-links 10x38 aM 400 to 690VAC

## TIME CURRENT CHARACTERISTIC CURVES

Size 10x38 400V aM with striker



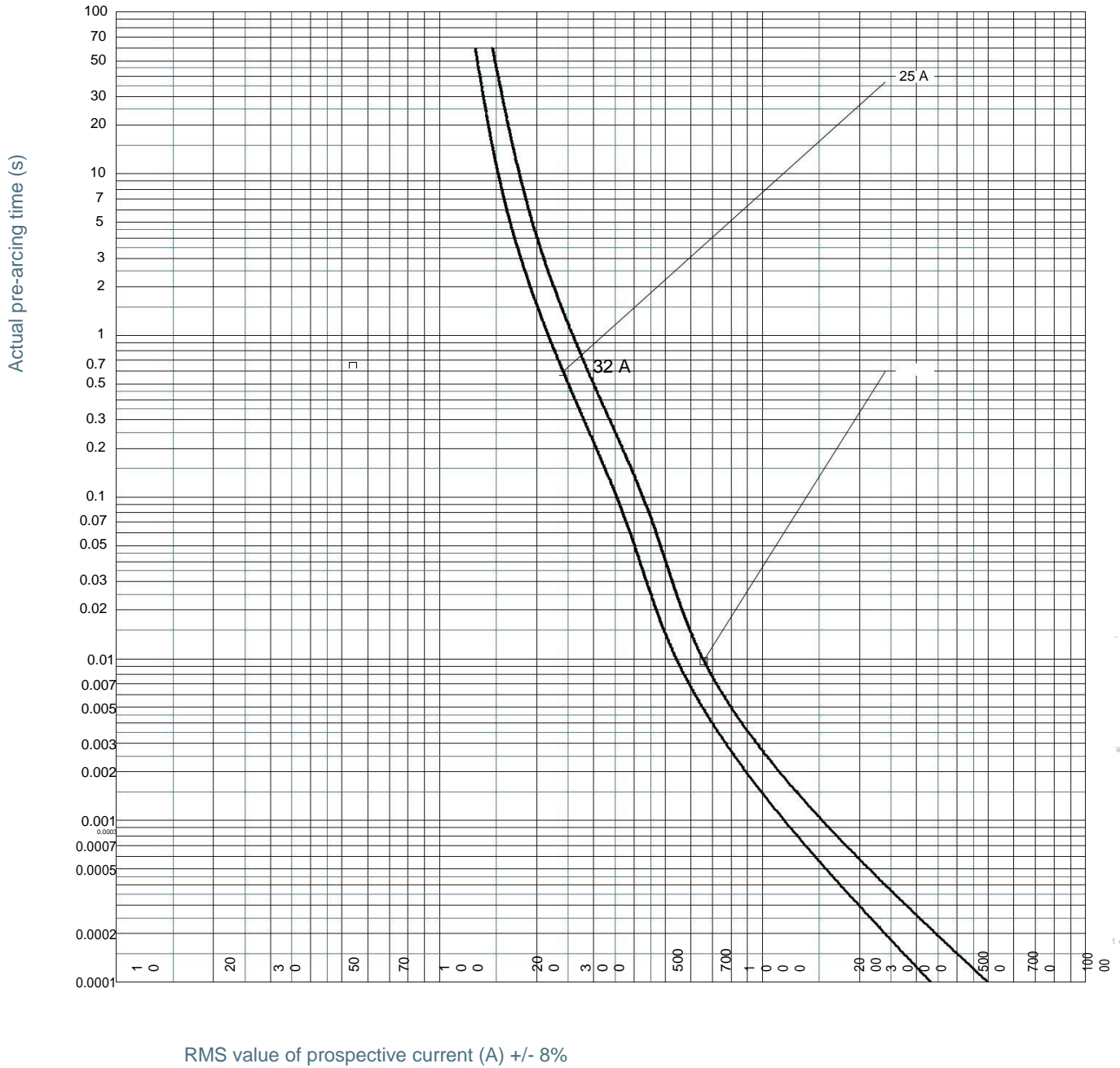
RMS value of prospective current (A) +/- 8%



# Ferrule fuse-links 10x38 aM 400 to 690VAC

## TIME CURRENT CHARACTERISTIC CURVES

Size 10x38 250V aM with striker

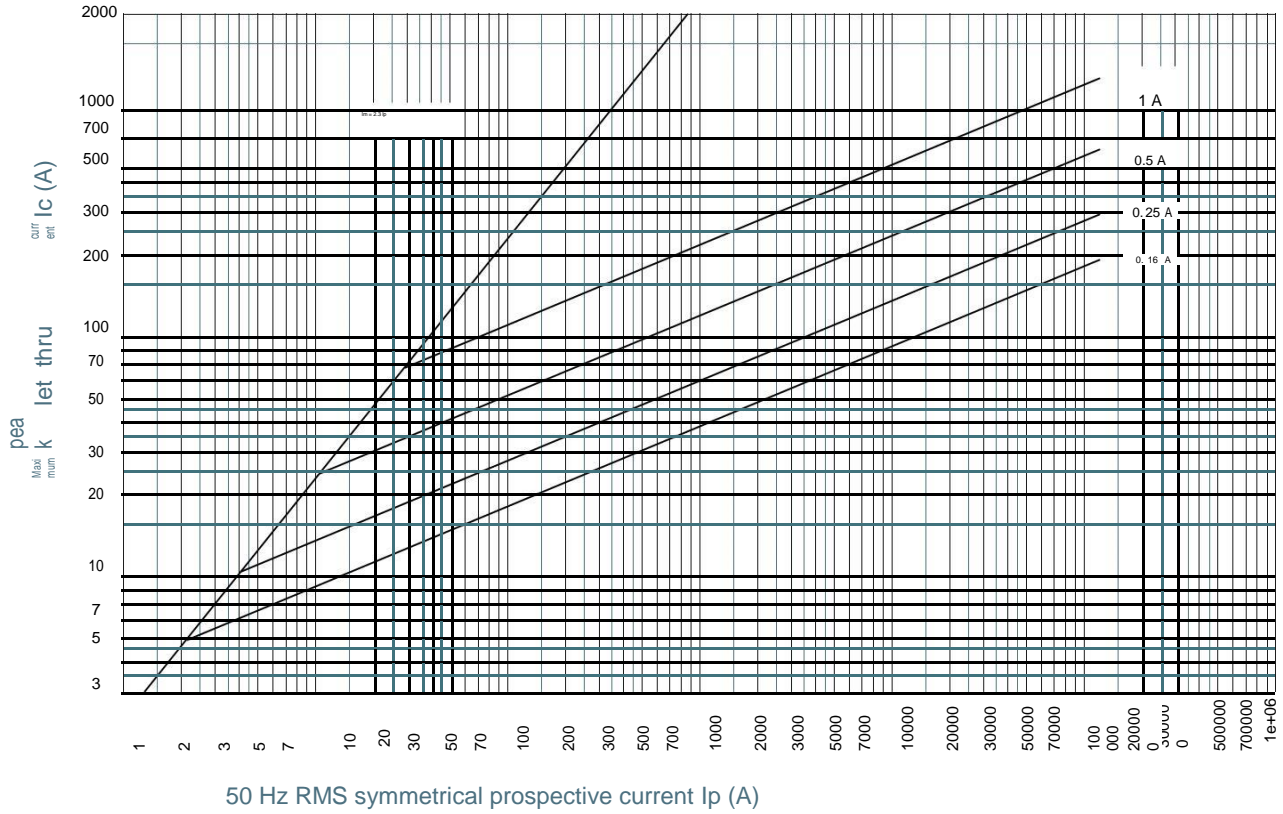


MERSEN reserves the right to change, update or

# Ferrule fuse-links 10x38 aM 400 to 690VAC

## CUT-OFF CURRENT CHARACTERISTIC

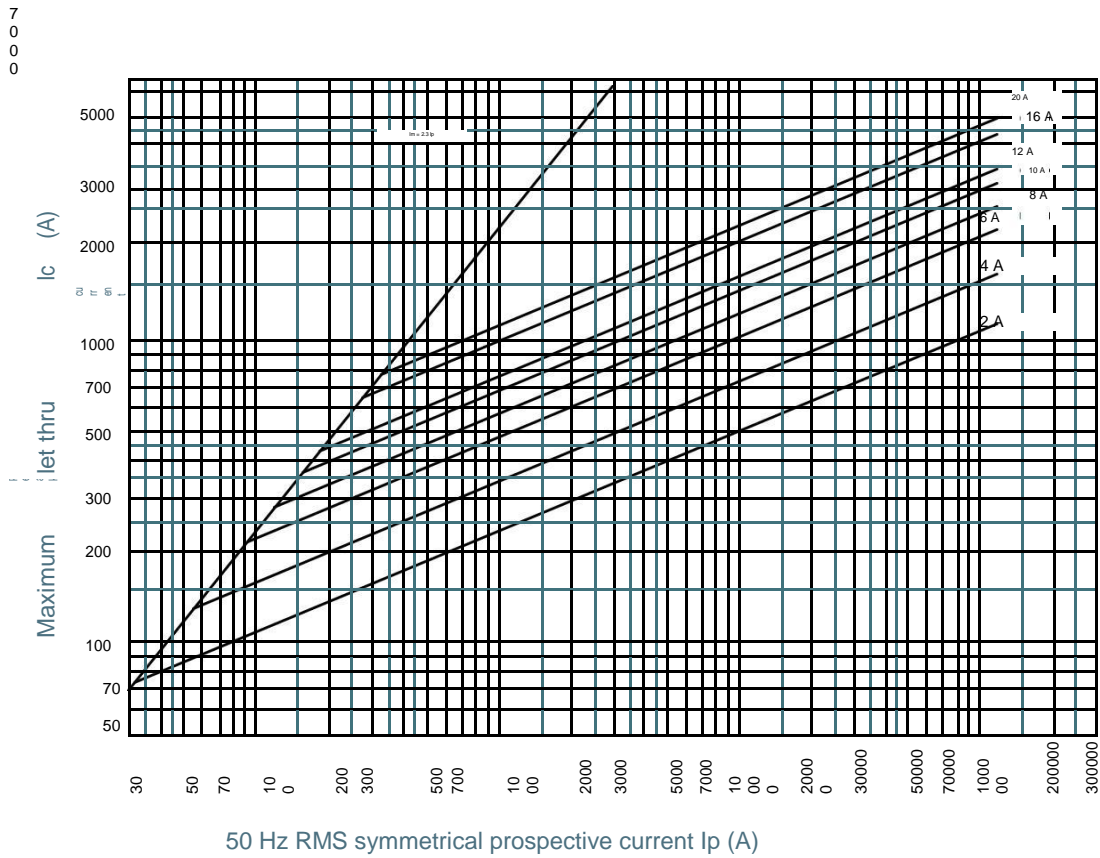
Size 10x38 500V aM without striker



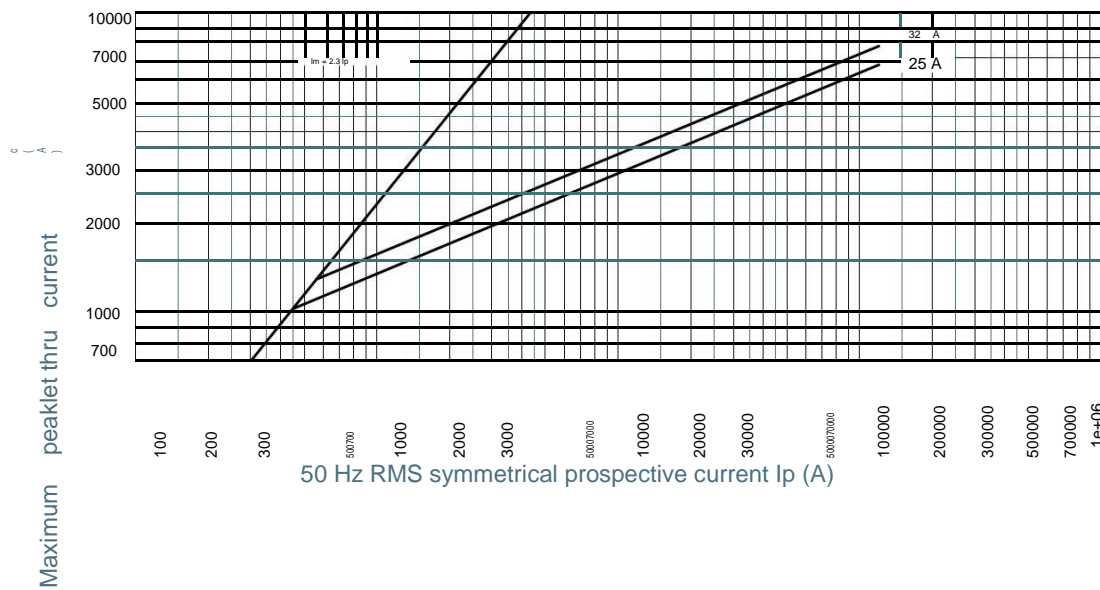
# Ferrule fuse-links 10x38 aM 400 to 690VAC

## CUT-OFF CURRENT CHARACTERISTIC

### Size 10x38 500V aM without striker



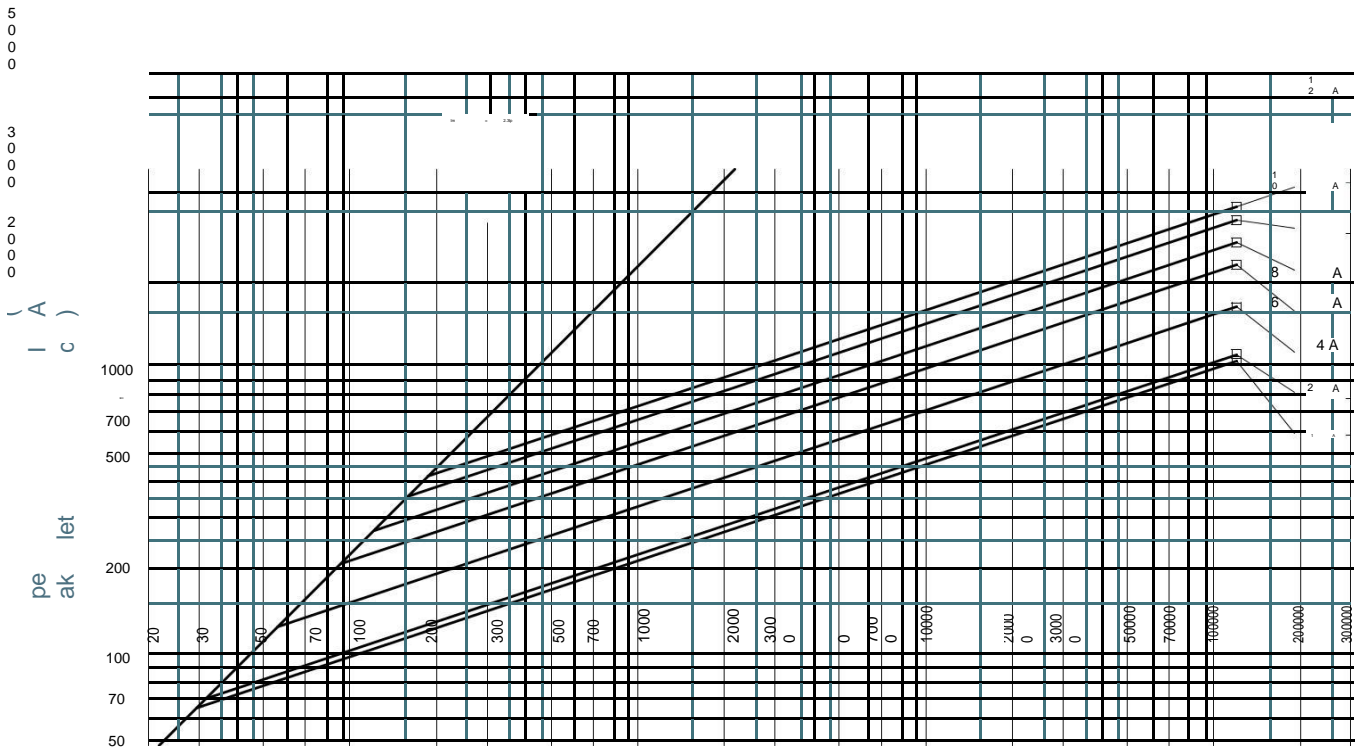
### Size 10x38 400V aM without striker



# Ferrule fuse-links 10x38 aM 400 to 690VAC

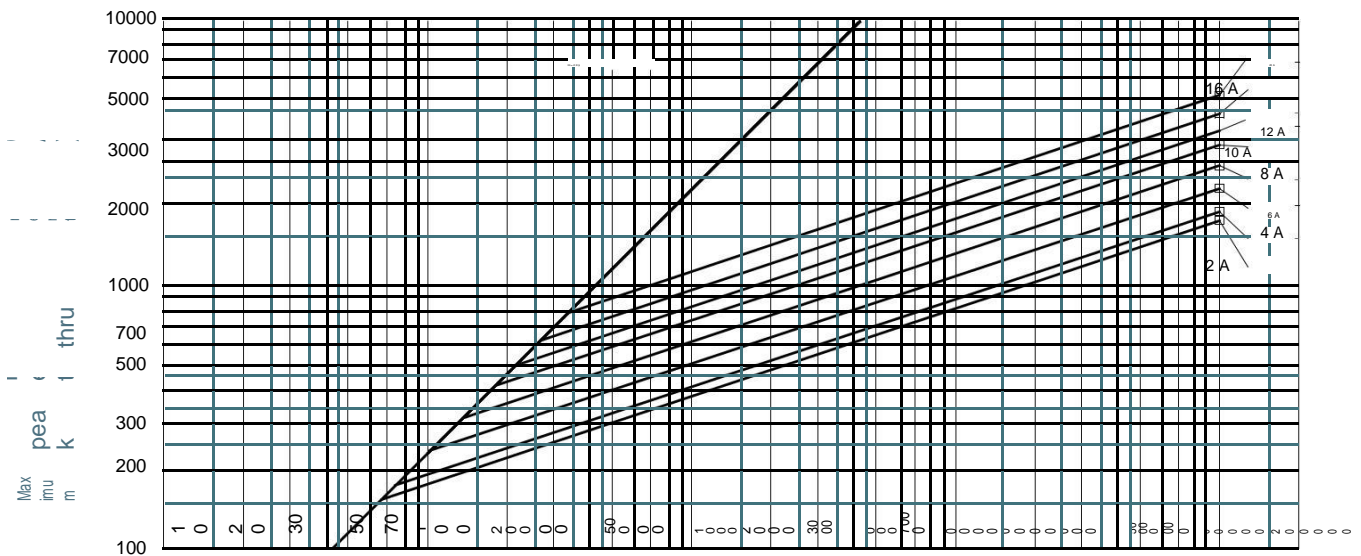
## CUT-OFF CURRENT CHARACTERISTIC

Size 10x38 690V aM without striker



50 Hz RMS symmetrical prospective current  $I_p$  (A)

Size 10x38 400V aM with striker

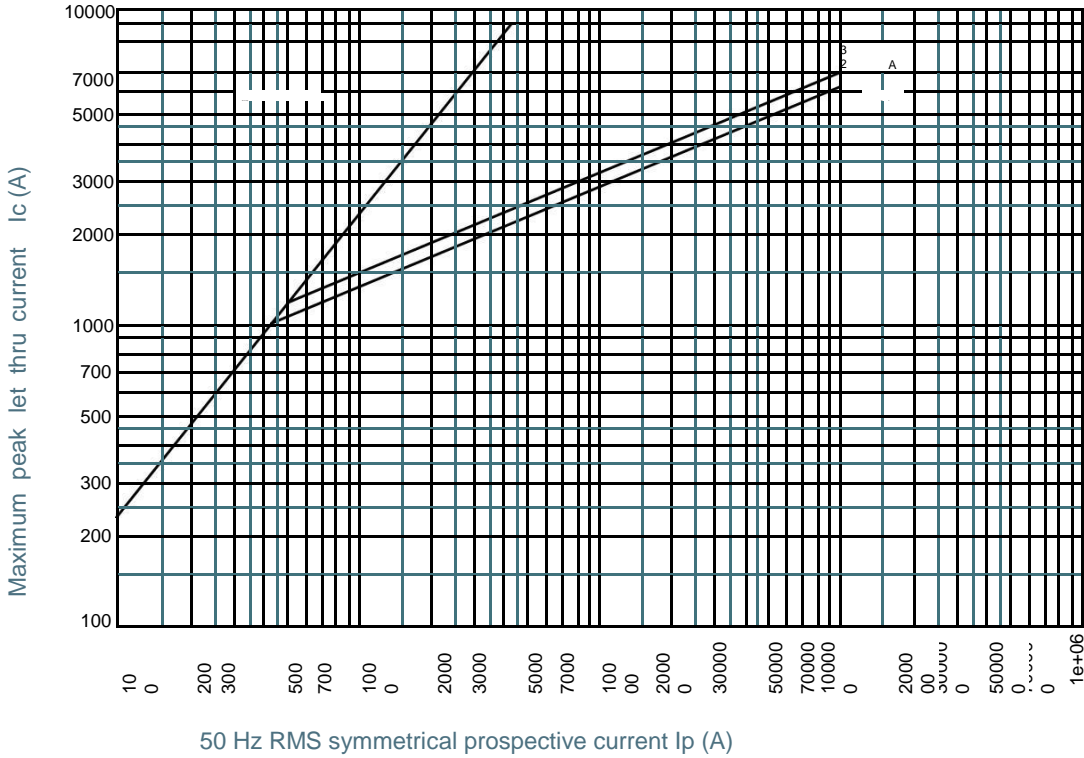


50 Hz RMS symmetrical prospective current  $I_p$  (A)

# Ferrule fuse-links 10x38 aM 400 to 690VAC

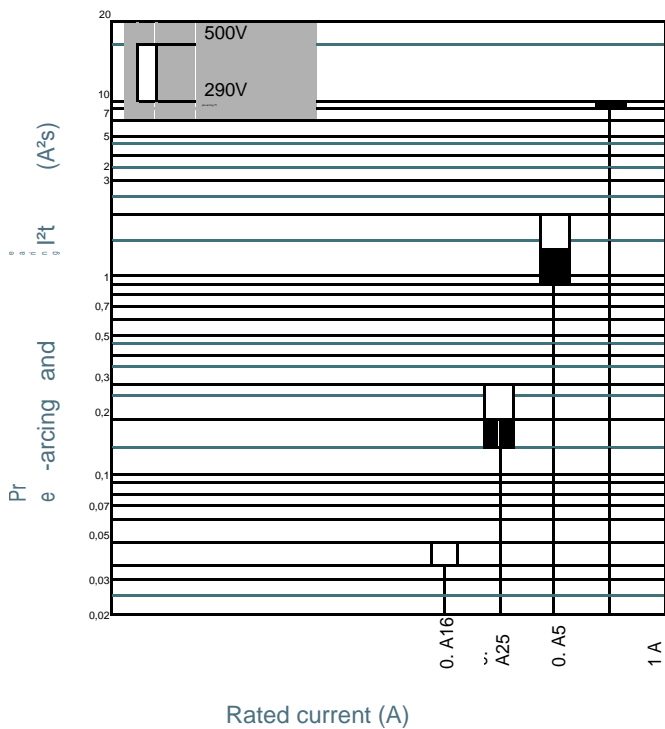
## CUT-OFF CURRENT CHARACTERISTIC

Size 10x38 250V aM with striker



## PRE-ARCING AND OPERATING $I^2T$ CHARACTERISTICS

Size 10x38 500V aM without striker

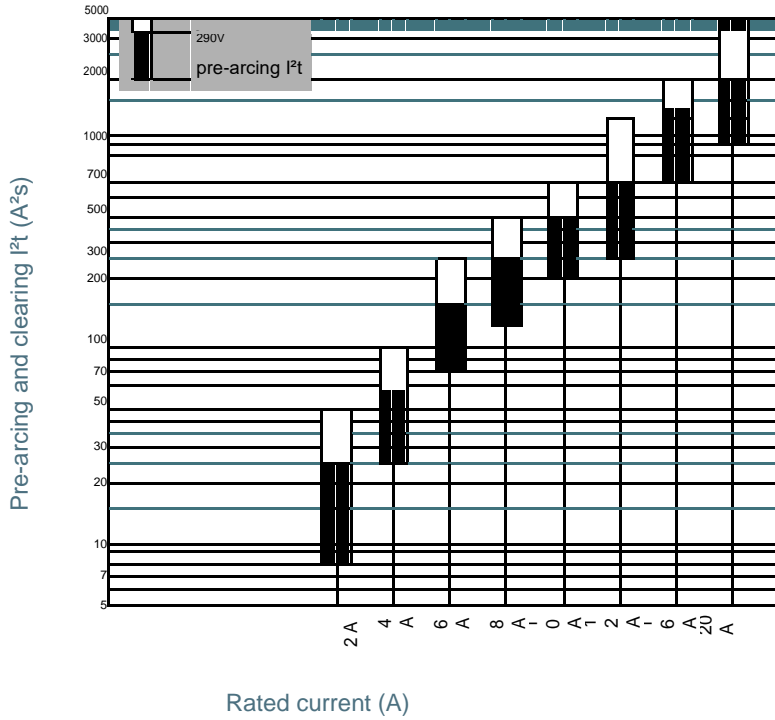




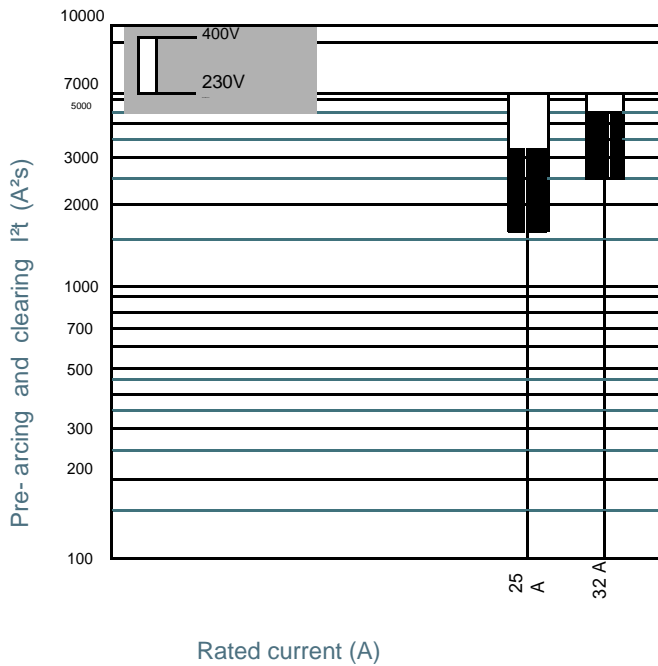
# Ferrule fuse-links 10x38 aM 400 to 690VAC

## PRE-ARCING AND OPERATING I<sup>2</sup>t CHARACTERISTICS

Size 10x38 500V aM without striker



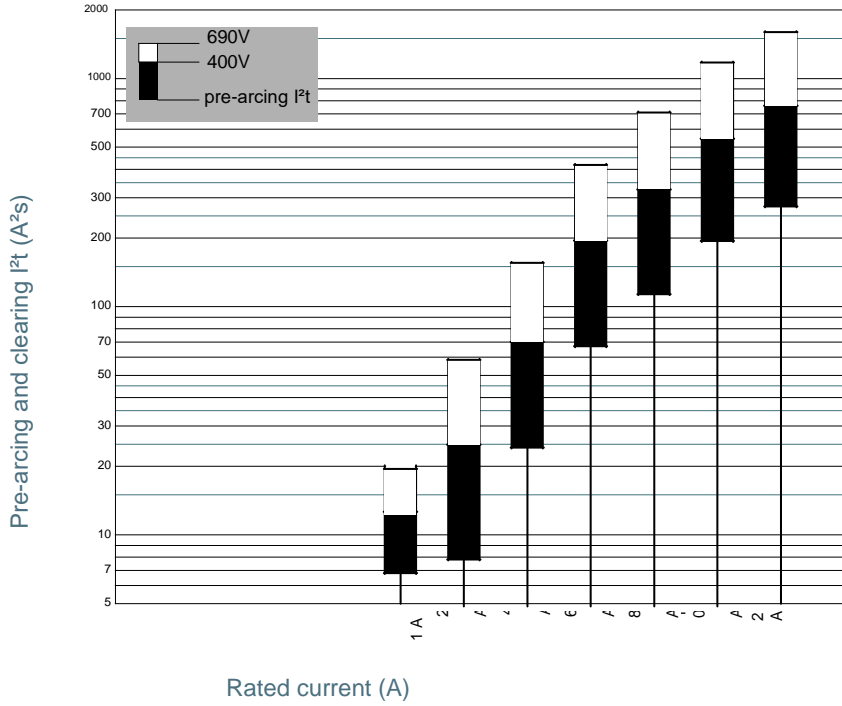
Size 10x38 400V aM without striker



# Ferrule fuse-links 10x38 aM 400 to 690VAC

## PRE-ARCING AND OPERATING I<sup>2</sup>T CHARACTERISTICS

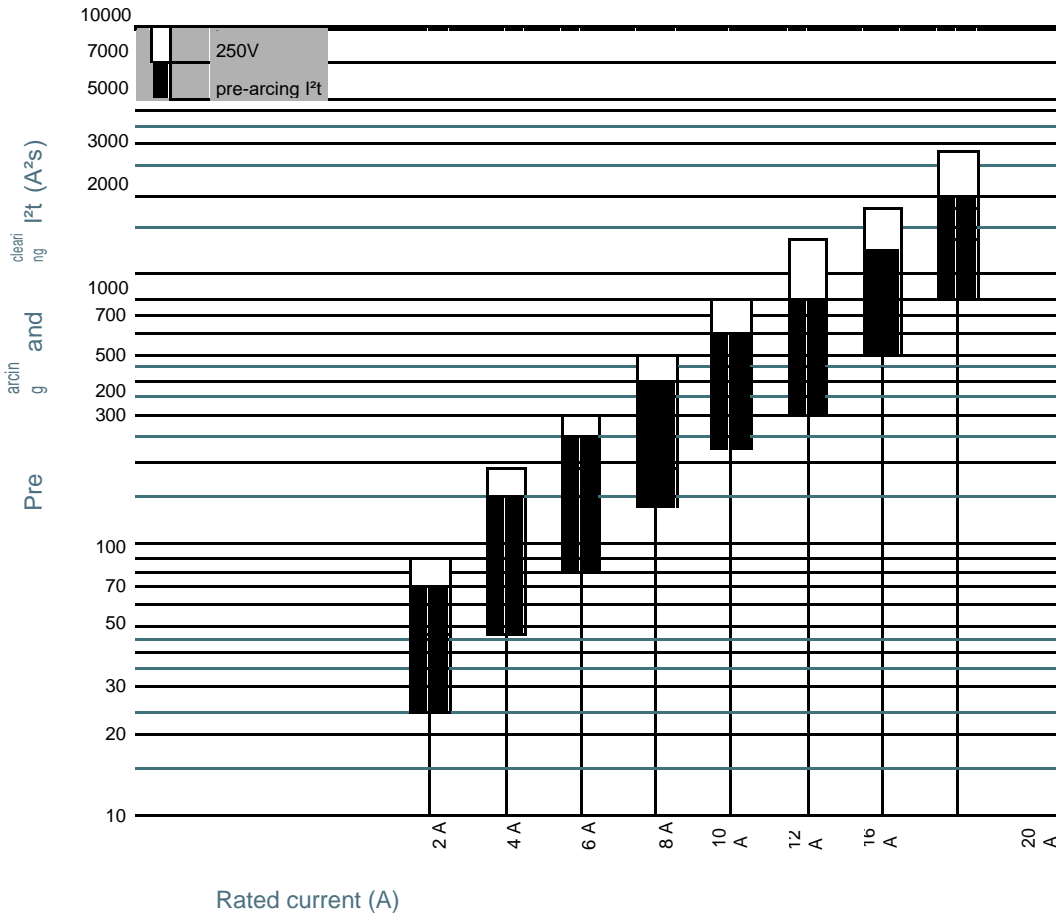
Size 10x38 690V aM without striker



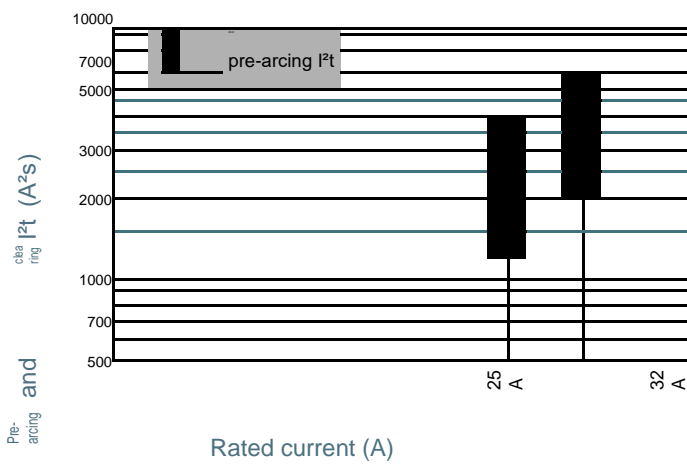
# Ferrule fuse-links 10x38 aM 400 to 690VAC

## PRE-ARCING AND OPERATING I<sup>2</sup>t CHARACTERISTICS

### Size 10x38 400V aM with striker



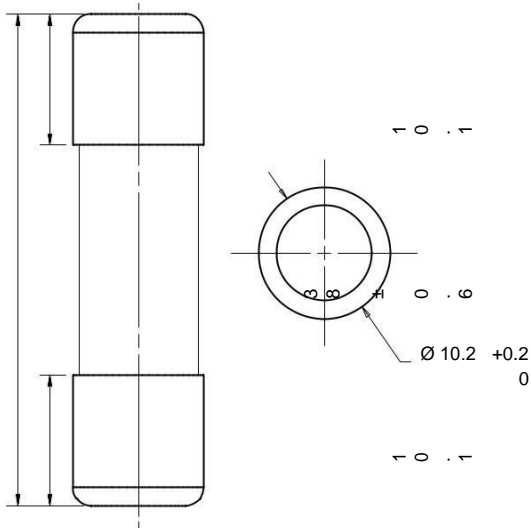
### Size 10x38 250V aM with striker



# Ferrule fuse-links 10x38 aM 400 to 690VAC

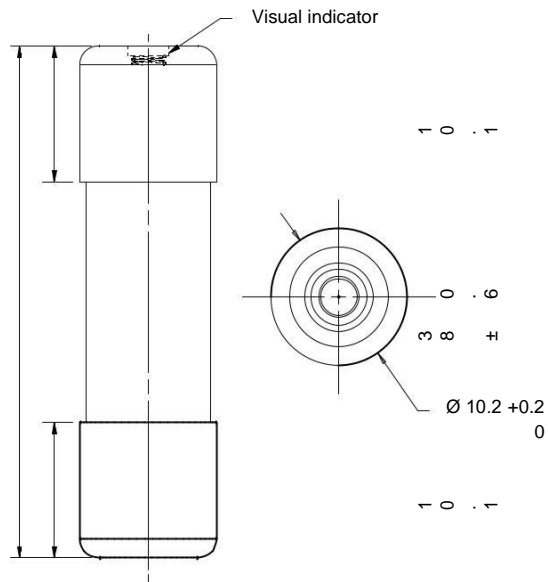
## DIMENSIONS

**Size 10x38 aM without indicator (1001210)**



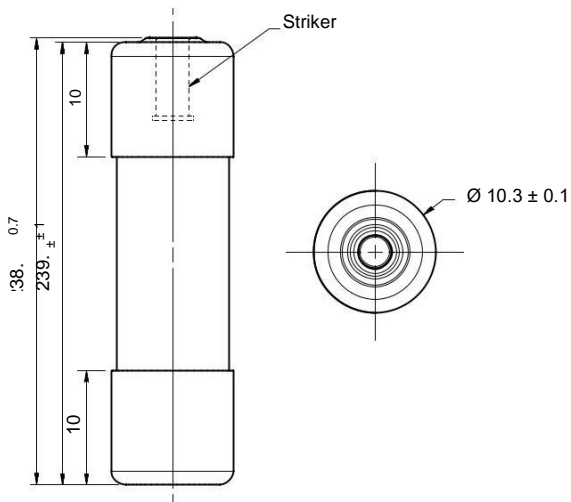
Dimensions in mm

**Size 10x38 aM with indicator (1002537)**



Dimensions in mm

**Size 10x38 aM with striker (33907)**



Dimensions in mm