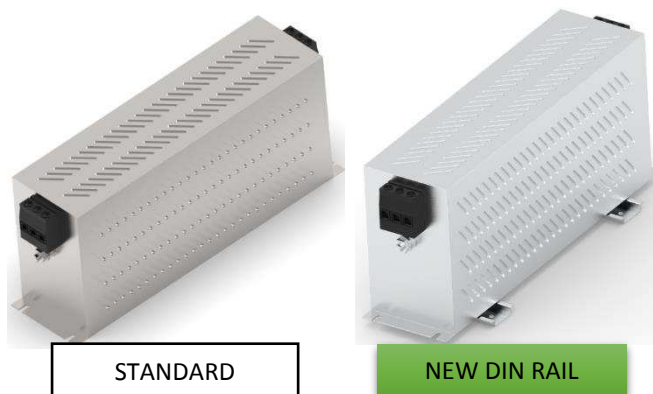


## Three Phase High Performance EMI Filter – Bookshelf Type Dual Stage DELTA Configuration

### DATASHEET

High performance filters with bookshelf design is designed for motor drive applications requiring minimum space and convenient installation with superior performance at significant interference levels.



### Approvals & Compliance

UL Recognised

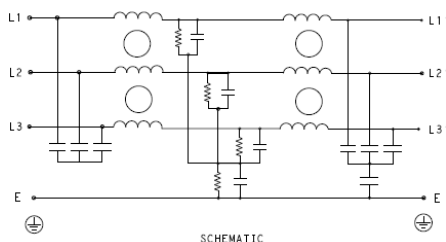
CSA Certified



### Features

- High Performance
- Bookshelf Design
- Light Weight / Easy Installation
- Dual Stage

### Typical Circuit Diagram



### Applications

- AC/Dc Drives
- HVAC
- Robotics
- UPS

### 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 |
|-------------------------|---------------------------------|

# KEH-BS SERIES



## Selection Table -Standard Version



| TE Ordering Number | Part Number   | Rated Current @40°C | Rated Voltage @40°C | Leakage Current (mA) | Termination  | Weight (Kgs) |
|--------------------|---------------|---------------------|---------------------|----------------------|-------------------------------------------------------------------------------------------------|--------------|
| 2-1609969-0        | 7KEHD10ABSD   | 7A                  | 440 VAC             | 10                   | 41                                                                                              | 2            |
| 2-1609969-1        | 16KEHD10ABSD  | 16A                 | 440 VAC             | 10                   | 41                                                                                              | 2            |
| 2-1609969-2        | 30KEHD10ABSD  | 30A                 | 440 VAC             | 10                   | 41                                                                                              | 2            |
| 2-1609969-3        | 42KEHD10ABSD  | 42A                 | 440 VAC             | 15                   | 10                                                                                              | 3            |
| 2-1609969-4        | 55KEHD10ABSD  | 55A                 | 440 VAC             | 15                   | 10                                                                                              | 3            |
| 2-1609969-5        | 75KEHD10ABSD  | 75A                 | 440 VAC             | 15                   | 16                                                                                              | 3            |
| 2-1609969-6        | 100KEHD10ABSD | 100A                | 440 VAC             | 15                   | 25                                                                                              | 4            |
| 2-1609969-7        | 120KEHD10ABSD | 120A                | 440 VAC             | 15                   | 50                                                                                              | 4            |
| 2-1609969-8        | 150KEHD10ABSD | 150A                | 440 VAC             | 15                   | 50                                                                                              | 4            |
| 5-1609969-0        | 7KEHD10BBS    | 7A                  | 520 VAC             | 10                   | 41                                                                                              | 2            |
| 5-1609969-1        | 16KEHD10BBS   | 16A                 | 520 VAC             | 10                   | 41                                                                                              | 2            |
| 5-1609969-2        | 30KEHD10BBS   | 30A                 | 520 VAC             | 10                   | 41                                                                                              | 2            |
| 5-1609969-3        | 42KEHD10BBS   | 42A                 | 520 VAC             | 15                   | 10                                                                                              | 3            |
| 5-1609969-4        | 55KEHD10BBS   | 55A                 | 520 VAC             | 15                   | 10                                                                                              | 3            |
| 5-1609969-5        | 75KEHD10BBS   | 75A                 | 520 VAC             | 15                   | 16                                                                                              | 3            |
| 5-1609969-6        | 100KEHD10BBS  | 100A                | 520 VAC             | 15                   | 25                                                                                              | 4            |
| 5-1609969-7        | 120KEHD10BBS  | 120A                | 520 VAC             | 15                   | 50                                                                                              | 4            |
| 5-1609969-8        | 150KEHD10BBS  | 150A                | 520 VAC             | 15                   | 50                                                                                              | 4            |

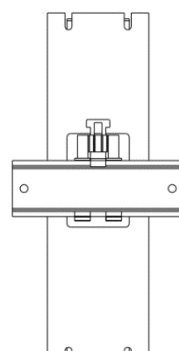
# KEH-BS SERIES



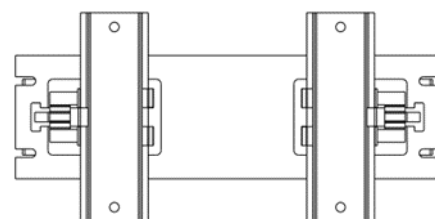
## Selection Table – Din Rail Mount



NEW



HORIZONTAL MOUNT



Note: Din Rail not supplied

VERTICAL MOUNT

| TE Ordering Number | Part Number     | Din Type   | Rated Current @40°C | Rated Voltage @40°C | Leakage Current (mA) | Termination  | Weight (Kgs) |
|--------------------|-----------------|------------|---------------------|---------------------|----------------------|-------------------------------------------------------------------------------------------------|--------------|
| 3-1609969-0        | 7KEHD10ABSDHM   | HORIZONTAL | 7A                  | 440 VAC             | 10                   | 41                                                                                              | 2.1          |
| 3-1609969-1        | 16KEHD10ABSDHM  | HORIZONTAL | 16A                 | 440 VAC             | 10                   | 41                                                                                              | 2.1          |
| 3-1609969-2        | 30KEHD10ABSDHM  | HORIZONTAL | 30A                 | 440 VAC             | 10                   | 41                                                                                              | 2.1          |
| 3-1609969-3        | 7KEHD10ABSDVM   | VERTICAL   | 7A                  | 440 VAC             | 10                   | 41                                                                                              | 2.2          |
| 3-1609969-4        | 16KEHD10ABSDVM  | VERTICAL   | 16A                 | 440 VAC             | 10                   | 41                                                                                              | 2.2          |
| 3-1609969-5        | 30KEHD10ABSDVM  | VERTICAL   | 30A                 | 440 VAC             | 10                   | 41                                                                                              | 2.2          |
| 3-1609969-6        | 42KEHD10ABSDHM  | HORIZONTAL | 42A                 | 440 VAC             | 15                   | 10                                                                                              | 3.2          |
| 3-1609969-7        | 55KEHD10ABSDHM  | HORIZONTAL | 55A                 | 440 VAC             | 15                   | 10                                                                                              | 3.2          |
| 3-1609969-8        | 75KEHD10ABSDHM  | HORIZONTAL | 75A                 | 440 VAC             | 15                   | 16                                                                                              | 3.2          |
| 3-1609969-9        | 100KEHD10ABSDHM | HORIZONTAL | 100A                | 440 VAC             | 15                   | 25                                                                                              | 4.2          |
| 6-1609969-0        | 7KEHD10BBSDHM   | HORIZONTAL | 7A                  | 520 VAC             | 10                   | 41                                                                                              | 2.1          |
| 6-1609969-1        | 16KEHD10BBSDHM  | HORIZONTAL | 16A                 | 520 VAC             | 10                   | 41                                                                                              | 2.1          |
| 6-1609969-2        | 30KEHD10BBSDHM  | HORIZONTAL | 30A                 | 520 VAC             | 10                   | 41                                                                                              | 2.1          |
| 6-1609969-3        | 7KEHD10BBSDVM   | VERTICAL   | 7A                  | 520 VAC             | 10                   | 41                                                                                              | 2.2          |
| 6-1609969-4        | 16KEHD10BBSDVM  | VERTICAL   | 16A                 | 520 VAC             | 10                   | 41                                                                                              | 2.2          |
| 6-1609969-5        | 30KEHD10BBSDVM  | VERTICAL   | 30A                 | 520 VAC             | 10                   | 41                                                                                              | 2.2          |
| 6-1609969-6        | 42KEHD10BBSDHM  | HORIZONTAL | 42A                 | 520 VAC             | 15                   | 10                                                                                              | 3.2          |
| 6-1609969-7        | 55KEHD10BBSDHM  | HORIZONTAL | 55A                 | 520 VAC             | 15                   | 10                                                                                              | 3.2          |
| 6-1609969-8        | 75KEHD10BBSDHM  | HORIZONTAL | 75A                 | 520 VAC             | 15                   | 16                                                                                              | 3.2          |
| 6-1609969-9        | 100KEHD10BBSDHM | HORIZONTAL | 100A                | 520 VAC             | 15                   | 25                                                                                              | 4.2          |

## Connectors Cross Section

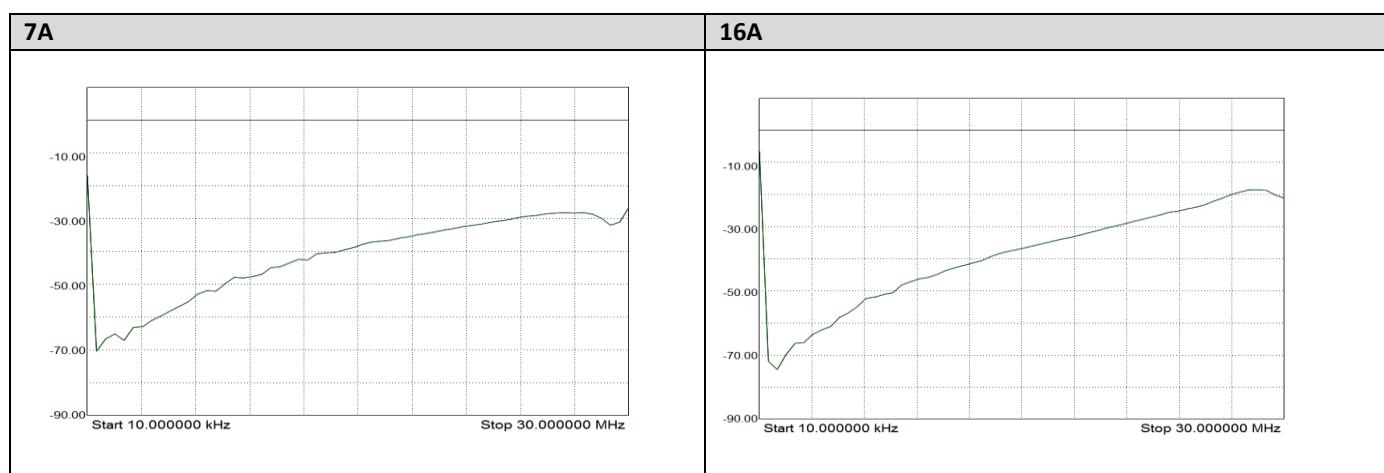
|  | 41                  | 10                   | 16                        | 25                 | 50                 |
|-------------------------------------------------------------------------------------|---------------------|----------------------|---------------------------|--------------------|--------------------|
| 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   | 70                    | 72   | 75   | 80  | 75 | 60 | 50 | 48 | 19 |
|                | 16A  | 73                    | 70   | 76   | 81  | 78 | 70 | 52 | 48 | 19 |
|                | 30A  | 42                    | 46   | 69   | 77  | 82 | 64 | 57 | 47 | 39 |
|                | 42A  | 45                    | 50   | 65   | 75  | 80 | 65 | 56 | 42 | 32 |
|                | 55A  | 35                    | 41   | 67   | 76  | 77 | 62 | 56 | 47 | 29 |
|                | 75A  | 35                    | 36   | 62   | 72  | 70 | 65 | 50 | 47 | 30 |
|                | 100A | 30                    | 32   | 65   | 68  | 70 | 62 | 52 | 40 | 32 |
|                | 120A | 18                    | 21   | 50   | 54  | 55 | 48 | 42 | 34 | 22 |
|                | 150A | 14                    | 21   | 53   | 58  | 53 | 45 | 41 | 34 | 20 |

|                |      | Differential Mode 50Ω / 50Ω |      |      |     |    |    |    |    |    |
|----------------|------|-----------------------------|------|------|-----|----|----|----|----|----|
|                |      | Frequency in MHz            |      |      |     |    |    |    |    |    |
|                |      | 0.01                        | 0.05 | 0.15 | 0.5 | 1  | 3  | 5  | 10 | 30 |
| Current Rating | 7A   | 45                          | 50   | 33   | 47  | 50 | 48 | 38 | 22 | 65 |
|                | 16A  | 30                          | 45   | 33   | 47  | 49 | 65 | 50 | 22 | 65 |
|                | 30A  | 18                          | 24   | 57   | 81  | 87 | 60 | 45 | 17 | 25 |
|                | 42A  | 18                          | 24   | 50   | 70  | 84 | 60 | 45 | 19 | 26 |
|                | 55A  | 22                          | 23   | 25   | 82  | 78 | 59 | 46 | 23 | 26 |
|                | 75A  | 25                          | 24   | 28   | 65  | 75 | 60 | 46 | 26 | 24 |
|                | 100A | 26                          | 28   | 30   | 62  | 72 | 60 | 46 | 26 | 24 |
|                | 120A | 28                          | 30   | 60   | 52  | 43 | 32 | 26 | 20 | 19 |
|                | 150A | 33                          | 38   | 64   | 51  | 43 | 32 | 26 | 20 | 19 |

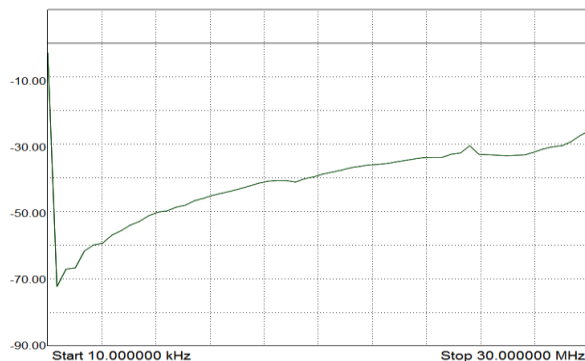
## Common Mode Insertion Loss (Typical in dB – refer to Table above)



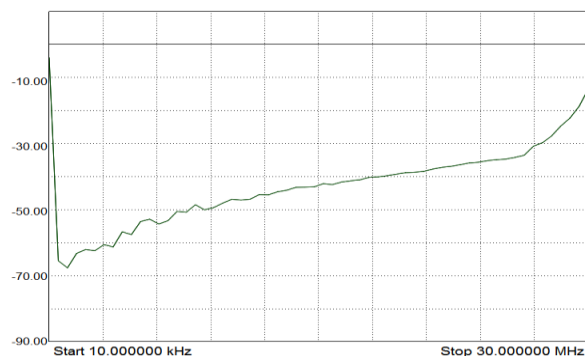
# KEH-BS SERIES



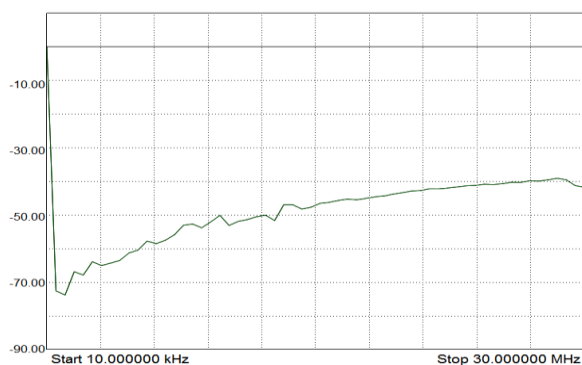
**30A**



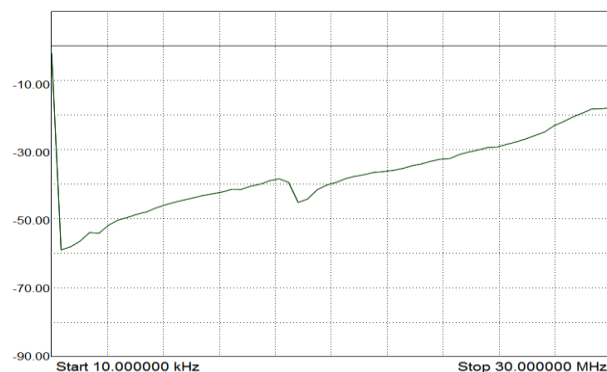
**42A**



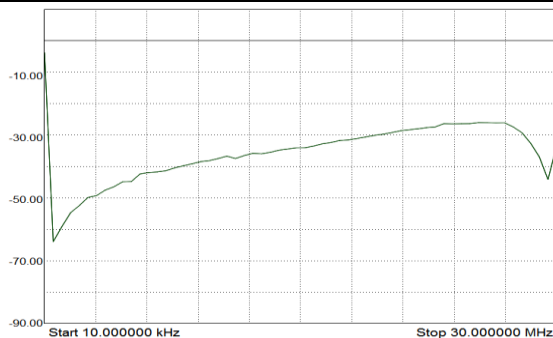
**55A**



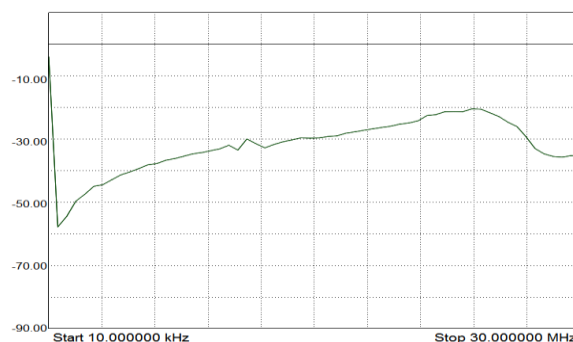
**75A**



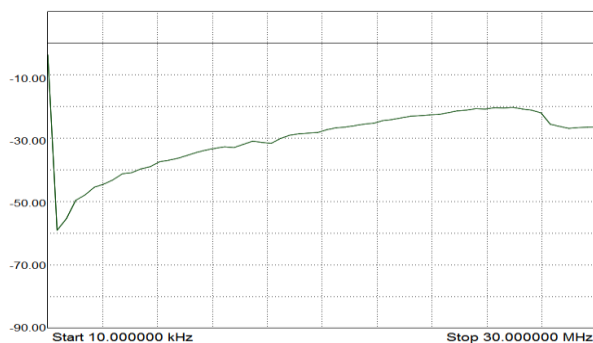
**100A**



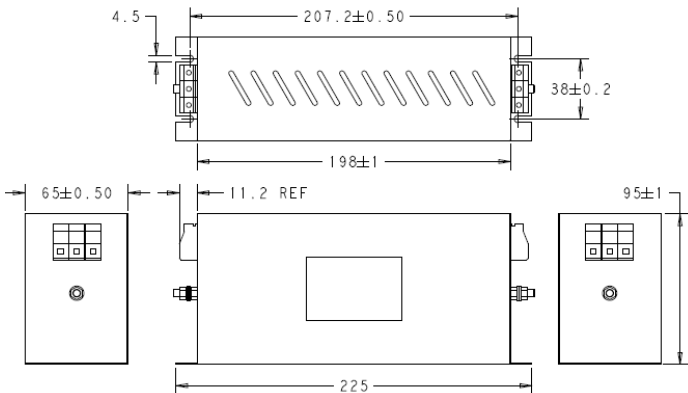
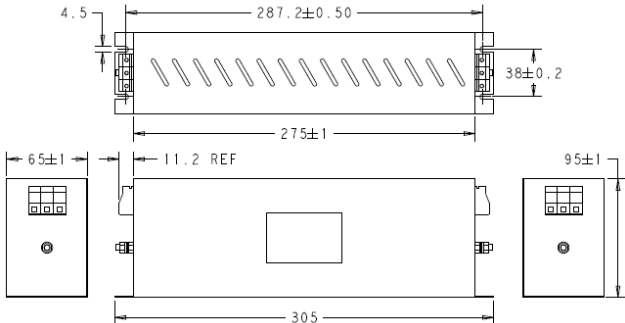
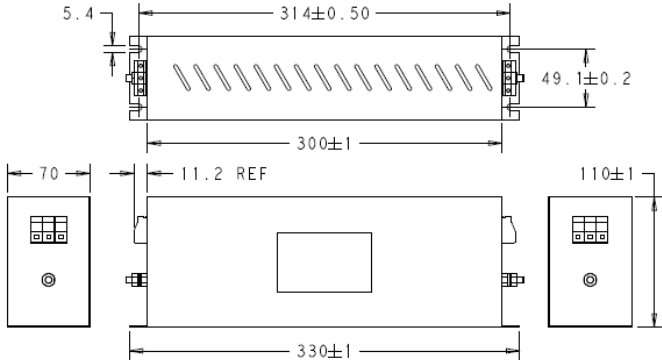
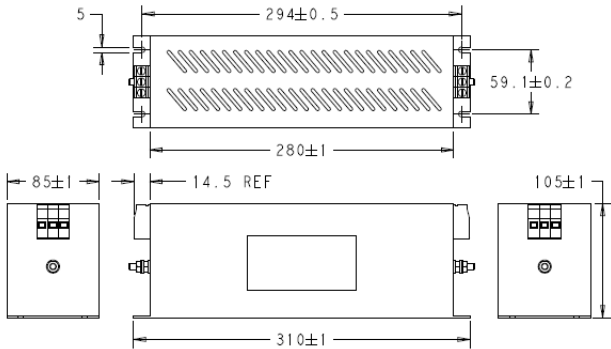
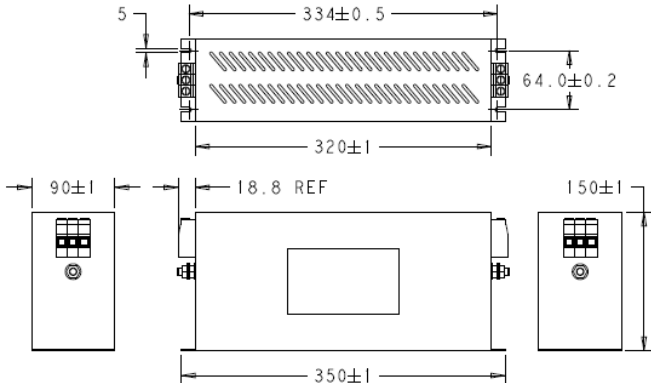
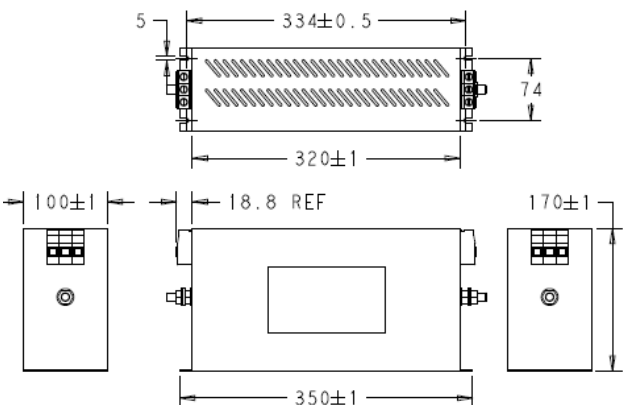
**120A**



**150A**



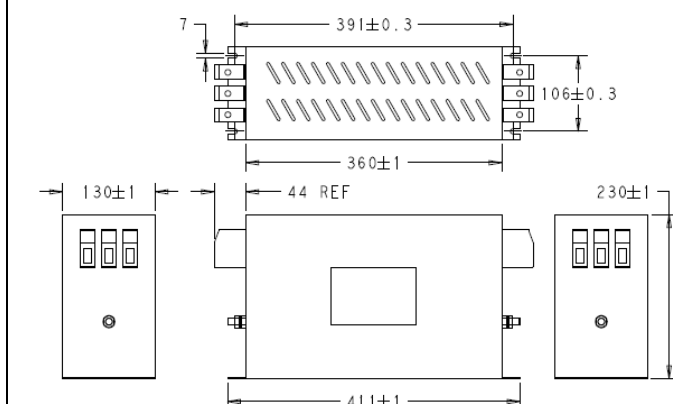
## Case Dimensions – Standard Version

| 7A Shock Proof Type                                                                 | 16A Shock Proof Type                                                                 |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |
| 30A & 42A Shock Proof Types                                                         | 55A Shock Proof Type                                                                 |
|   |   |
| 75A Shock Proof Type                                                                | 100A Shock Proof Type                                                                |
|  |  |

# KEH-BS SERIES



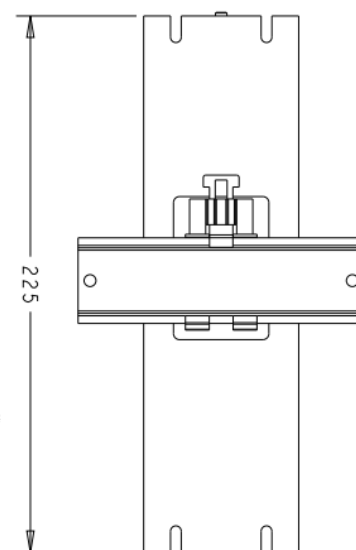
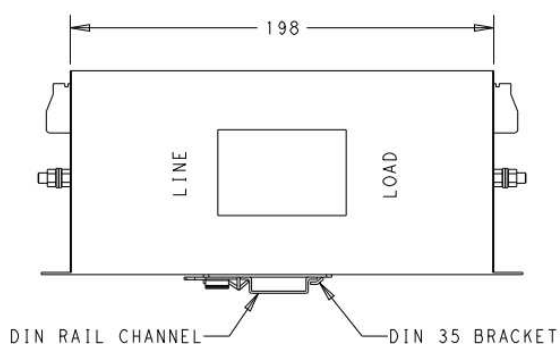
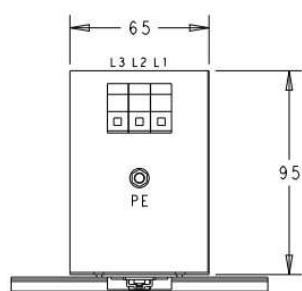
## 125A to 150A Shock Proof Types



## Case Dimensions – Din Rail Mount

### 7A Shock Proof Type – Horizontal Mount

*Note: Din Rail not supplied*

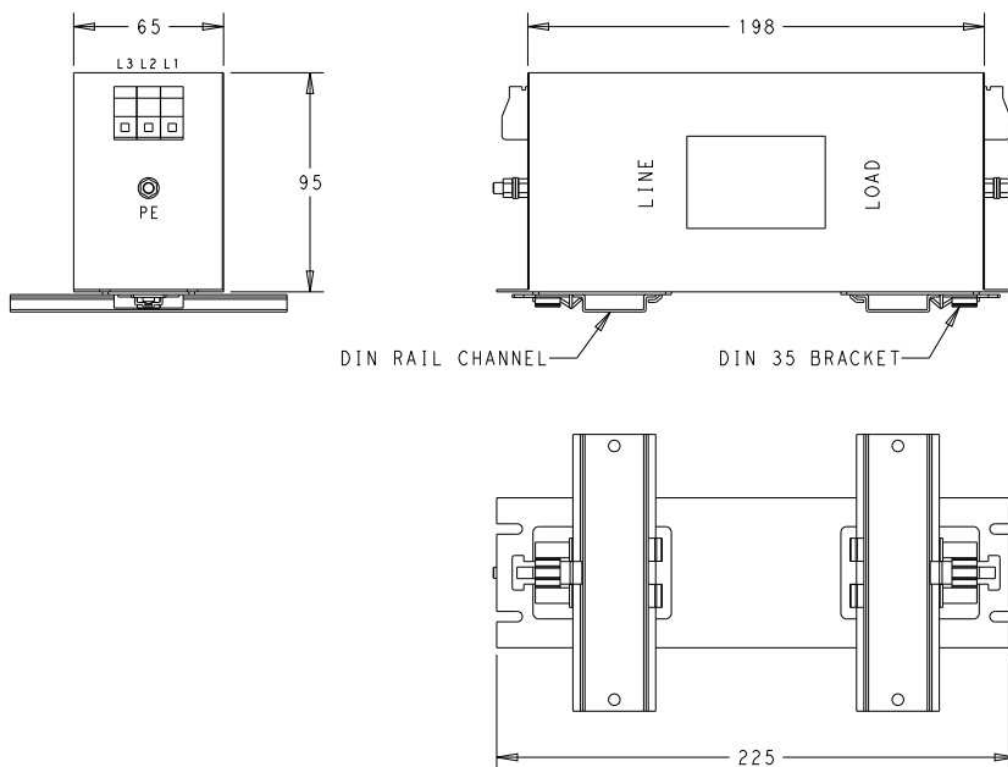


# KEH-BS SERIES



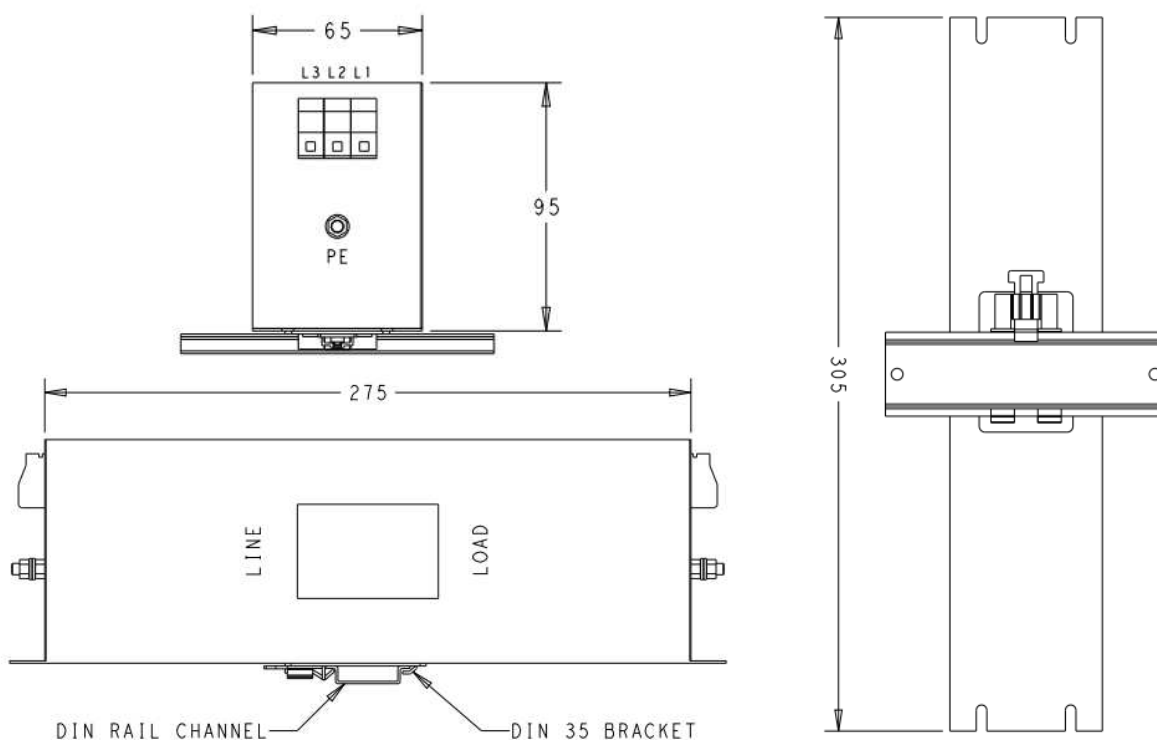
## 7A Shock Proof Type – Vertical Mount

*Note: Din Rail not supplied*



## 16A Shock Proof Type – Horizontal Mount

*Note: Din Rail not supplied*

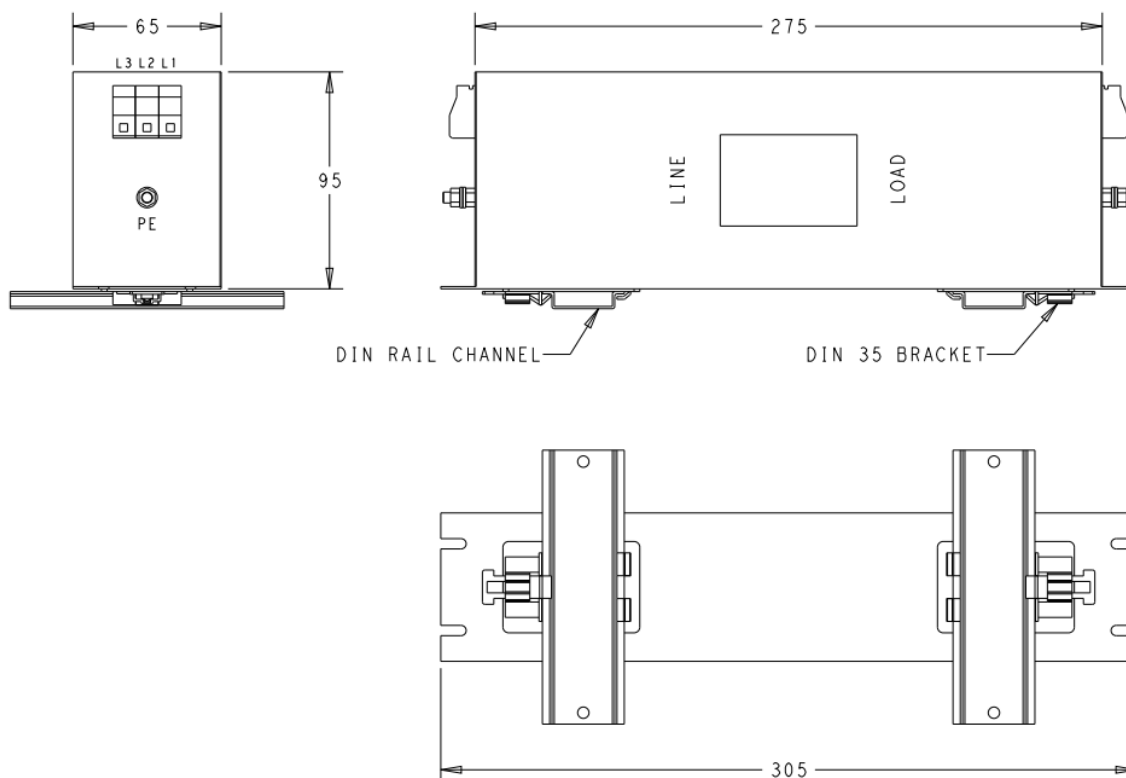


# KEH-BS SERIES



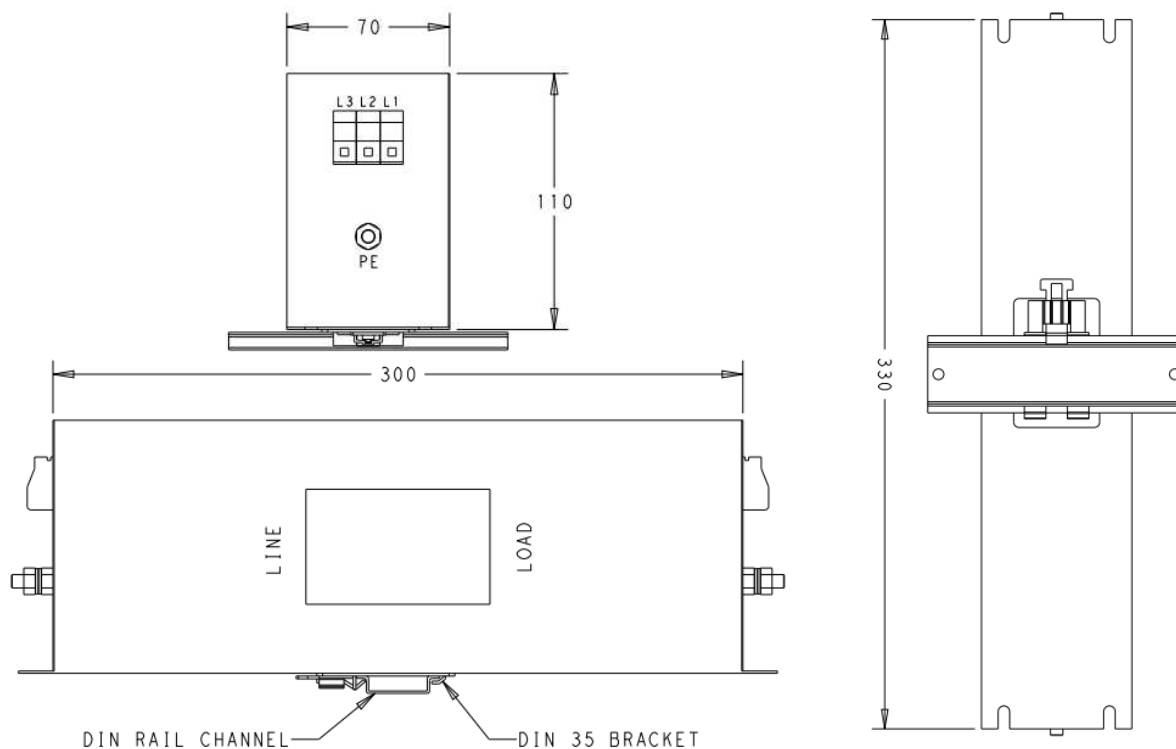
## 16A Shock Proof Type – Vertical Mount

Note: Din Rail not supplied



## 30A Shock Proof Type – Horizontal Mount

Note: Din Rail not supplied

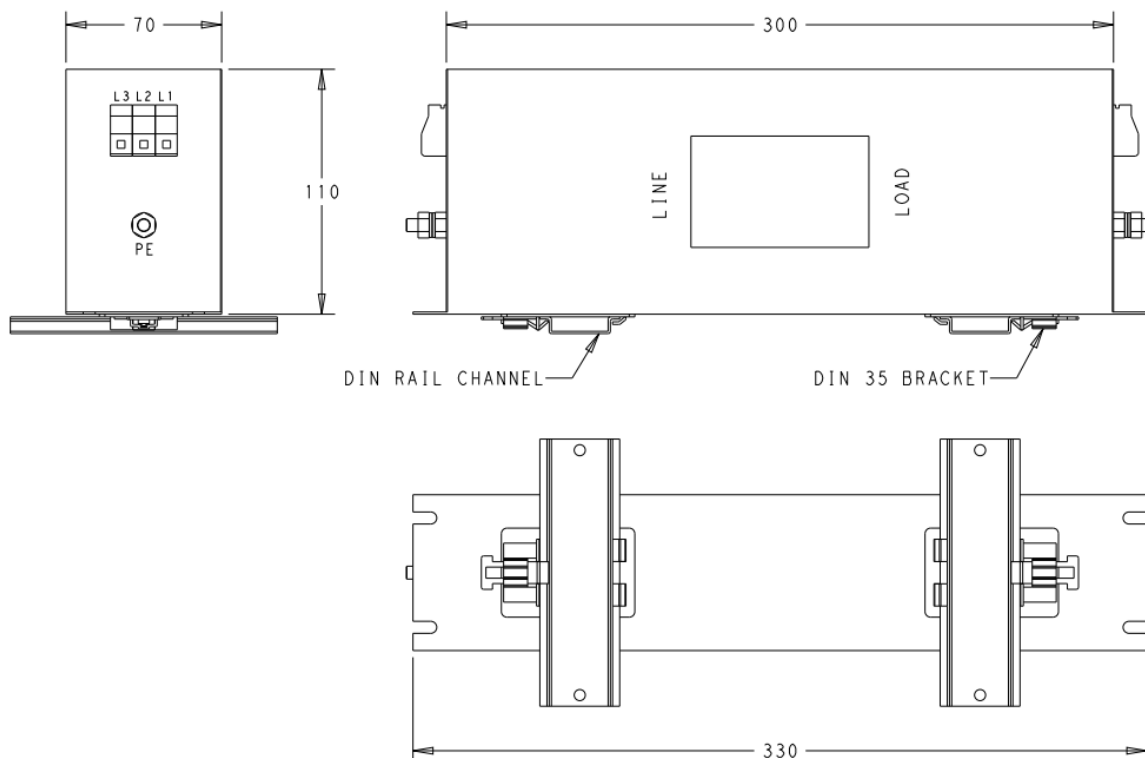


# KEH-BS SERIES



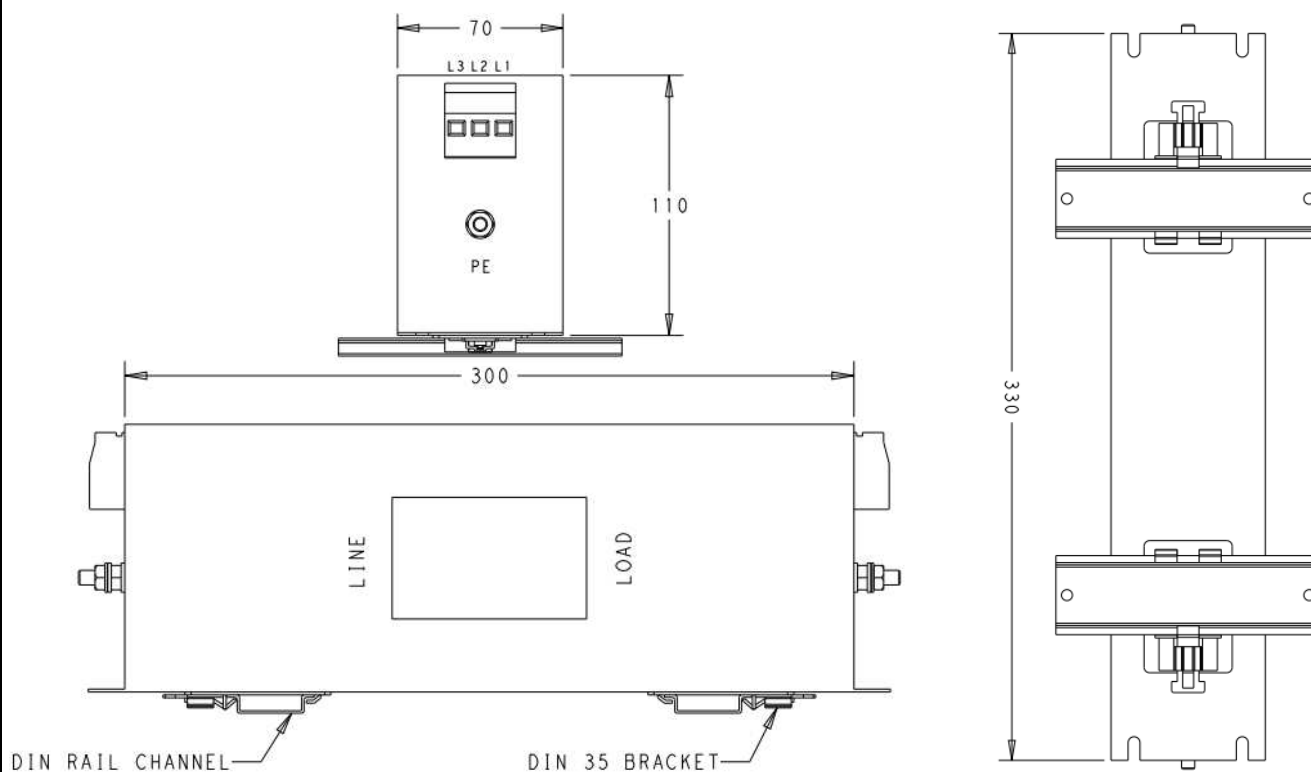
## 30A Shock Proof Types – Vertical Mount

Note: Din Rail not supplied



## 42A Shock Proof Type – Horizontal Mount

Note: Din Rail not supplied

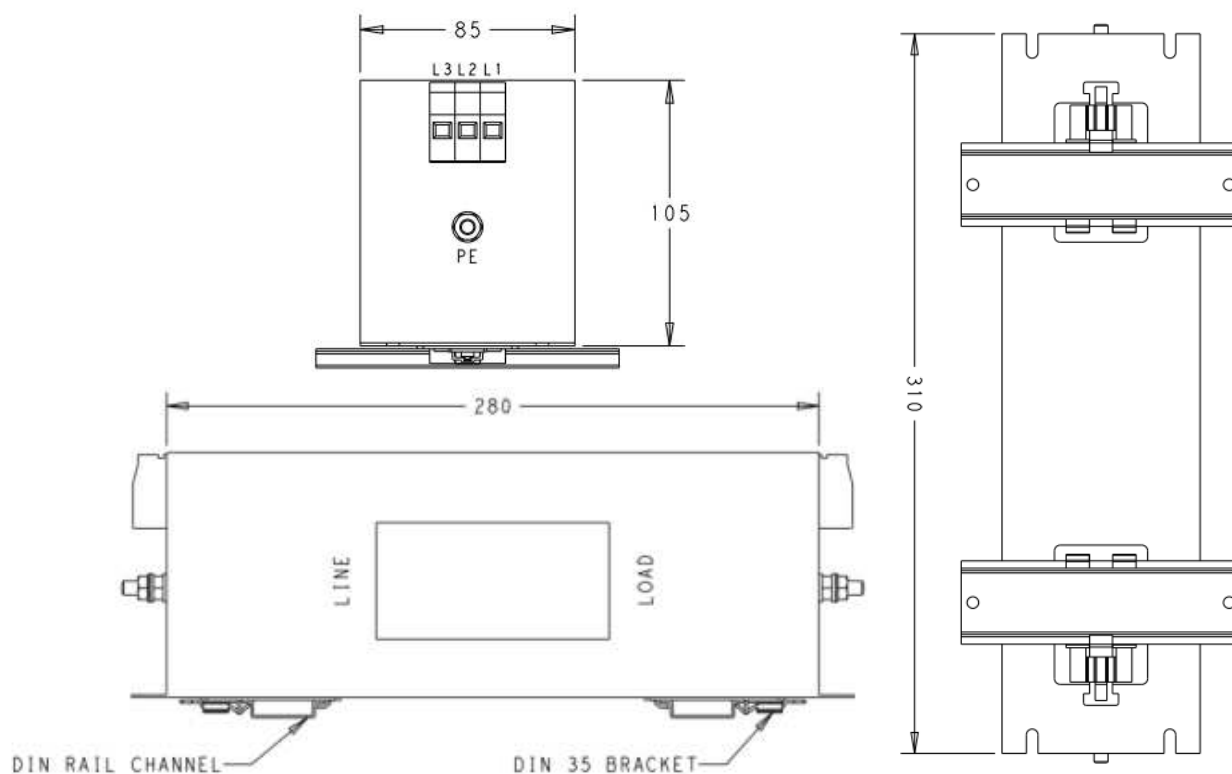


# KEH-BS SERIES



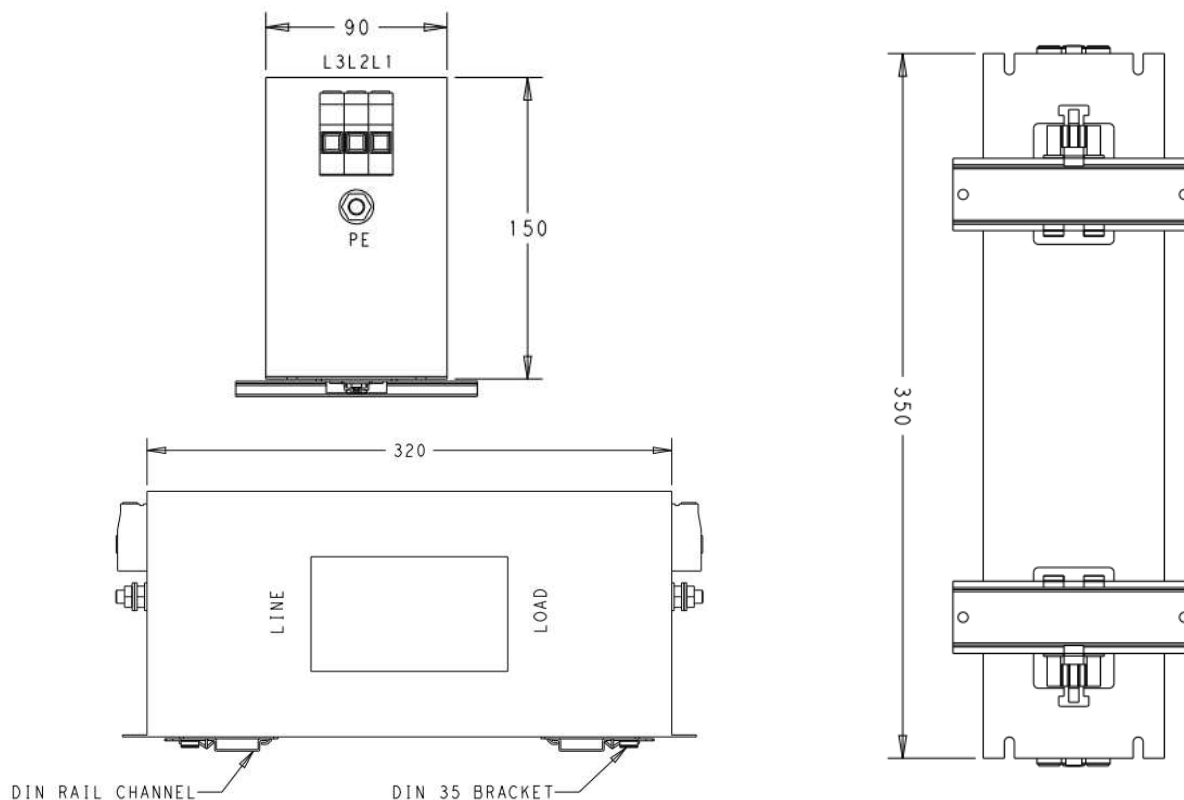
## 55A Shock Proof Type – Horizontal Mount

Note: Din Rail not supplied



## 75A Shock Proof Type – Horizontal Mount

Note: Din Rail not supplied

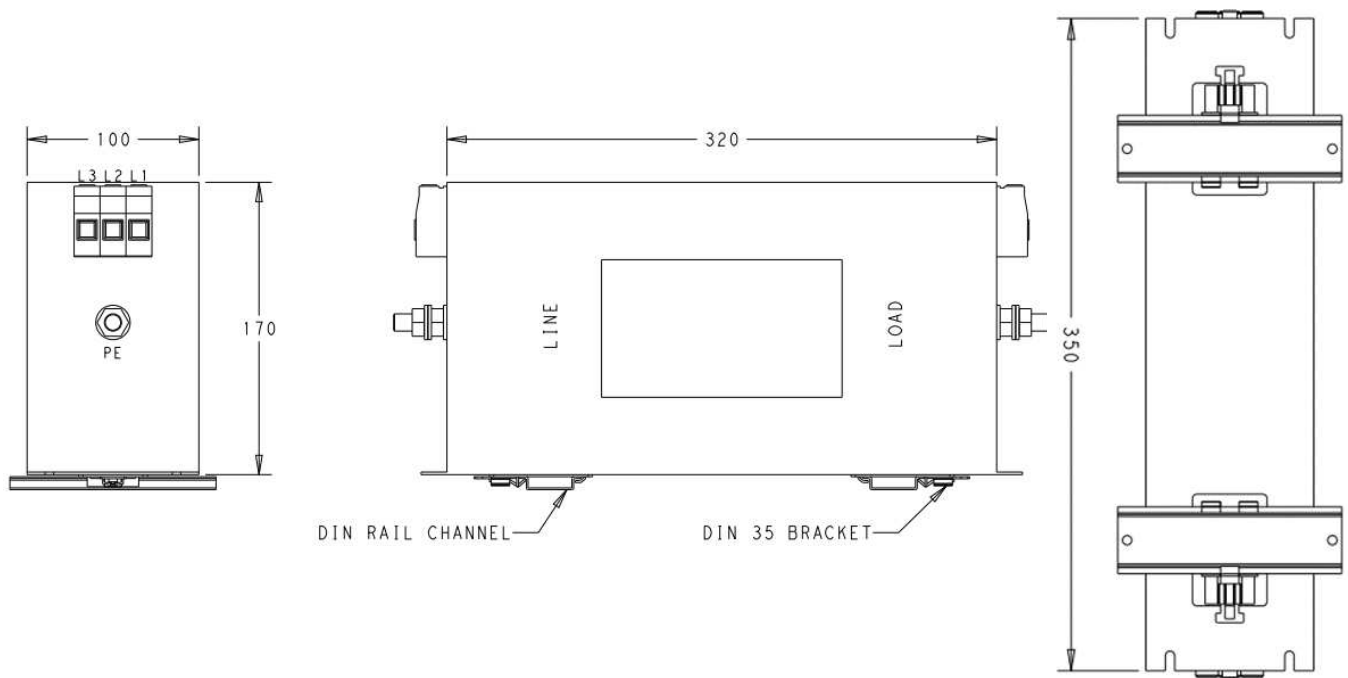


# KEH-BS SERIES



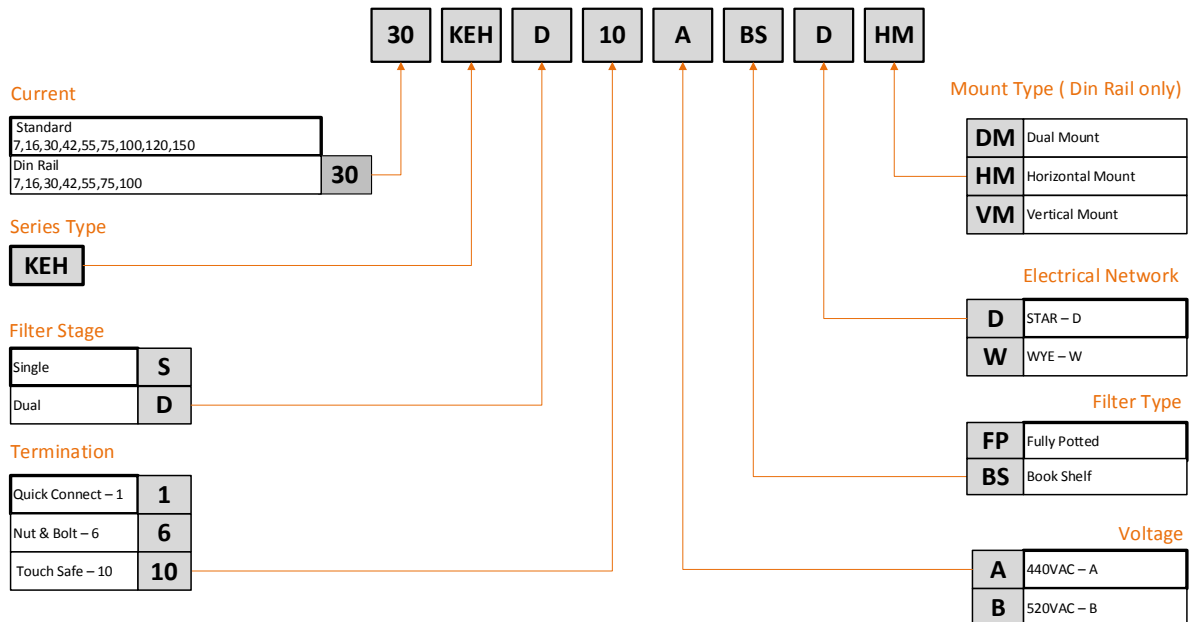
## 100A Shock Proof Type – Horizontal Mount

Note: Din Rail not supplied



All dimensions in mm; Tolerances according to ISO2768-m

## How to Order



# Mouser Electronics

Authorized Distributor

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