

## Square Body DIN 43 653 — 1250V/1300V (IEC/UL): 50-1400A

### 1250V/1300V (IEC/UL) 50-1400A

#### Specifications

**Description:** Square body DIN 43 653 stud-mount high speed fuses.

**Dimensions:** See dimensions illustration.

#### Ratings:

Volts: — 1250Vac (IEC)  
— 1300Vac (UL)

Amps: — 50-1400A

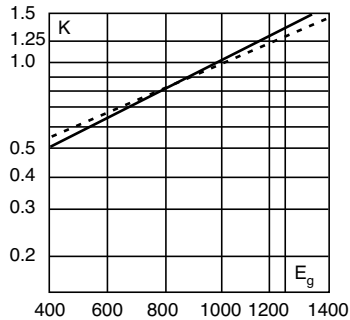
IR: — 100kA RMS Sym.

**Agency Information:** CE, Designed and tested to IEC 60269: Part 4, UL Recognized. Consult Cooper Bussmann for UL Recognition/CSA Component Acceptance status.

#### Electrical Characteristics

##### Total Clearing $I^2t$

The total clearing  $I^2t$  at rated voltage and at power factor of 15% are given in the electrical characteristics. For other voltages, the clearing  $I^2t$  is found by multiplying by correction factor, K, given as a function of applied working voltage,  $E_g$ , (rms).



Dashed lines (---) apply to the following amperages:.

| Size | Amps.     |
|------|-----------|
| 1*   | 400A      |
| 1    | 500-630A  |
| 2    | 630-1000A |
| 3    | 800-1400A |

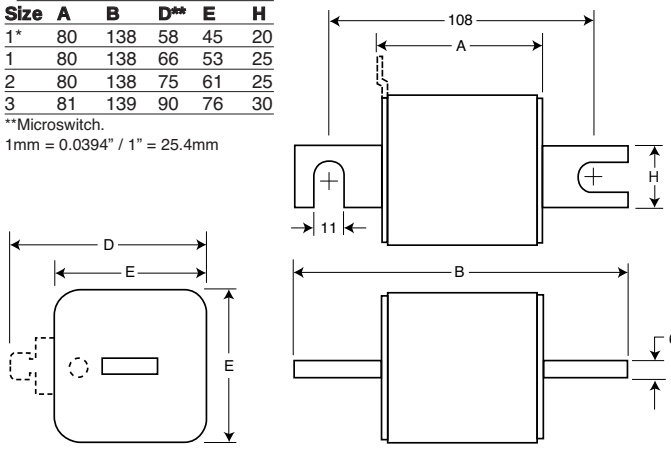
#### Dimensions (mm)

Type -/110, -TN/110

| Size | A  | B   | D** | E  | H  |
|------|----|-----|-----|----|----|
| 1*   | 80 | 138 | 58  | 45 | 20 |
| 1    | 80 | 138 | 66  | 53 | 25 |
| 2    | 80 | 138 | 75  | 61 | 25 |
| 3    | 81 | 139 | 90  | 76 | 30 |

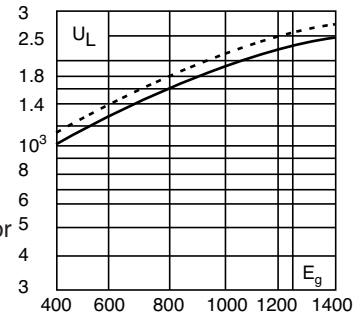
\*\*Microswitch.

1mm = 0.0394" / 1" = 25.4mm



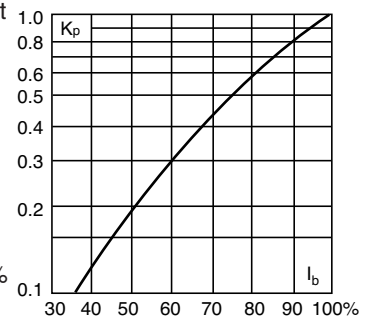
#### Arc Voltage

This curve gives the peak arc voltage,  $U_L$ , which may appear across the fuse during its operation as a function of the applied working voltage,  $E_g$ , (rms) at a power factor of 15%.



#### Power Losses

Watts loss at rated current is given in the electrical characteristics. The curve allows the calculation of the power losses at load currents lower than the rated current. The correction factor,  $K_p$ , is given as a function of the RMS load current,  $I_b$ , in % of the rated current.



#### Features and Benefits

- Excellent DC performance
- Low arc voltage and low energy let-through ( $I^2t$ )
- Low watts loss
- Superior cycling capability

#### Typical Applications

- DC common bus
- DC drives
- Power converters/rectifiers
- Reduced voltage starters

#### For Other Voltage Ratings in This Body Style

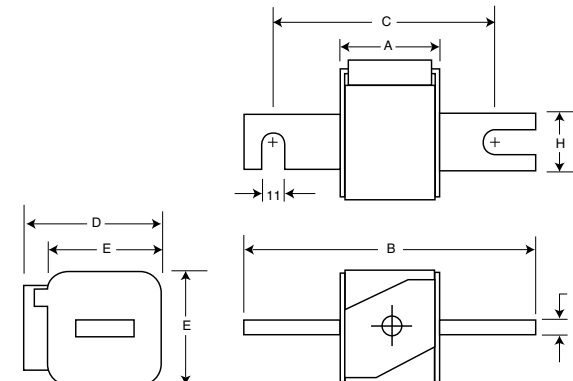
- See pages 122 (690V/700V) and 146 (1000V)

#### Dimensions (mm)

Type -KN/110

| Size | A  | B   | D  | E  | H  |
|------|----|-----|----|----|----|
| 1*   | 80 | 138 | 58 | 45 | 20 |
| 1    | 80 | 138 | 66 | 53 | 25 |
| 2    | 80 | 138 | 75 | 61 | 25 |
| 3    | 81 | 139 | 90 | 76 | 30 |

1mm = 0.0394" / 1" = 25.4mm



## Square Body DIN 43 653 — 1250V/1300V (IEC/UL): 50-1400A

### Catalog Numbers

| Catalog Numbers             |                                             |                                             | Size  | Electrical Characteristics   |             |                      |                      |               |
|-----------------------------|---------------------------------------------|---------------------------------------------|-------|------------------------------|-------------|----------------------|----------------------|---------------|
| -110<br>Visual<br>Indicator | -TN/110<br>Type T<br>Indicator<br>for Micro | -KN/110<br>Type K<br>Indicator<br>for Micro |       | Rated<br>Current<br>RMS-Amps | Pt (A² Sec) |                      |                      | Watts<br>Loss |
|                             |                                             |                                             |       |                              | Pre-arc     | Clearing<br>at 1000V | Clearing<br>at 1250V |               |
| 170M3138                    | 170M3188                                    | 170M3238                                    | 1*    | 50                           | 135         | 815                  | 1100                 | 15            |
| 170M3139                    | 170M3189                                    | 170M3239                                    |       | 63                           | 215         | 1300                 | 1750                 | 20            |
| 170M3140                    | 170M3190                                    | 170M3240                                    |       | 80                           | 420         | 2500                 | 3350                 | 25            |
| 170M3141                    | 170M3191                                    | 170M3241                                    |       | 100                          | 750         | 4450                 | 5950                 | 30            |
| 170M3142                    | 170M3192                                    | 170M3242                                    |       | 125                          | 1450        | 9000                 | 11500                | 35            |
| 170M3143                    | 170M3193                                    | 170M3243                                    |       | 160                          | 2600        | 16000                | 21000                | 40            |
| 170M3144                    | 170M3194                                    | 170M3244                                    |       | 200                          | 5150        | 31000                | 41000                | 45            |
| 170M3145                    | 170M3195                                    | 170M3245                                    |       | 250                          | 9200        | 54500                | 73000                | 55            |
| 170M3146                    | 170M3196                                    | 170M3246                                    |       | 315                          | 18500       | 115000               | 150000               | 60            |
| 170M3147                    | 170M3197                                    | 170M3247                                    |       | 350                          | 27000       | 165000               | 220000               | 65            |
| 170M3148                    | 170M3198                                    | 170M3248                                    | 400   | 53000                        | 265000      | 335000               | 70                   |               |
| 170M4138                    | 170M4188                                    | 170M4238                                    | 1     | 160                          | 1900        | 11500                | 15500                | 45            |
| 170M4139                    | 170M4189                                    | 170M4239                                    |       | 200                          | 3800        | 22500                | 30000                | 50            |
| 170M4140                    | 170M4190                                    | 170M4240                                    |       | 250                          | 7750        | 46000                | 61500                | 60            |
| 170M4141                    | 170M4191                                    | 170M4241                                    |       | 315                          | 15000       | 90000                | 120000               | 65            |
| 170M4142                    | 170M4192                                    | 170M4242                                    |       | 350                          | 20000       | 125000               | 165000               | 70            |
| 170M4143                    | 170M4193                                    | 170M4243                                    |       | 400                          | 29500       | 175000               | 235000               | 75            |
| 170M4144                    | 170M4194                                    | 170M4244                                    |       | 450                          | 42000       | 250000               | 335000               | 80            |
| 170M4145                    | 170M4195                                    | 170M4245                                    |       | 500                          | 69500       | 340000               | 435000               | 85            |
| 170M4146                    | 170M4196                                    | 170M4246                                    |       | 550                          | 95000       | 465000               | 590000               | 95            |
| 170M4147                    | 170M4197                                    | 170M4247                                    |       | 630†                         | 130000      | 660000               |                      | 100           |
| 170M5138                    | 170M5188                                    | 170M5238                                    | 2     | 250                          | 6500        | 38500                | 51500                | 65            |
| 170M5139                    | 170M5189                                    | 170M5239                                    |       | 280                          | 9350        | 55500                | 74500                | 70            |
| 170M5140                    | 170M5190                                    | 170M5240                                    |       | 315                          | 13000       | 77500                | 105000               | 75            |
| 170M5141                    | 170M5191                                    | 170M5241                                    |       | 350                          | 16500       | 97500                | 135000               | 80            |
| 170M5142                    | 170M5192                                    | 170M5242                                    |       | 400                          | 23000       | 140000               | 180000               | 85            |
| 170M5143                    | 170M5193                                    | 170M5243                                    |       | 450                          | 34000       | 205000               | 270000               | 90            |
| 170M5144                    | 170M5194                                    | 170M5244                                    |       | 500                          | 48000       | 285000               | 380000               | 95            |
| 170M5145                    | 170M5195                                    | 170M5245                                    |       | 550                          | 62000       | 370000               | 495000               | 100           |
| 170M5146                    | 170M5196                                    | 170M5246                                    |       | 630                          | 115000      | 575000               | 730000               | 110           |
| 170M5147                    | 170M5197                                    | 170M5247                                    |       | 700                          | 160000      | 795000               | 1050000              | 115           |
| 170M5148                    | 170M5198                                    | 170M5248                                    | 800   | 245000                       | 1200000     | 1550000              | 120                  |               |
| 170M5149                    | 170M5199                                    | 170M5249                                    | 900†  | 360000                       | 1750000     |                      | 125                  |               |
| 170M5150                    | 170M5200                                    | 170M5250                                    | 1000† | 480000                       | 2350000     |                      | 135                  |               |
| 170M6138                    | 170M6188                                    | 170M6238                                    | 3     | 315                          | 9500        | 58000                | 77500                | 85            |
| 170M6139                    | 170M6189                                    | 170M6239                                    |       | 350                          | 13500       | 81500                | 110000               | 90            |
| 170M6140                    | 170M6190                                    | 170M6240                                    |       | 400                          | 19500       | 120000               | 160000               | 95            |
| 170M6141                    | 170M6191                                    | 170M6241                                    |       | 450                          | 31000       | 185000               | 245000               | 100           |
| 170M6142                    | 170M6192                                    | 170M6242                                    |       | 500                          | 39000       | 235000               | 310000               | 105           |
| 170M6143                    | 170M6193                                    | 170M6243                                    |       | 550                          | 55000       | 325000               | 435000               | 110           |
| 170M6144                    | 170M6194                                    | 170M6244                                    |       | 630                          | 83500       | 495000               | 665000               | 115           |
| 170M6145                    | 170M6195                                    | 170M6245                                    |       | 700                          | 115000      | 705000               | 940000               | 120           |
| 170M6146                    | 170M6196                                    | 170M6246                                    |       | 800‡                         | 205000      | 995000               | 1300000              | 125           |
| 170M6147                    | 170M6197                                    | 170M6247                                    |       | 900‡                         | 305000      | 1500000              | 1900000              | 130           |
| 170M6148                    | 170M6198                                    | 170M6248                                    | 1000‡ | 450000                       | 2150000     | 2750000              | 135                  |               |
| 170M6149                    | 170M6199                                    | 170M6249                                    | 1100‡ | 575000                       | 2800000     | 3600000              | 140                  |               |
| 170M6150                    | 170M6200                                    | 170M6250                                    | 1250† | 810000                       | 3950000     |                      | 145                  |               |
| 170M6151                    | 170M6201                                    | 170M6251                                    | 1400† | 1250000                      | 6000000     |                      | 150                  |               |

†Rated voltage (IEC) 1100V.

‡Rated voltage (IEC) 1250V.

• Watts loss provided at rated current.

• Microswitch indicator ordered separately. See accessories on pages 185-186.

• For fuse curves see pages 166 and 167.