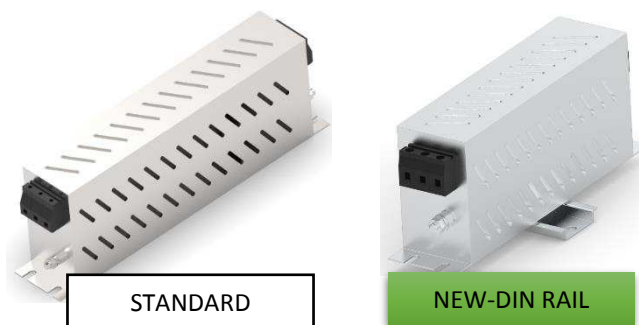


## Three Phase Superior Performance EMI Filter – Bookshelf Type Single Stage Delta Configuration

### DATASHEET

Bookshelf design for motor drive applications requiring minimum space and convenient installation with superior performance at significant interference levels



### Approvals & Compliance

UL Recognised

CSA Certified



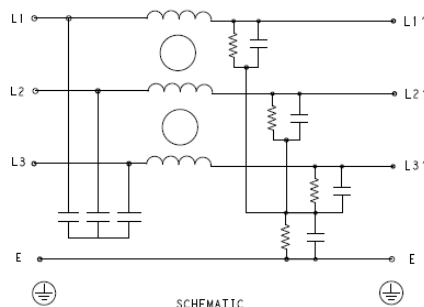
### Features

- 3 Phase filters for Drives/invertors
- Bookshelf Design
- Chassis mounting

### Applications

- Industrial Automation
- HVAC
- CNC Machines

### Typical Circuit Diagram



### Specifications

#### Electrical Characteristics

|                                      |                                              |
|--------------------------------------|----------------------------------------------|
| Maximum Continuous Operating Voltage | 440/520VAC                                   |
| Current Ratings                      | 7A to 150A @40°C, Din Mount 7A to 100A @40°C |
| Operating Frequency                  | 50/60Hz                                      |
| High Potential Test Voltage -440VAC  | Line to Ground 2632VDC for 1 Minute          |
|                                      | Line to Line 1892VDC for 1 Minute            |
| High Potential Test Voltage -520VAC  | Line to Ground 2856VDC for 1 Minute          |
|                                      | Line to Line 2236VDC for 1 Minute            |
| Overload Capability                  | 135% of Rated current for 15 minutes         |

#### Functional Characteristics

|                               |                |
|-------------------------------|----------------|
| Operating Temperature Range   | -25°C to +85°C |
| Climatic Category             | 25/85/21       |
| Termination                   | Shock Proof    |
| Flammability corresponding to | UL 94 V-0      |

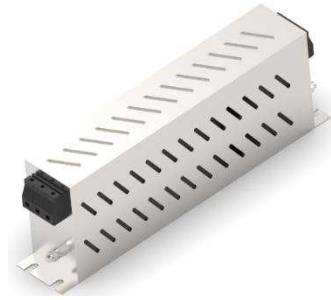
#### Reference Standards

|                         |                                 |
|-------------------------|---------------------------------|
| Design Corresponding to | UL 60939-3 and CSA 22.2 No.8-13 |
|-------------------------|---------------------------------|

# KEM-BS SERIES



## Selection Table – Standard Version



| TE Ordering Number | Catalog Number | Rated Current @40°C | Rated Voltage @40°C | Leakage Current (mA) | Termination<br> | Weight (Kgs) |
|--------------------|----------------|---------------------|---------------------|----------------------|----------------------------------------------------------------------------------------------------|--------------|
| 2-1609967-7        | 7KEMS10ABSD    | 7A                  | 440 VAC             | 5                    | 41                                                                                                 | 0.7          |
| 3-1609967-0        | 16KEMS10ABSD   | 16A                 | 440 VAC             | 5                    | 41                                                                                                 | 0.8          |
| 3-1609967-1        | 30KEMS10ABSD   | 30A                 | 440 VAC             | 5                    | 41                                                                                                 | 0.8          |
| 3-1609967-2        | 42KEMS10ABSD   | 42A                 | 440 VAC             | 10                   | 10                                                                                                 | 1.2          |
| 3-1609967-3        | 55KEMS10ABSD   | 55A                 | 440 VAC             | 10                   | 10                                                                                                 | 2            |
| 3-1609967-4        | 75KEMS10ABSD   | 75A                 | 440 VAC             | 10                   | 16                                                                                                 | 2            |
| 3-1609967-5        | 100KEMS10ABSD  | 100A                | 440 VAC             | 10                   | 25                                                                                                 | 3            |
| 3-1609967-6        | 120KEMS10ABSD  | 120A                | 440 VAC             | 10                   | 50                                                                                                 | 4            |
| 3-1609967-7        | 150KEMS10ABSD  | 150A                | 440 VAC             | 10                   | 50                                                                                                 | 4            |
| 5-1609967-7        | 7KEMS10BBSD    | 7A                  | 520 VAC             | 5                    | 41                                                                                                 | 0.7          |
| 6-1609967-0        | 16KEMS10BBSD   | 16A                 | 520 VAC             | 5                    | 41                                                                                                 | 0.8          |
| 6-1609967-1        | 30KEMS10BBSD   | 30A                 | 520 VAC             | 5                    | 41                                                                                                 | 0.8          |
| 6-1609967-2        | 42KEMS10BBSD   | 42A                 | 520 VAC             | 10                   | 10                                                                                                 | 1.2          |
| 6-1609967-3        | 55KEMS10BBSD   | 55A                 | 520 VAC             | 10                   | 10                                                                                                 | 2            |
| 6-1609967-4        | 75KEMS10BBSD   | 75A                 | 520 VAC             | 10                   | 16                                                                                                 | 2            |
| 6-1609967-5        | 100KEMS10BBSD  | 100A                | 520 VAC             | 10                   | 25                                                                                                 | 3            |
| 6-1609967-6        | 120KEMS10BBSD  | 120A                | 520 VAC             | 10                   | 50                                                                                                 | 4            |
| 6-1609967-7        | 150KEMS10BBSD  | 150A                | 520 VAC             | 10                   | 50                                                                                                 | 4            |

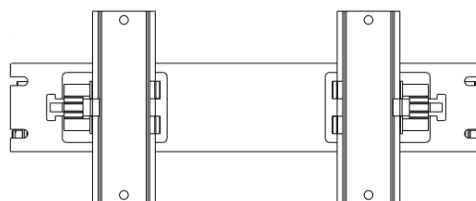
# KEM-BS SERIES



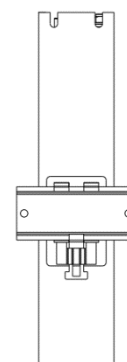
## Selection Table – Din Rail Mount



NEW



VERTICAL MOUNT



HORIZONTAL MOUNT

Note: Din Rail not supplied

| TE Part Number | Catalog Number  | Din Type   | Rated Current @40°C | Rated Voltage @40°C | Leakage Current (mA) | Termination  | Weight (Kgs) |
|----------------|-----------------|------------|---------------------|---------------------|----------------------|-------------------------------------------------------------------------------------------------|--------------|
| 8-1609967-1    | 7KEMS10ABSDDM   | DUAL       | 7A                  | 440 VAC             | 5                    | 41                                                                                              | 0.8          |
| 8-1609967-2    | 16KEMS10ABSDDM  | DUAL       | 16A                 | 440 VAC             | 5                    | 41                                                                                              | 0.9          |
| 8-1609967-3    | 30KEMS10ABSDDM  | HORIZONTAL | 30A                 | 440 VAC             | 5                    | 41                                                                                              | 0.9          |
| 8-1609967-4    | 42KEMS10ABSDDM  | HORIZONTAL | 42A                 | 440 VAC             | 10                   | 10                                                                                              | 1.3          |
| 8-1609967-5    | 55KEMS10ABSDDM  | HORIZONTAL | 55A                 | 440 VAC             | 10                   | 10                                                                                              | 2.1          |
| 8-1609967-6    | 30KEMS10ABSDVM  | VERTICAL   | 30A                 | 440 VAC             | 5                    | 41                                                                                              | 1            |
| 8-1609967-7    | 42KEMS10ABSDVM  | VERTICAL   | 42A                 | 440 VAC             | 10                   | 10                                                                                              | 1.4          |
| 8-1609967-8    | 55KEMS10ABSDVM  | VERTICAL   | 55A                 | 440 VAC             | 10                   | 10                                                                                              | 2.2          |
| 8-1609967-9    | 75KEMS10ABSDDM  | DUAL       | 75A                 | 440 VAC             | 10                   | 16                                                                                              | 2.2          |
| 9-1609967-0    | 100KEMS10ABSDDM | DUAL       | 100A                | 440 VAC             | 10                   | 25                                                                                              | 3.2          |
| 7-1609968-2    | 7KEMS10BBSDDM   | DUAL       | 7A                  | 520 VAC             | 5                    | 41                                                                                              | 0.8          |
| 7-1609968-3    | 16KEMS10BBSDDM  | DUAL       | 16A                 | 520 VAC             | 5                    | 41                                                                                              | 0.9          |
| 7-1609968-4    | 30KEMS10BBSDDM  | HORIZONTAL | 30A                 | 520 VAC             | 5                    | 41                                                                                              | 0.9          |
| 7-1609968-5    | 42KEMS10BBSDDM  | HORIZONTAL | 42A                 | 520 VAC             | 10                   | 10                                                                                              | 1.3          |
| 7-1609968-6    | 55KEMS10BBSDDM  | HORIZONTAL | 55A                 | 520 VAC             | 10                   | 10                                                                                              | 2.1          |
| 7-1609968-7    | 30KEMS10BBSDVM  | VERTICAL   | 30A                 | 520 VAC             | 5                    | 41                                                                                              | 1            |
| 7-1609968-8    | 42KEMS10BBSDVM  | VERTICAL   | 42A                 | 520 VAC             | 10                   | 10                                                                                              | 1.4          |
| 7-1609968-9    | 55KEMS10BBSDVM  | VERTICAL   | 55A                 | 520 VAC             | 10                   | 10                                                                                              | 2.2          |
| 8-1609968-0    | 75KEMS10BBSDDM  | DUAL       | 75A                 | 520 VAC             | 10                   | 16                                                                                              | 2.2          |
| 8-1609968-1    | 100KEMS10BBSDDM | DUAL       | 100A                | 520 VAC             | 10                   | 25                                                                                              | 3.2          |

## Connectors Cross Section

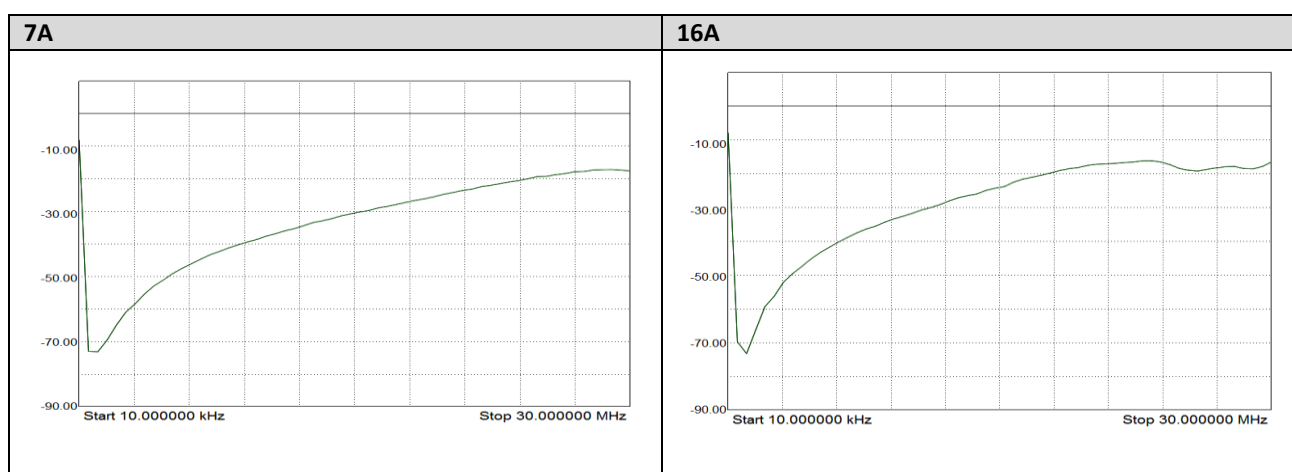
|  | 41                  | 10                   | 16                        | 25                 | 50                 |
|-------------------------------------------------------------------------------------|---------------------|----------------------|---------------------------|--------------------|--------------------|
| Wire Section (mm <sup>2</sup> )                                                     | 4mm <sup>2</sup>    | 10 mm <sup>2</sup>   | 16 mm <sup>2</sup>        | 25 mm <sup>2</sup> | 50 mm <sup>2</sup> |
| Wire Section (AWG)                                                                  | 12AWG               | 8 AWG                | 6 AWG                     | 4 AWG              | 1/0 AWG            |
| Wire Stripping                                                                      | Max 10mm            | max 13.5 mm          | max 17 mm                 | max 17 mm          | max 20 mm          |
| Max Recommended Torque                                                              | 0.5 Nm / 4.5 in.lbs | 1.2 Nm / 10.8 in.lbs | 2÷2.2 Nm / 18÷19.8 in.lbs | 2 Nm / 18 in.lbs   | 6 Nm / 54 in.lbs   |

## Insertion Loss (Typical) – Measured in Closed 50Ω System

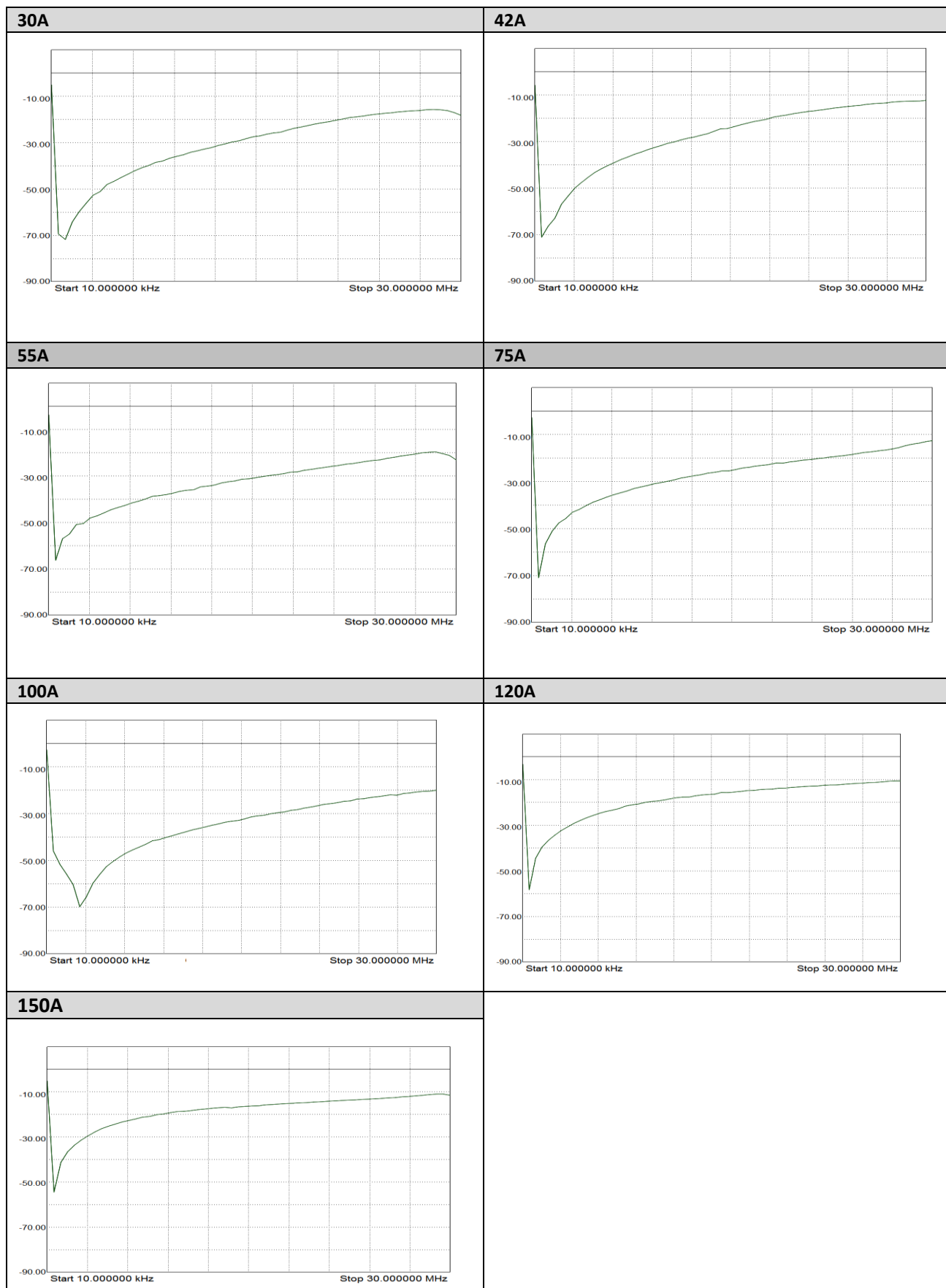
|                |      | Common Mode 50Ω / 50Ω |      |      |     |    |    |    |    |    |
|----------------|------|-----------------------|------|------|-----|----|----|----|----|----|
|                |      | Frequency in MHz      |      |      |     |    |    |    |    |    |
|                |      | 0.01                  | 0.05 | 0.15 | 0.5 | 1  | 3  | 5  | 10 | 30 |
| Current Rating | 7A   | 54                    | 56   | 48   | 71  | 82 | 70 | 65 | 40 | 16 |
|                | 16A  | 42                    | 34   | 46   | 80  | 73 | 48 | 40 | 29 | 13 |
|                | 30A  | 40                    | 26   | 47   | 70  | 73 | 51 | 44 | 34 | 13 |
|                | 42A  | 20                    | 13   | 46   | 78  | 69 | 50 | 42 | 32 | 12 |
|                | 55A  | 24                    | 28   | 32   | 73  | 66 | 56 | 48 | 36 | 19 |
|                | 75A  | 23                    | 32   | 36   | 71  | 67 | 60 | 54 | 30 | 17 |
|                | 100A | 21                    | 32   | 36   | 69  | 58 | 56 | 50 | 30 | 17 |
|                | 120A | 19                    | 28   | 33   | 70  | 60 | 56 | 49 | 26 | 18 |
|                | 150A | 20                    | 20   | 31   | 65  | 40 | 28 | 24 | 19 | 11 |

|                |      | Differential Mode 50Ω / 50Ω |      |      |     |    |    |    |    |    |
|----------------|------|-----------------------------|------|------|-----|----|----|----|----|----|
|                |      | Frequency in MHz            |      |      |     |    |    |    |    |    |
|                |      | 0.01                        | 0.05 | 0.15 | 0.5 | 1  | 3  | 5  | 10 | 30 |
| Current Rating | 7A   | 30                          | 32   | 40   | 69  | 54 | 50 | 48 | 34 | 25 |
|                | 16A  | 28                          | 30   | 42   | 79  | 81 | 58 | 43 | 8  | 22 |
|                | 30A  | 28                          | 21   | 37   | 76  | 82 | 67 | 49 | 20 | 28 |
|                | 42A  | 18                          | 21   | 35   | 83  | 74 | 64 | 45 | 13 | 27 |
|                | 55A  | 22                          | 30   | 34   | 69  | 70 | 58 | 40 | 49 | 22 |
|                | 75A  | 38                          | 40   | 45   | 86  | 81 | 68 | 50 | 49 | 35 |
|                | 100A | 36                          | 40   | 47   | 80  | 75 | 62 | 54 | 50 | 35 |
|                | 120A | 32                          | 35   | 45   | 78  | 72 | 60 | 54 | 47 | 31 |
|                | 150A | 31                          | 30   | 34   | 48  | 39 | 28 | 23 | 17 | 15 |

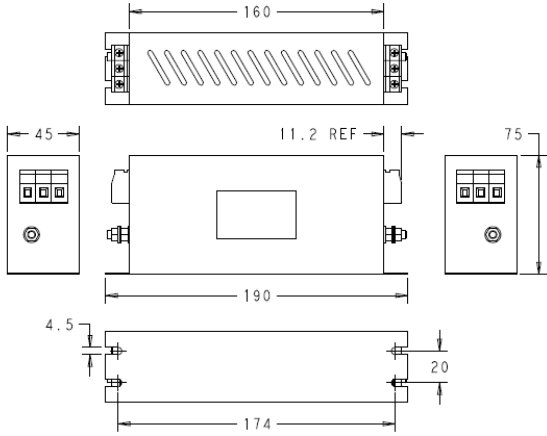
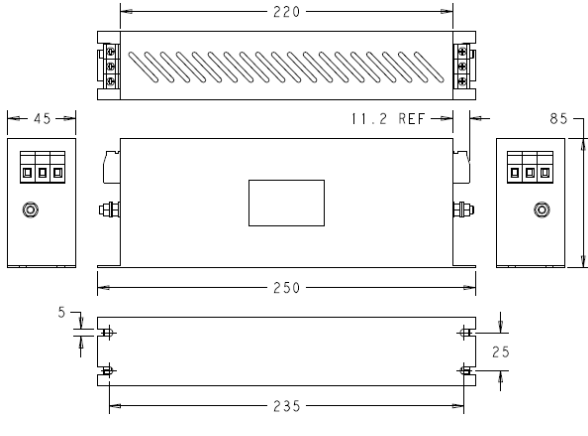
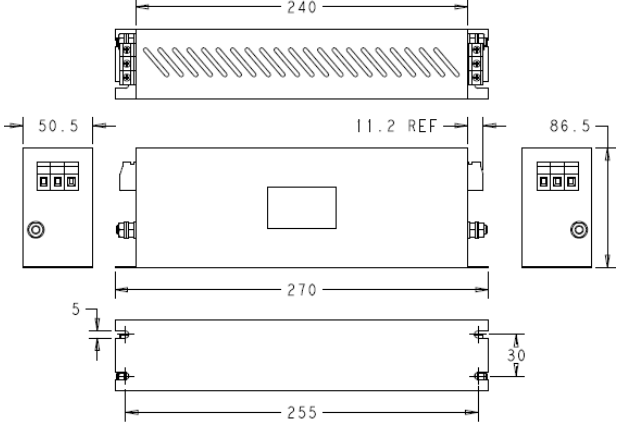
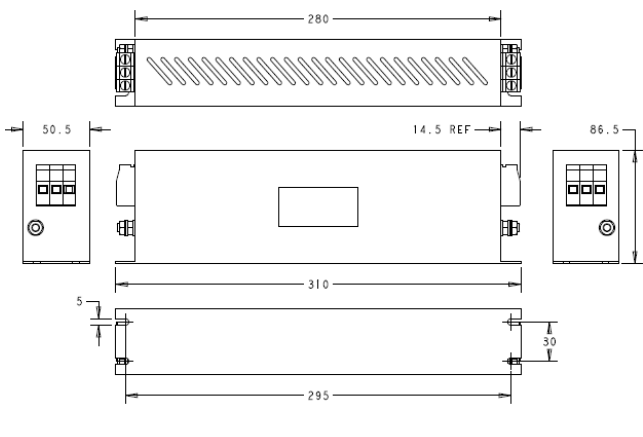
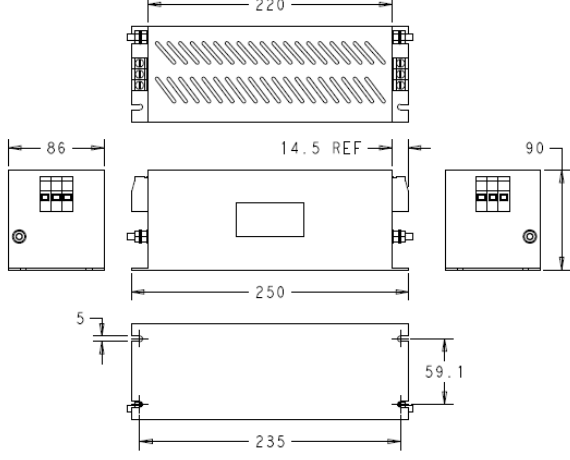
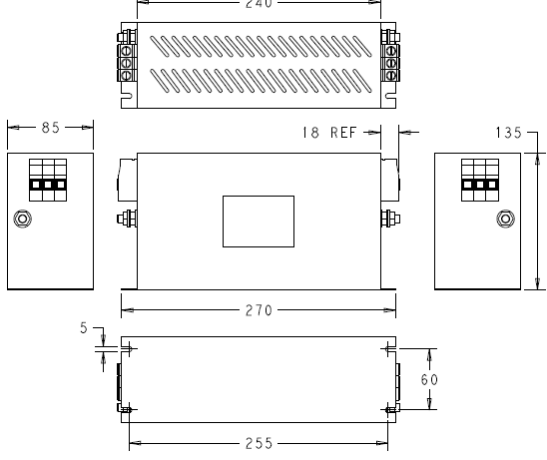
## Common Mode Insertion Loss (Typical in dB – refer to Table above)



# KEM-BS SERIES



## Case Dimensions – Standard Version

| 7A Shock Proof Type                                                                                                                                                                                                                                                                    | 16A Shock Proof Type                                                                                                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Top view: 160 mm width, 11.2 REF height.</p> <p>Front view: 45 mm width, 190 mm height, 4.5 mm mounting hole offset, 174 mm base width, 20 mm base height.</p> <p>Side view: 75 mm height.</p>    |  <p>Top view: 220 mm width, 11.2 REF height.</p> <p>Front view: 45 mm width, 250 mm height, 5 mm mounting hole offset, 235 mm base width, 25 mm base height.</p> <p>Side view: 85 mm height.</p>      |
| 30A Shock Proof Type                                                                                                                                                                                                                                                                   | 42A Shock Proof Type                                                                                                                                                                                                                                                                    |
|  <p>Top view: 240 mm width, 11.2 REF height.</p> <p>Front view: 50.5 mm width, 270 mm height, 5 mm mounting hole offset, 255 mm base width, 30 mm base height.</p> <p>Side view: 86.5 mm height.</p> |  <p>Top view: 280 mm width, 14.5 REF height.</p> <p>Front view: 50.5 mm width, 310 mm height, 5 mm mounting hole offset, 295 mm base width, 30 mm base height.</p> <p>Side view: 86.5 mm height.</p> |
| 55A Shock Proof Type                                                                                                                                                                                                                                                                   | 75A Shock Proof Type                                                                                                                                                                                                                                                                    |
|  <p>Top view: 220 mm width, 14.5 REF height.</p> <p>Front view: 86 mm width, 250 mm height, 5 mm mounting hole offset, 235 mm base width, 59.1 mm base height.</p> <p>Side view: 90 mm height.</p>  |  <p>Top view: 240 mm width, 18 REF height.</p> <p>Front view: 85 mm width, 270 mm height, 5 mm mounting hole offset, 255 mm base width, 60 mm base height.</p> <p>Side view: 135 mm height.</p>     |

# KEM-BS SERIES

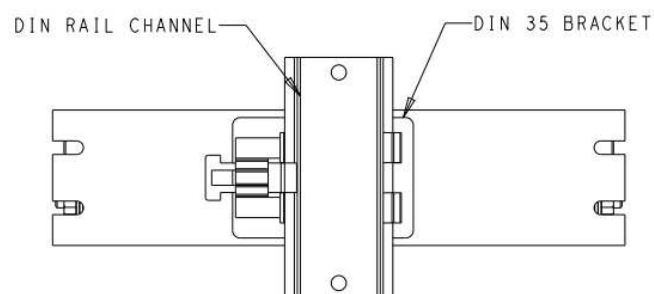
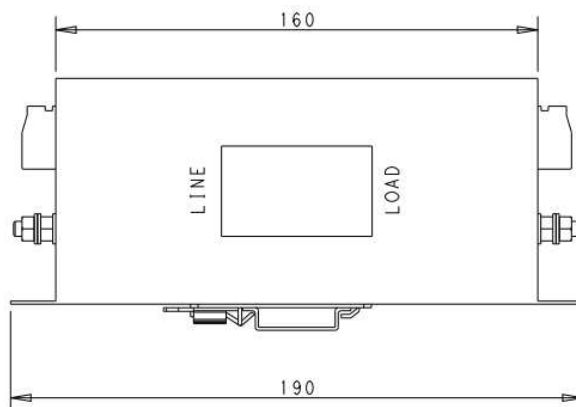
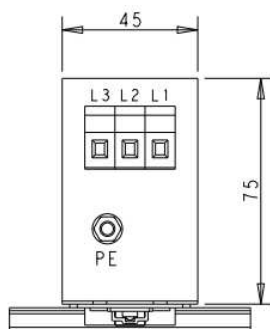


| 100A Shock Proof Type | 120A to 150A Shock Proof Types |
|-----------------------|--------------------------------|
|                       |                                |

## Case Dimensions – Din Rail Mount

### 7A Shock Proof Type – Dual Mount

*Note: Din Rail not supplied*

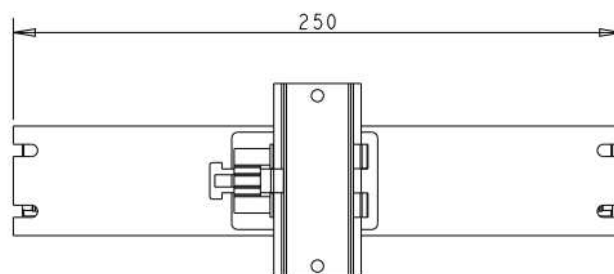
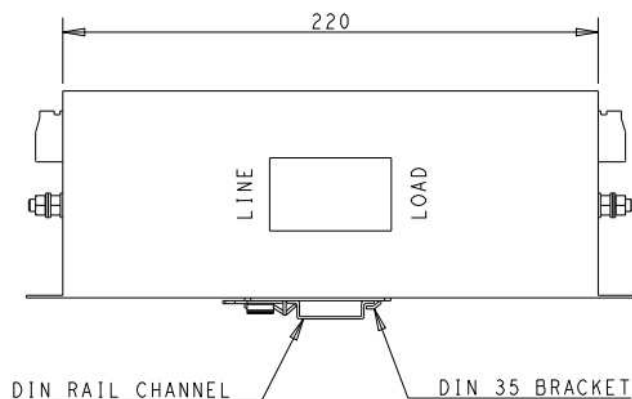
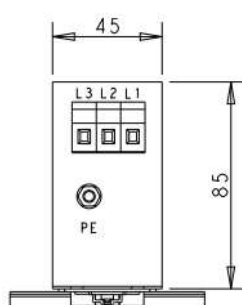


# KEM-BS SERIES



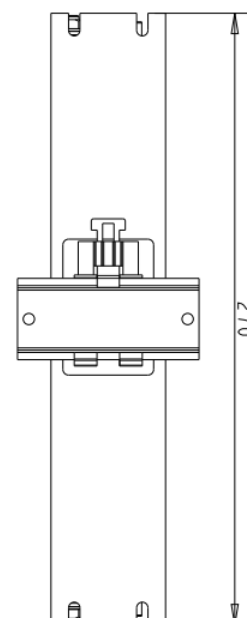
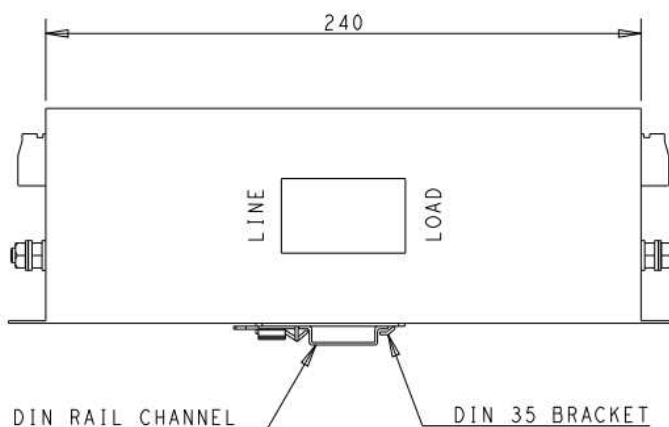
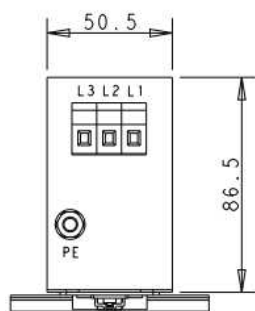
## 16A Shock Proof Type – Dual Mount

*Note: Din Rail not supplied*



## 30A Shock Proof Type – Horizontal Mount

*Note: Din Rail not supplied*

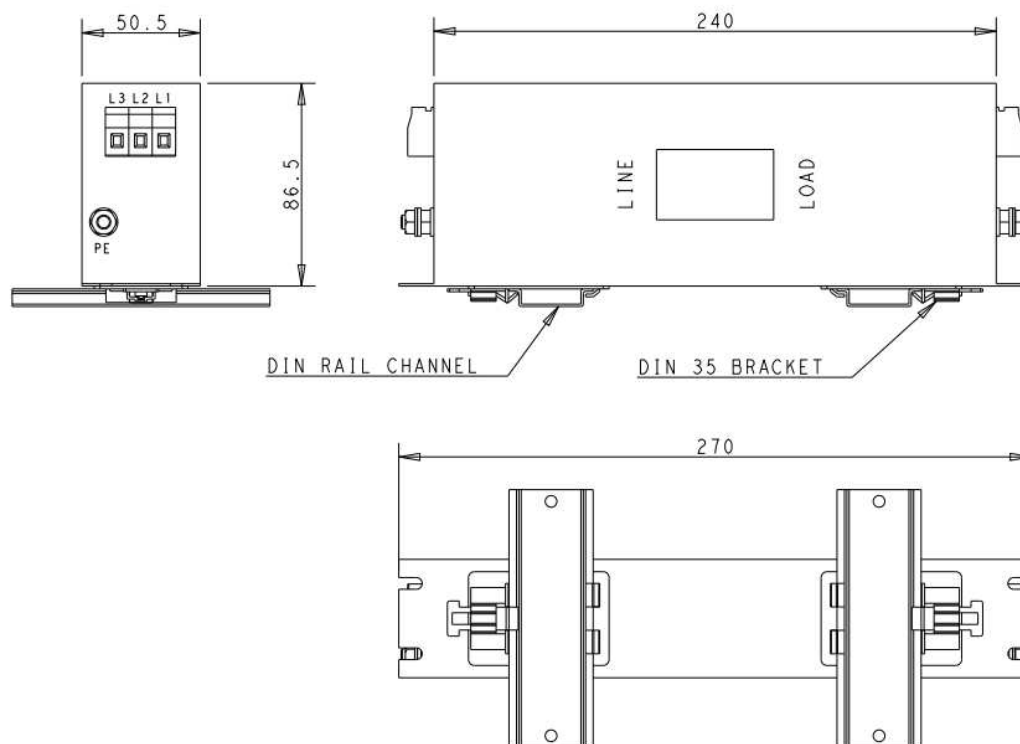


# KEM-BS SERIES



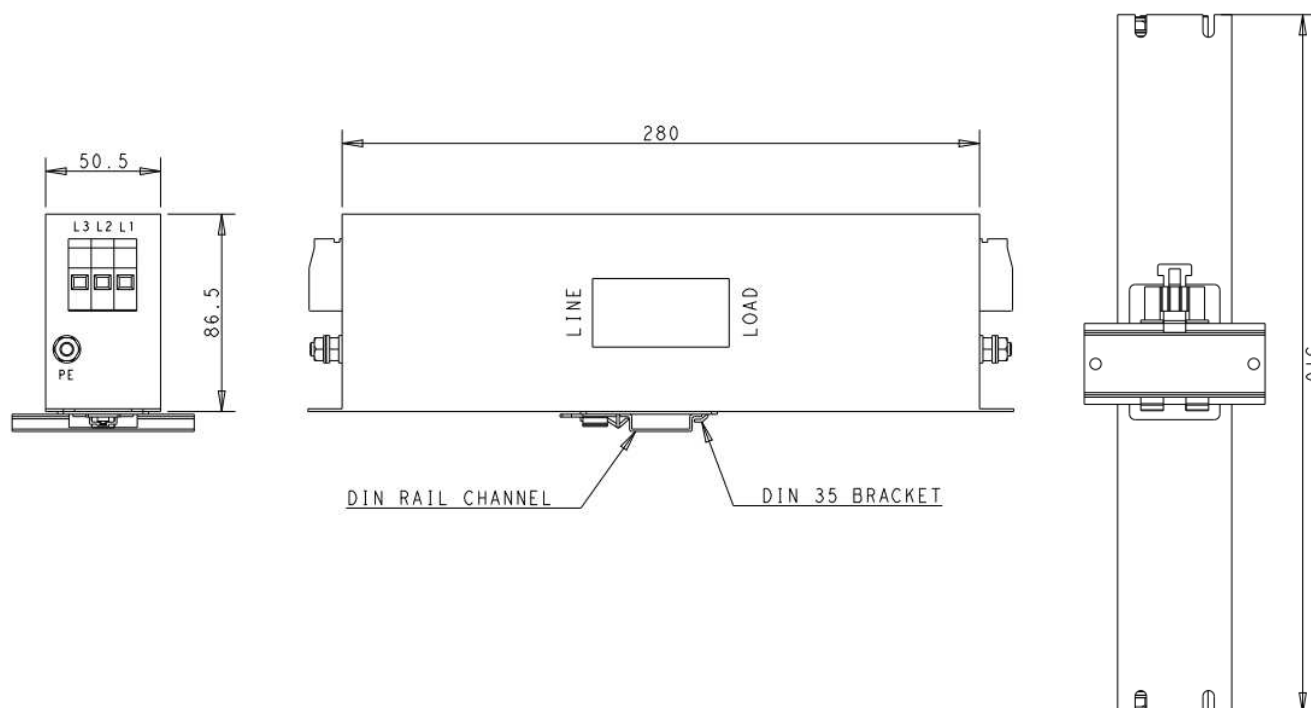
## 30A Shock Proof Type – Vertical Mount

Note: Din Rail not supplied



## 42A Shock Proof Type – Horizontal Mount

Note: Din Rail not supplied

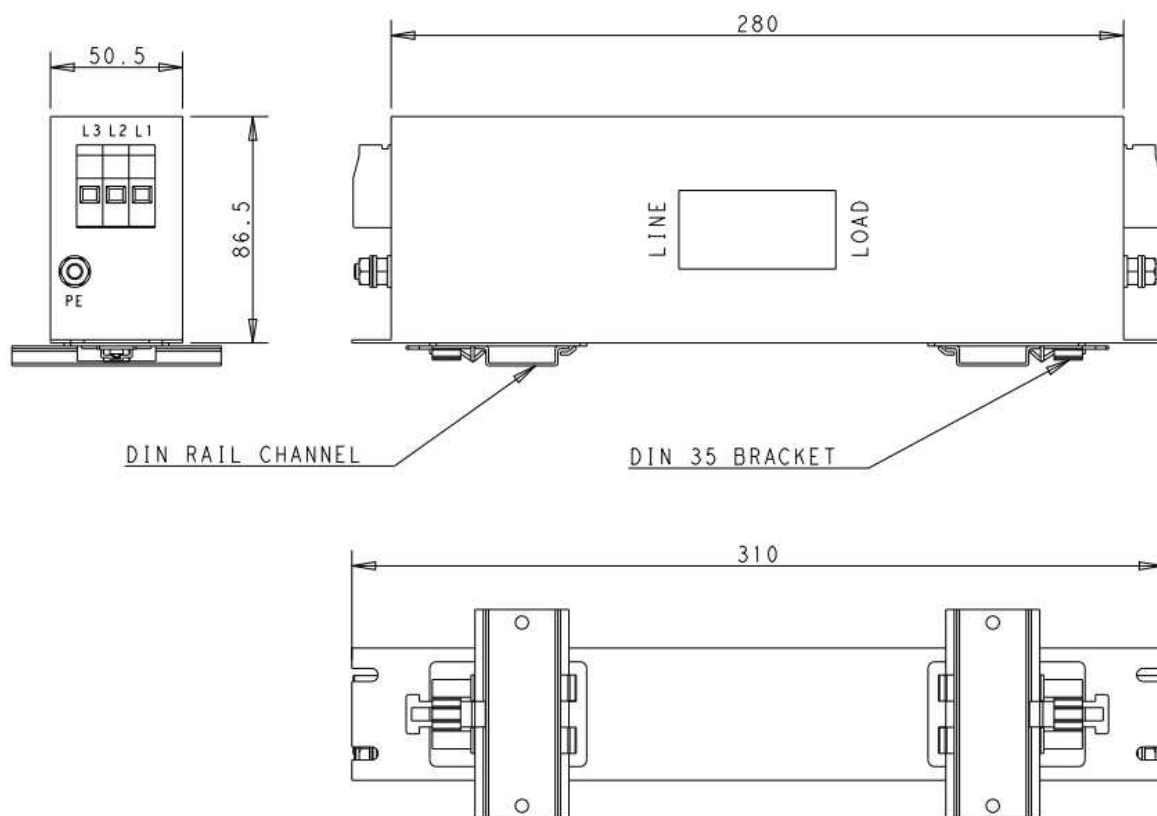


# KEM-BS SERIES



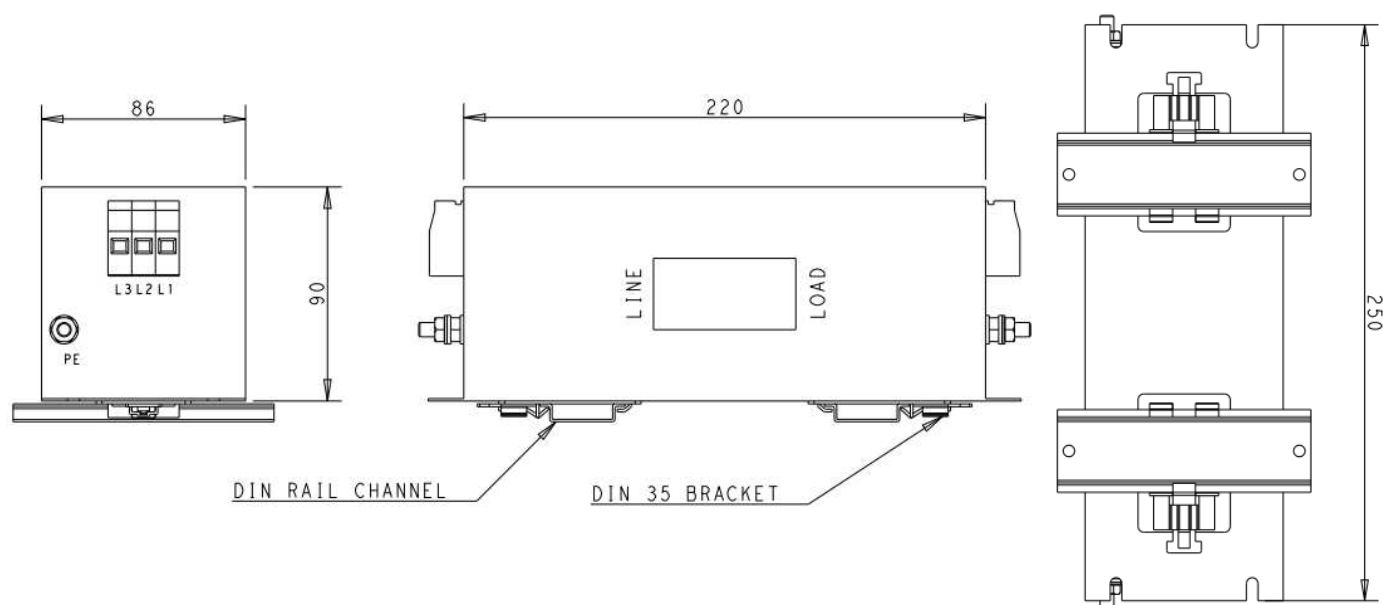
## 42A Shock Proof Type – Vertical Mount

Note: Din Rail not supplied



## 55A Shock Proof Type – Horizontal Mount

Note: Din Rail not supplied

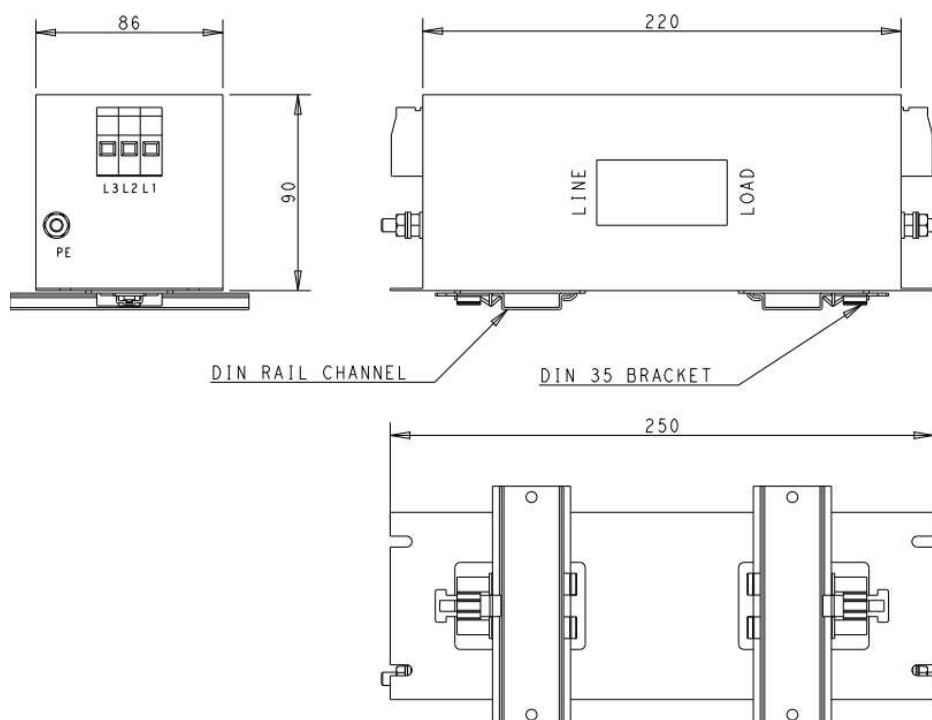


# KEM-BS SERIES



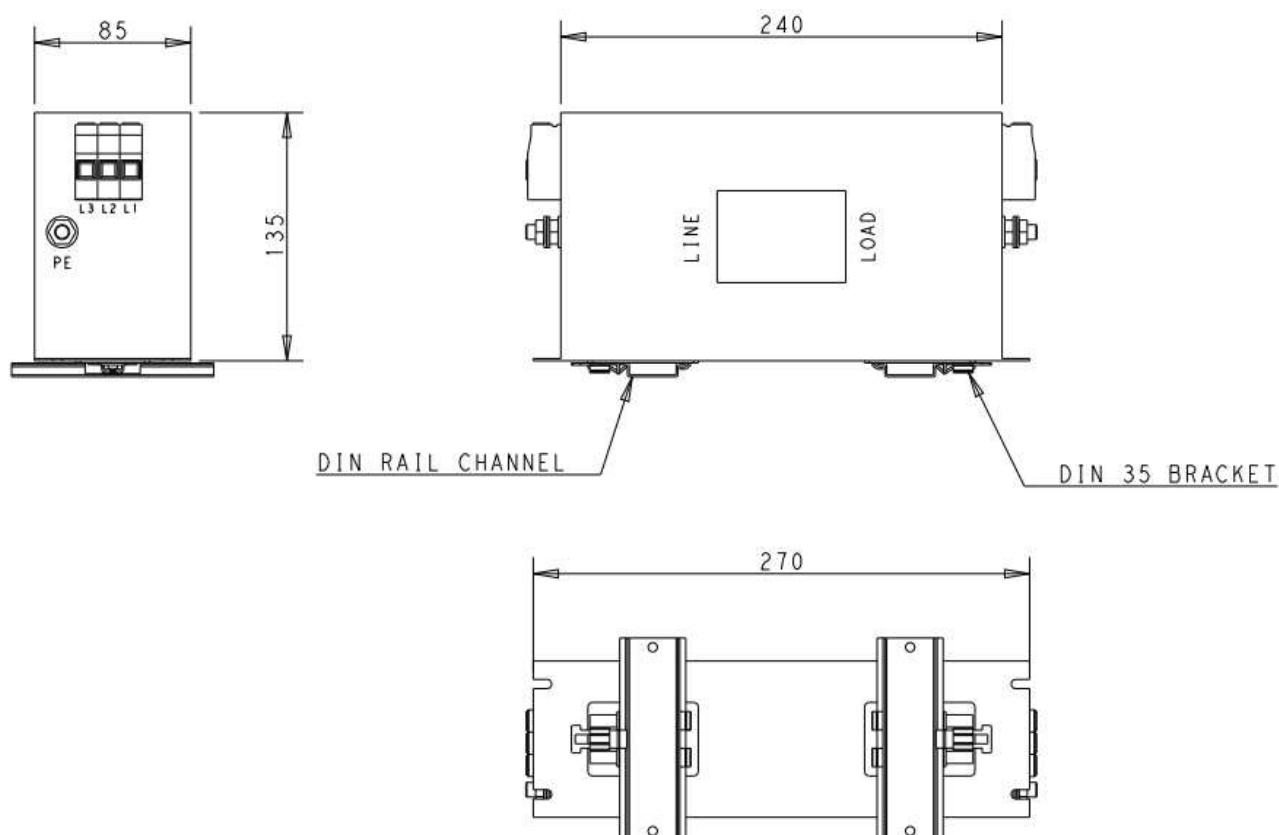
## 55A Shock Proof Type – Vertical Mount

*Note: Din Rail not supplied*



## 75A Shock Proof Type – Dual Mount

*Note: Din Rail not supplied*

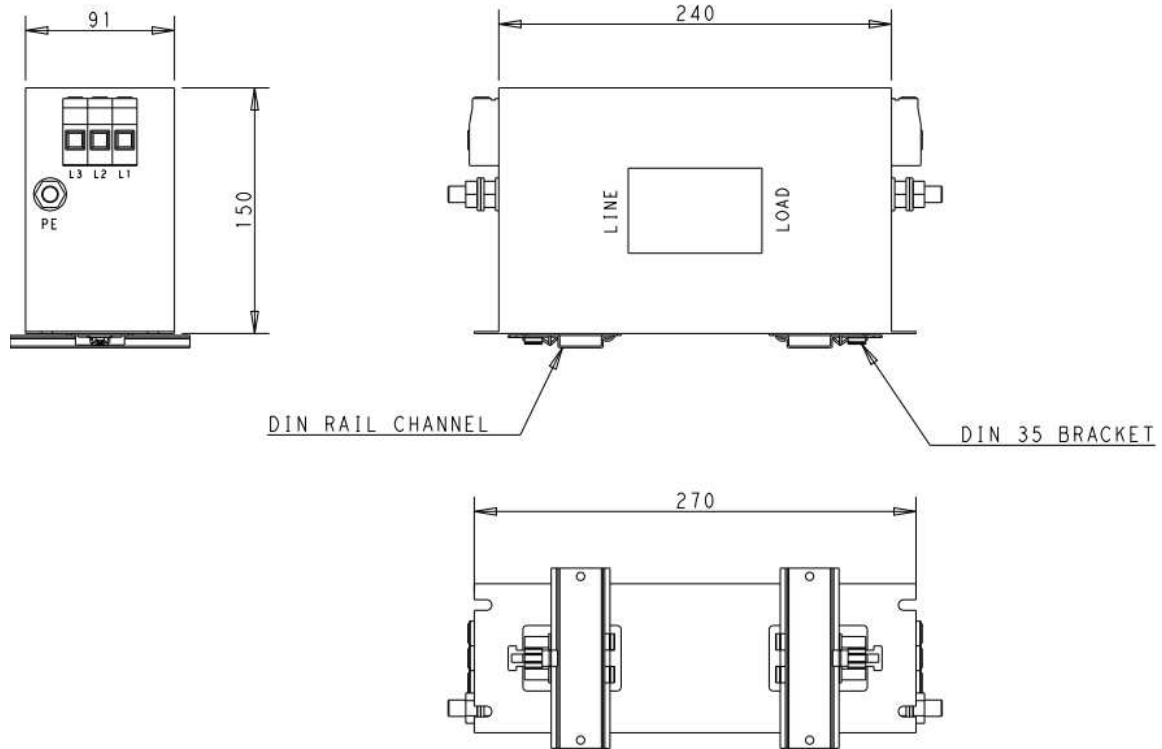


# KEM-BS SERIES



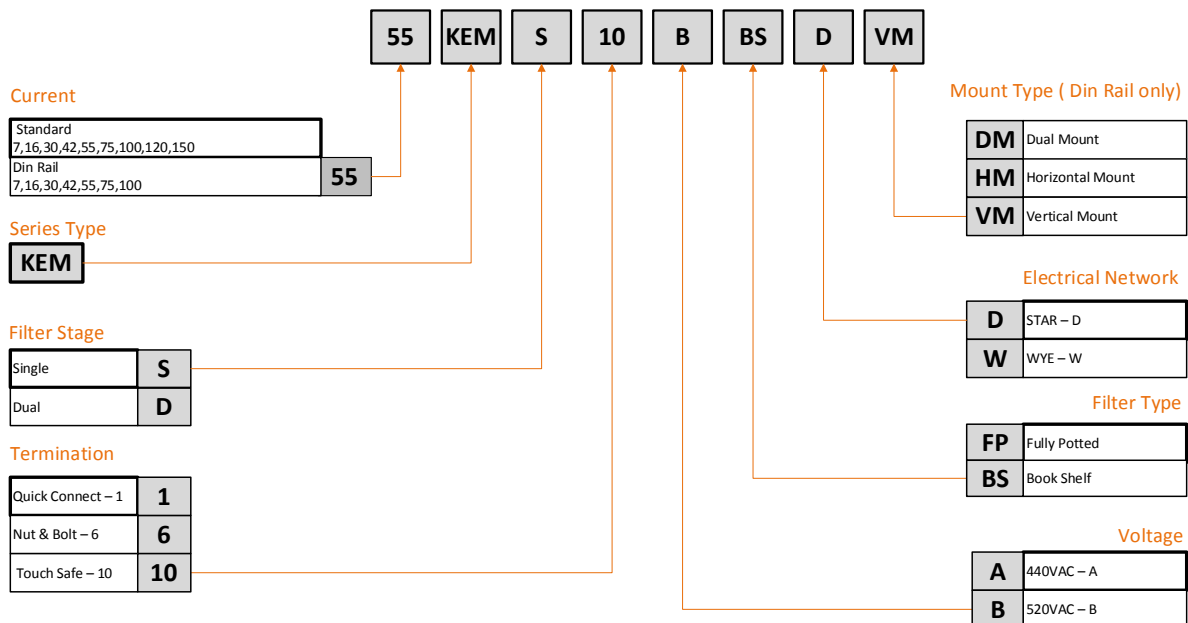
## 100A Shock Proof Type – Dual Mount

Note: Din Rail not supplied



All dimensions in mm; Tolerances according: ISO2768-m

## How to Order



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