

## Three Phase General Purpose EMI Filter – Single Stage Delta Configuration

### DATASHEET

Three phase General Purpose Filters designed to be used in wide range of applications.



STANDARD



NEW DIN RAIL

### Approvals & Compliance

UL Approved

CSA Certified \*

\* 30<sup>th</sup> June 2021



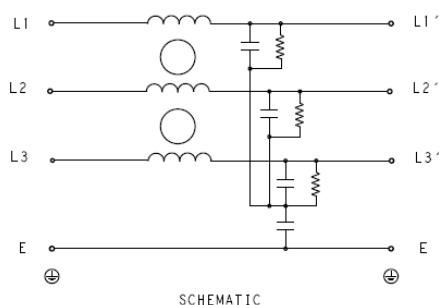
### Features

- General Purpose
- Standard Attenuation Performance
- Chassis mounting, Din Rail Mount

### Applications

- Industrial Automation
- HVAC
- Rectifier

### Typical Circuit Diagram



### Specifications

#### Electrical Characteristics

|                                      |                                            |
|--------------------------------------|--------------------------------------------|
| Maximum Continuous Operating Voltage | 440/520VAC                                 |
| Current Ratings                      | 1A to 150A @40°C, Din Mount 1A to 60A@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 (Depends on Current Rating) | Quick Connect (1-10A)/ Bolt & Nut (15-150A) / Shock Proof (75-100A) |
| Flammability corresponding to           | UL 94 V-0                                                           |

#### Reference Standards

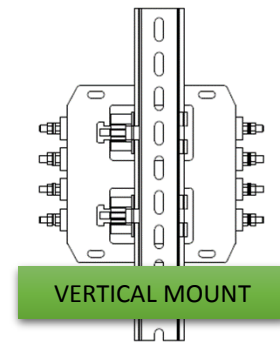
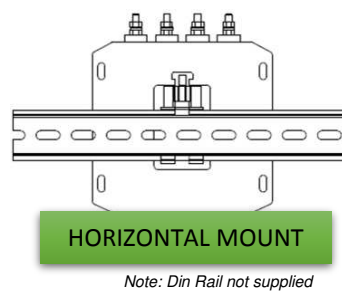
|                         |                                 |
|-------------------------|---------------------------------|
| Design Corresponding to | UL 60939-3 and CSA 22.2 No.8-13 |
|-------------------------|---------------------------------|

## Selection Table – Standard Version



| TE Ordering Number | Catalog Number | Rated Current @40°C | Rated Voltage @40°C | Leakage Current (mA) | Termination                                                                         |                                                                                     |                                                                                     | Weight (Kgs) |
|--------------------|----------------|---------------------|---------------------|----------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------|
|                    |                |                     |                     |                      |  |  |  |              |
| 1-1609965-0        | 1KEBS1AFPD     | 1A                  | 440 VAC             | 3                    | 6.3 x 0.8                                                                           |                                                                                     |                                                                                     | 0.26         |
| 1-1609965-1        | 3KEBS1AFPD     | 3A                  | 440 VAC             | 3                    | 6.3 x 0.8                                                                           |                                                                                     |                                                                                     | 0.26         |
| 1-1609965-2        | 6KEBS1AFPD     | 6A                  | 440 VAC             | 3                    | 6.3 x 0.8                                                                           |                                                                                     |                                                                                     | 0.26         |
| 1-1609965-3        | 10KEBS1AFPD    | 10A                 | 440 VAC             | 3                    | 6.3 x 0.8                                                                           |                                                                                     |                                                                                     | 0.26         |
| 1-1609965-4        | 15KEBS6AFPD    | 15A                 | 440 VAC             | 3                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 1-1609965-5        | 20KEBS6AFPD    | 16A                 | 440 VAC             | 3                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 1-1609965-6        | 25KEBS6AFPD    | 20A                 | 440 VAC             | 5                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 1-1609965-7        | 30KEBS6AFPD    | 25A                 | 440 VAC             | 5                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 1-1609965-8        | 40KEBS6AFPD    | 30A                 | 440 VAC             | 5                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 1-1609965-9        | 50KEBS6AFPD    | 50A                 | 440 VAC             | 5                    |                                                                                     | M6                                                                                  |                                                                                     | 1.2          |
| 2-1609965-0        | 60KEBS6AFPD    | 60A                 | 440 VAC             | 5                    |                                                                                     | M6                                                                                  |                                                                                     | 1.2          |
| 2-1609965-1        | 75KEBS6AFPD    | 75A                 | 440 VAC             | 6                    |                                                                                     | M8                                                                                  |                                                                                     | 8            |
| 2-1609965-2        | 80KEBS6AFPD    | 80A                 | 440 VAC             | 6                    |                                                                                     | M8                                                                                  |                                                                                     | 8            |
| 2-1609965-3        | 100KEBS6AFPD   | 100A                | 440 VAC             | 6                    |                                                                                     | M10                                                                                 |                                                                                     | 8            |
| 2-1609965-4        | 125KEBS6AFPD   | 125A                | 440 VAC             | 8                    |                                                                                     | M10                                                                                 |                                                                                     | 8            |
| 2-1609965-5        | 150KEBS6AFPD   | 150A                | 440 VAC             | 8                    |                                                                                     | M10                                                                                 |                                                                                     | 8            |
| 2-1609965-6        | 75KEBS10AFPD   | 75A                 | 440 VAC             | 6                    |                                                                                     |                                                                                     | 16                                                                                  | 8            |
| 2-1609965-7        | 80KEBS10AFPD   | 80A                 | 440 VAC             | 6                    |                                                                                     |                                                                                     | 25                                                                                  | 8            |
| 2-1609965-8        | 100KEBS10AFPD  | 100A                | 440 VAC             | 6                    |                                                                                     |                                                                                     | 25                                                                                  | 8            |
| 4-1609965-0        | 1KEBS1BFPD     | 1A                  | 520 VAC             | 3                    | 6.3 x 0.8                                                                           |                                                                                     |                                                                                     | 0.26         |
| 4-1609965-1        | 3KEBS1BFPD     | 3A                  | 520 VAC             | 3                    | 6.3 x 0.8                                                                           |                                                                                     |                                                                                     | 0.26         |
| 4-1609965-2        | 6KEBS1BFPD     | 6A                  | 520 VAC             | 3                    | 6.3 x 0.8                                                                           |                                                                                     |                                                                                     | 0.26         |
| 4-1609965-3        | 10KEBS1BFPD    | 10A                 | 520 VAC             | 3                    | 6.3 x 0.8                                                                           |                                                                                     |                                                                                     | 0.26         |
| 4-1609965-4        | 15KEBS6BFPD    | 15A                 | 520 VAC             | 3                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 4-1609965-5        | 20KEBS6BFPD    | 16A                 | 520 VAC             | 3                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 4-1609965-6        | 25KEBS6BFPD    | 20A                 | 520 VAC             | 5                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 4-1609965-7        | 30KEBS6BFPD    | 25A                 | 520 VAC             | 5                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 4-1609965-8        | 40KEBS6BFPD    | 30A                 | 520 VAC             | 5                    |                                                                                     | M5                                                                                  |                                                                                     | 0.7          |
| 4-1609965-9        | 50KEBS6BFPD    | 52A                 | 520 VAC             | 5                    |                                                                                     | M6                                                                                  |                                                                                     | 1.2          |
| 5-1609965-0        | 60KEBS6BFPD    | 60A                 | 520 VAC             | 5                    |                                                                                     | M6                                                                                  |                                                                                     | 1.2          |
| 5-1609965-1        | 75KEBS6BFPD    | 75A                 | 520 VAC             | 6                    |                                                                                     | M8                                                                                  |                                                                                     | 8            |
| 5-1609965-2        | 80KEBS6BFPD    | 80A                 | 520 VAC             | 6                    |                                                                                     | M8                                                                                  |                                                                                     | 8            |
| 5-1609965-3        | 100KEBS6BFPD   | 100A                | 520 VAC             | 6                    |                                                                                     | M10                                                                                 |                                                                                     | 8            |
| 5-1609965-4        | 125KEBS6BFPD   | 125A                | 520 VAC             | 8                    |                                                                                     | M10                                                                                 |                                                                                     | 8            |
| 5-1609965-5        | 150KEBS6BFPD   | 150A                | 520 VAC             | 8                    |                                                                                     | M10                                                                                 |                                                                                     | 8            |
| 5-1609965-6        | 75KEBS10BFPD   | 75A                 | 520 VAC             | 6                    |                                                                                     |                                                                                     | 16                                                                                  | 8            |
| 5-1609965-7        | 80KEBS10BFPD   | 80A                 | 520 VAC             | 6                    |                                                                                     |                                                                                     | 25                                                                                  | 8            |
| 5-1609965-8        | 100KEBS10BFPD  | 100A                | 520 VAC             | 6                    |                                                                                     |                                                                                     | 25                                                                                  | 8            |

## Selection Table – Din Rail Mount



| TE Ordering Number | Catalog Number | Din Type   | Rated Current @40°C | Rated Voltage @40°C | Leakage Current (mA) | Weight (Kgs) | Termination                                                                         |                                                                                     |
|--------------------|----------------|------------|---------------------|---------------------|----------------------|--------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                    |                |            |                     |                     |                      |              |  |  |
| 3-1609965-0        | 1KEBS1AFPDDM   | DUAL       | 1A                  | 440 VAC             | 3                    | 0.36         | 6.3 x 0.8                                                                           |                                                                                     |
| 3-1609965-1        | 3KEBS1AFPDDM   | DUAL       | 3A                  | 440 VAC             | 3                    | 0.36         | 6.3 x 0.8                                                                           |                                                                                     |
| 3-1609965-2        | 6KEBS1AFPDDM   | DUAL       | 6A                  | 440 VAC             | 3                    | 0.36         | 6.3 x 0.8                                                                           |                                                                                     |
| 3-1609965-3        | 10KEBS1AFPDDM  | DUAL       | 10A                 | 440 VAC             | 3                    | 0.36         | 6.3 x 0.8                                                                           |                                                                                     |
| 3-1609965-4        | 15KEBS6AFPDDM  | DUAL       | 15A                 | 440 VAC             | 3                    | 0.8          |                                                                                     | M5                                                                                  |
| 3-1609965-5        | 20KEBS6AFPDDM  | DUAL       | 20A                 | 440 VAC             | 3                    | 0.8          |                                                                                     | M5                                                                                  |
| 3-1609965-6        | 25KEBS6AFPDDM  | DUAL       | 25A                 | 440 VAC             | 5                    | 0.8          |                                                                                     | M5                                                                                  |
| 3-1609965-7        | 30KEBS6AFPDDM  | DUAL       | 30A                 | 440 VAC             | 5                    | 0.8          |                                                                                     | M5                                                                                  |
| 3-1609965-8        | 40KEBS6AFPDDM  | DUAL       | 40A                 | 440 VAC             | 5                    | 0.8          |                                                                                     | M5                                                                                  |
| 3-1609965-9        | 50KEBS6AFPDDM  | HORIZONTAL | 50A                 | 440 VAC             | 5                    | 1.3          |                                                                                     | M6                                                                                  |
| 6-1609965-0        | 60KEBS6AFPDDM  | HORIZONTAL | 60A                 | 440 VAC             | 5                    | 1.3          |                                                                                     | M6                                                                                  |
| 6-1609965-1        | 50KEBS6AFPDDM  | VERTICAL   | 50A                 | 440 VAC             | 5                    | 1.4          |                                                                                     | M6                                                                                  |
| 6-1609965-2        | 60KEBS6AFPDDM  | VERTICAL   | 60A                 | 440 VAC             | 5                    | 1.4          |                                                                                     | M6                                                                                  |
| 6-1609965-3        | 1KEBS1BFPDDM   | DUAL       | 1A                  | 520 VAC             | 3                    | 0.36         | 6.3 x 0.8                                                                           |                                                                                     |
| 6-1609965-4        | 3KEBS1BFPDDM   | DUAL       | 3A                  | 520 VAC             | 3                    | 0.36         | 6.3 x 0.8                                                                           |                                                                                     |
| 6-1609965-5        | 6KEBS1BFPDDM   | DUAL       | 6A                  | 520 VAC             | 3                    | 0.36         | 6.3 x 0.8                                                                           |                                                                                     |
| 6-1609965-6        | 10KEBS1BFPDDM  | DUAL       | 10A                 | 520 VAC             | 3                    | 0.36         | 6.3 x 0.8                                                                           |                                                                                     |
| 6-1609965-7        | 15KEBS6BFPDDM  | DUAL       | 15A                 | 520 VAC             | 3                    | 0.8          |                                                                                     | M5                                                                                  |
| 6-1609965-8        | 20KEBS6BFPDDM  | DUAL       | 20A                 | 520 VAC             | 3                    | 0.8          |                                                                                     | M5                                                                                  |
| 6-1609965-9        | 25KEBS6BFPDDM  | DUAL       | 25A                 | 520 VAC             | 5                    | 0.8          |                                                                                     | M5                                                                                  |
| 7-1609965-0        | 30KEBS6BFPDDM  | DUAL       | 30A                 | 520 VAC             | 5                    | 0.8          |                                                                                     | M5                                                                                  |
| 7-1609965-1        | 40KEBS6BFPDDM  | DUAL       | 40A                 | 520 VAC             | 5                    | 0.8          |                                                                                     | M5                                                                                  |
| 7-1609965-2        | 50KEBS6BFPDDM  | HORIZONTAL | 50A                 | 520 VAC             | 5                    | 1.3          |                                                                                     | M6                                                                                  |
| 7-1609965-3        | 60KEBS6BFPDDM  | HORIZONTAL | 60A                 | 520 VAC             | 5                    | 1.3          |                                                                                     | M6                                                                                  |
| 7-1609965-4        | 50KEBS6BFPDDM  | VERTICAL   | 50A                 | 520 VAC             | 5                    | 1.4          |                                                                                     | M6                                                                                  |
| 7-1609965-5        | 60KEBS6BFPDDM  | VERTICAL   | 60A                 | 520 VAC             | 5                    | 1.4          |                                                                                     | M6                                                                                  |

## 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

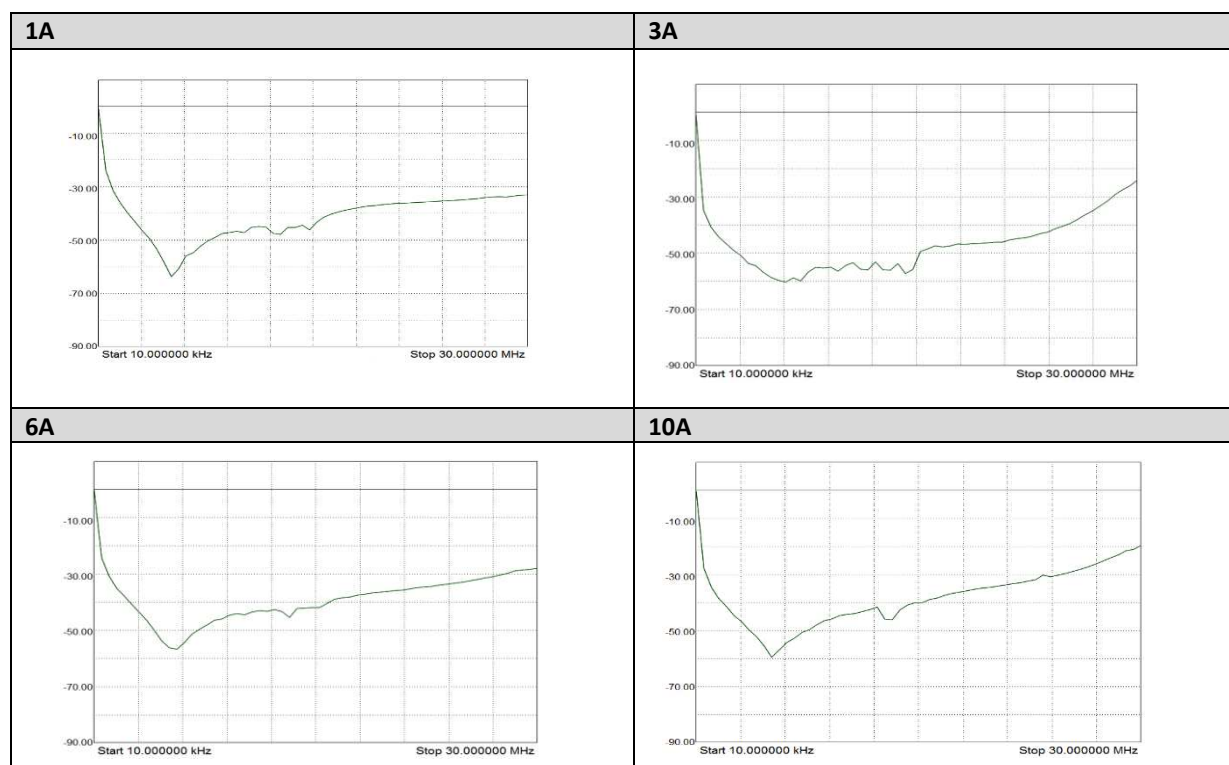
Common Mode 50Ω / 50Ω

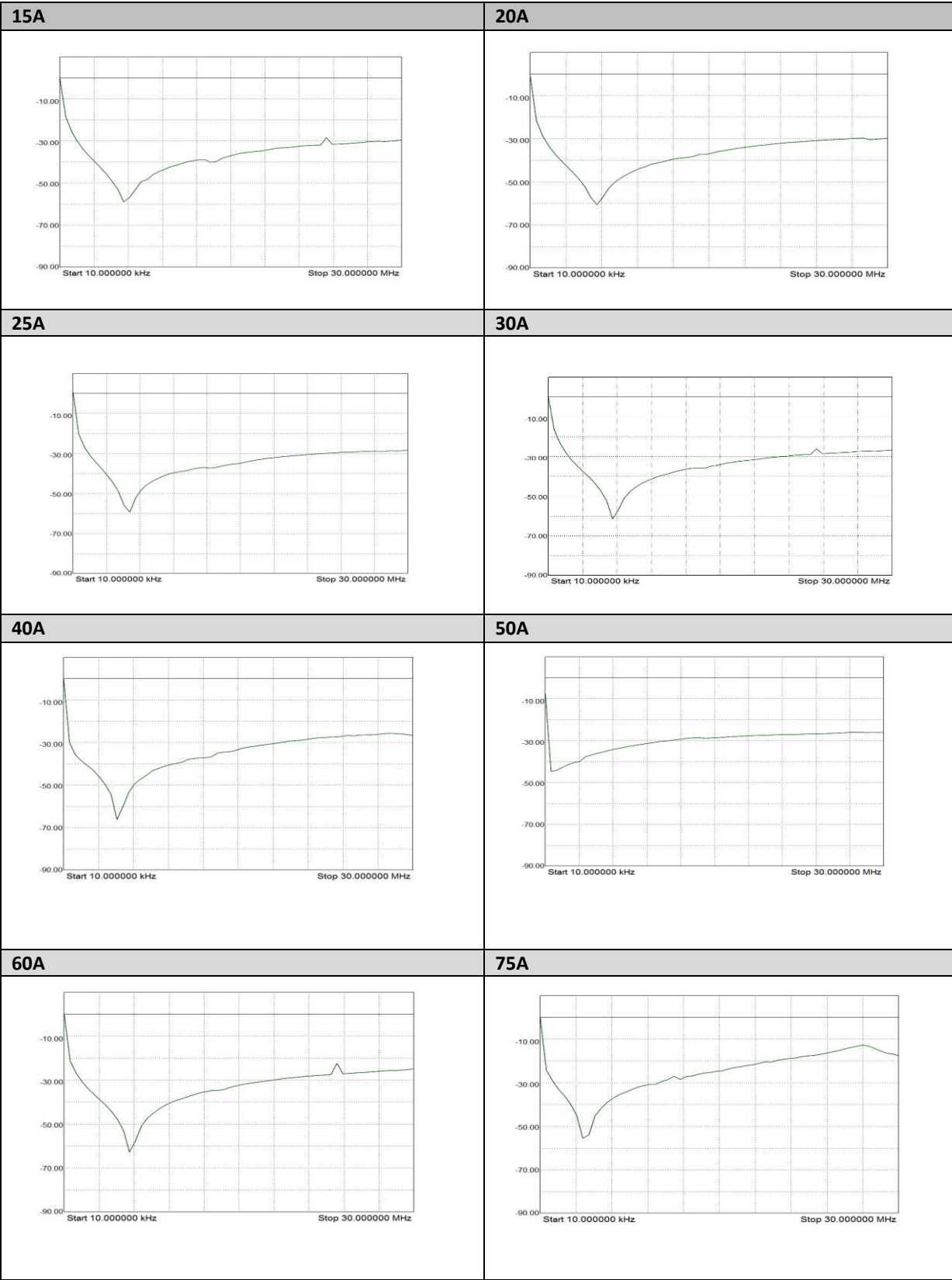
|                |      | Frequency in MHz |      |      |     |    |    |    |    |    |
|----------------|------|------------------|------|------|-----|----|----|----|----|----|
|                |      | 0.01             | 0.05 | 0.15 | 0.5 | 1  | 3  | 5  | 10 | 30 |
| Current Rating | 1A   | 2                | 3    | 4    | 11  | 20 | 40 | 35 | 35 | 45 |
|                | 3A   | 2                | 2    | 19   | 22  | 40 | 38 | 45 | 47 | 34 |
|                | 6A   | 3                | 5    | 13   | 19  | 33 | 40 | 42 | 48 | 31 |
|                | 10A  | 3                | 4    | 15   | 25  | 29 | 30 | 30 | 32 | 31 |
|                | 15A  | 4                | 5    | 8    | 20  | 30 | 38 | 48 | 30 | 22 |
|                | 20A  | 2                | 2    | 5    | 15  | 22 | 36 | 53 | 39 | 28 |
|                | 25A  | 3                | 5    | 5    | 18  | 23 | 35 | 40 | 44 | 24 |
|                | 30A  | 2                | 4    | 6    | 18  | 24 | 32 | 35 | 39 | 27 |
|                | 40A  | 5                | 5    | 12   | 22  | 34 | 39 | 45 | 37 | 46 |
|                | 50A  | 3                | 3    | 10   | 23  | 32 | 34 | 45 | 43 | 30 |
|                | 60A  | 2                | 4    | 5    | 22  | 27 | 30 | 32 | 35 | 24 |
|                | 75A  | 2                | 3    | 4    | 11  | 20 | 40 | 35 | 35 | 45 |
|                | 80A  | 4                | 5    | 8    | 15  | 18 | 22 | 35 | 42 | 45 |
|                | 100A | 2                | 4    | 3    | 17  | 23 | 25 | 25 | 32 | 38 |
|                | 125A | 2                | 2    | 5    | 12  | 18 | 25 | 32 | 40 | 45 |
|                | 150A | 2                | 3    | 6    | 15  | 22 | 28 | 30 | 35 | 42 |

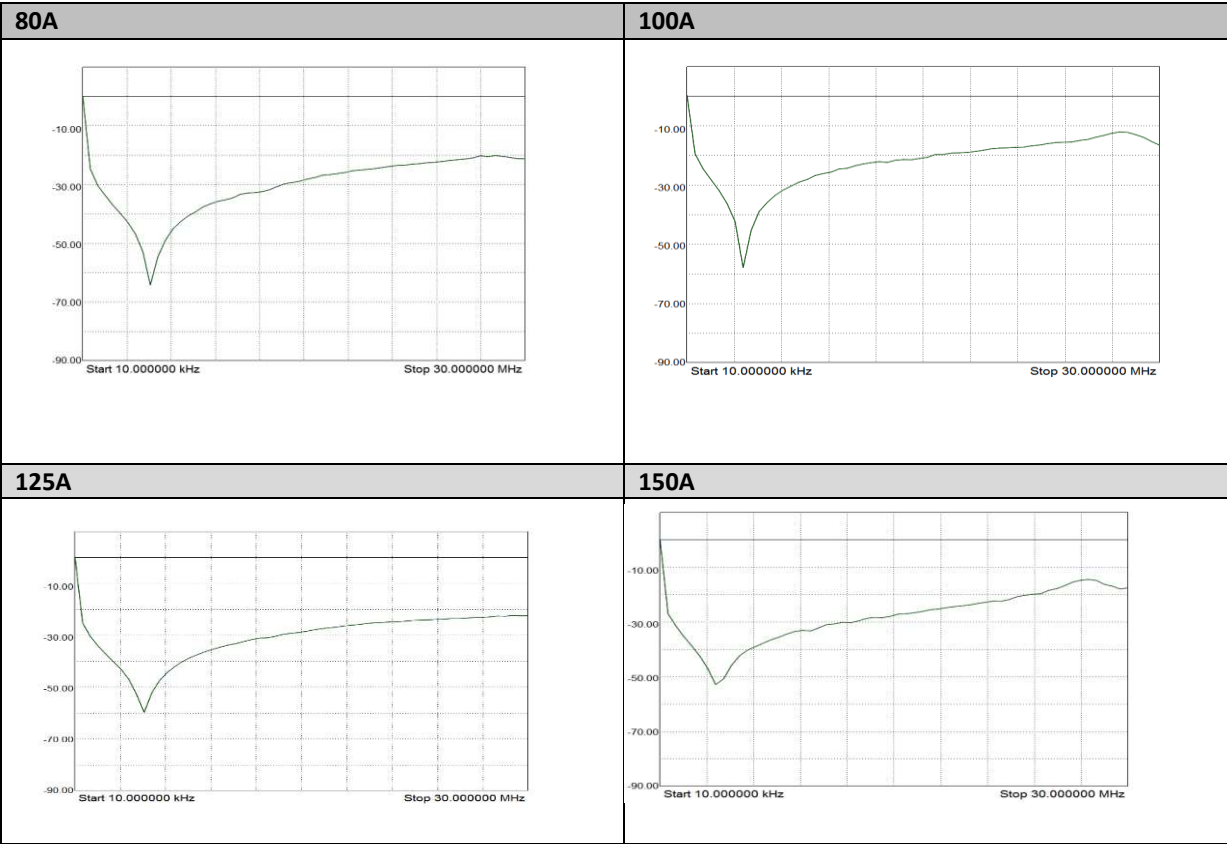
Differential Mode 50Ω / 50Ω

|                |      | Frequency in MHz |      |      |     |    |    |    |    |    |
|----------------|------|------------------|------|------|-----|----|----|----|----|----|
|                |      | 0.01             | 0.05 | 0.15 | 0.5 | 1  | 3  | 5  | 10 | 30 |
| Current Rating | 1A   | 3                | 4    | 6    | 17  | 27 | 33 | 36 | 38 | 54 |
|                | 3A   | 4                | 5    | 36   | 38  | 29 | 35 | 38 | 46 | 45 |
|                | 6A   | 4                | 4    | 15   | 25  | 30 | 38 | 45 | 54 | 56 |
|                | 10A  | 4                | 5    | 20   | 29  | 30 | 31 | 32 | 35 | 40 |
|                | 15A  | 7                | 7    | 10   | 17  | 28 | 40 | 42 | 38 | 49 |
|                | 20A  | 3                | 6    | 6    | 14  | 20 | 44 | 32 | 25 | 23 |
|                | 25A  | 4                | 4    | 19   | 22  | 26 | 32 | 48 | 50 | 52 |
|                | 30A  | 4                | 8    | 15   | 22  | 35 | 42 | 40 | 48 | 50 |
|                | 40A  | 7                | 7    | 11   | 23  | 31 | 38 | 44 | 41 | 51 |
|                | 50A  | 3                | 4    | 8    | 29  | 31 | 36 | 42 | 49 | 49 |
|                | 60A  | 2                | 5    | 5    | 24  | 42 | 38 | 40 | 31 | 29 |
|                | 75A  | 3                | 4    | 6    | 17  | 27 | 33 | 36 | 38 | 54 |
|                | 80A  | 4                | 4    | 10   | 20  | 24 | 30 | 36 | 40 | 42 |
|                | 100A | 7                | 8    | 14   | 43  | 37 | 40 | 35 | 30 | 40 |
|                | 125A | 3                | 3    | 9    | 14  | 19 | 31 | 35 | 42 | 42 |
|                | 150A | 2                | 2    | 8    | 20  | 25 | 31 | 35 | 40 | 47 |

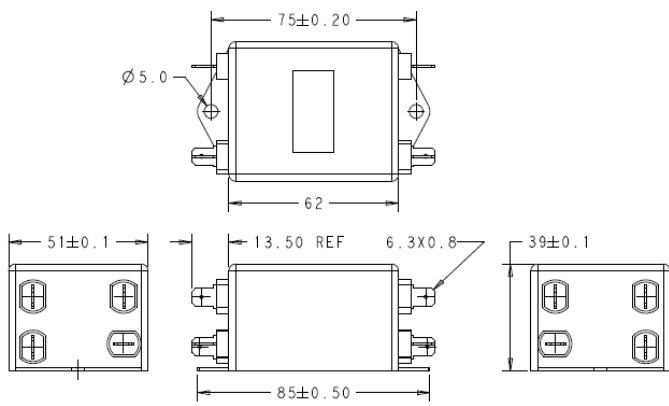
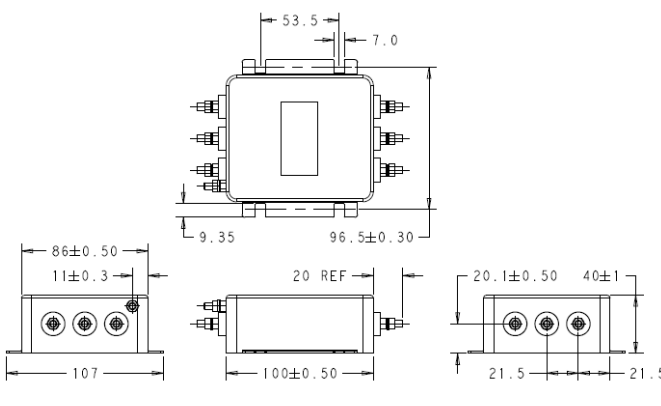
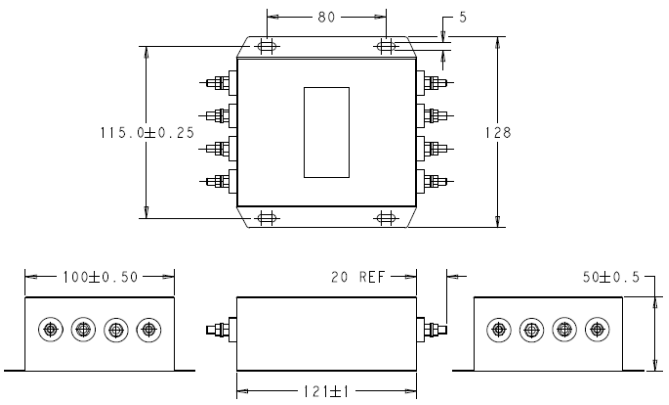
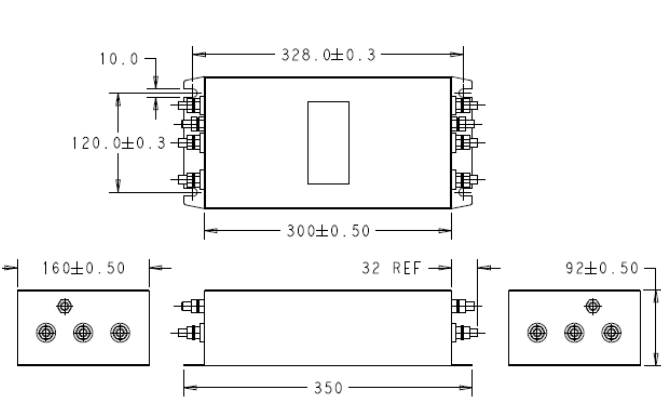
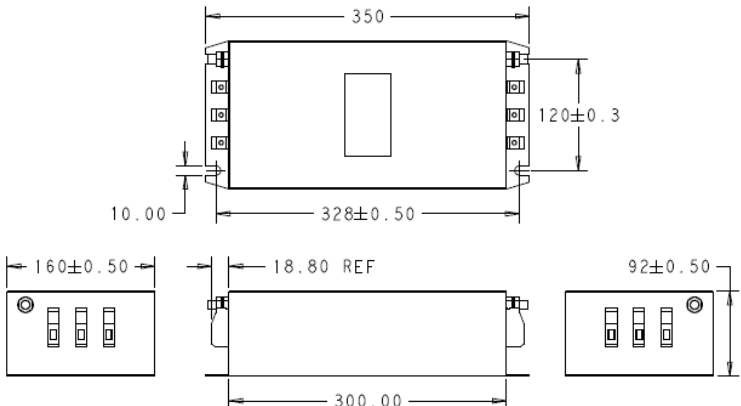
## Common Mode Insertion Loss (Typical in dB – refer to Table above)







## Case Dimensions - Standard

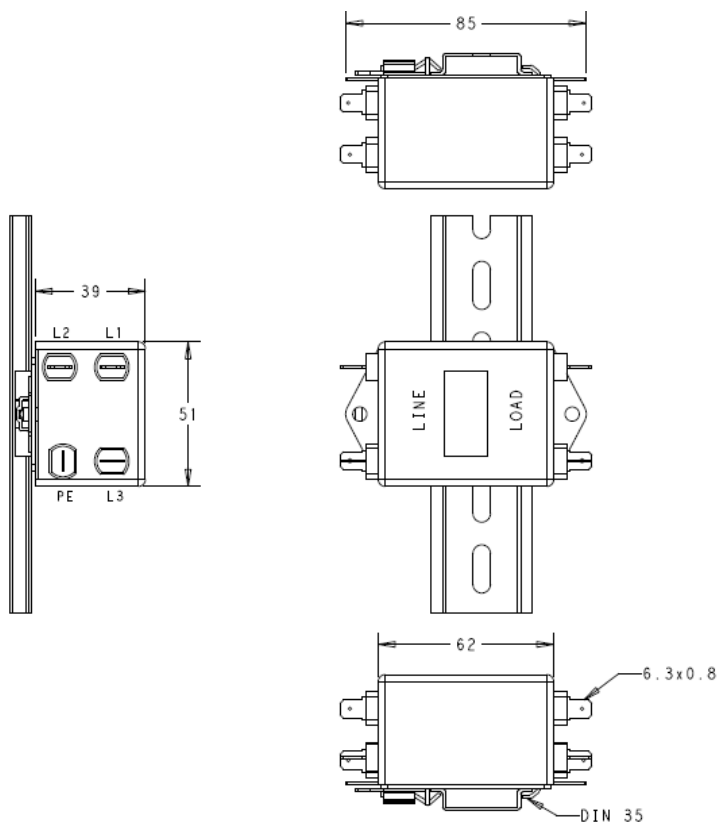
| 1 to 10A Quick Connect (6.35mm) Types                                                | 15A to 40A Nut & Bolt Types                                                         |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|     |   |
| 50A to 60A Nut & Bolt Types                                                          | 75A to 150A Nut & Bolt Types                                                        |
|    |  |
| 75A to 150A Shock Proof Types                                                        |                                                                                     |
|  |                                                                                     |

**All dimensions in mm; Tolerances according: ISO2768-m**

## Case Dimensions – Din Rail Mount

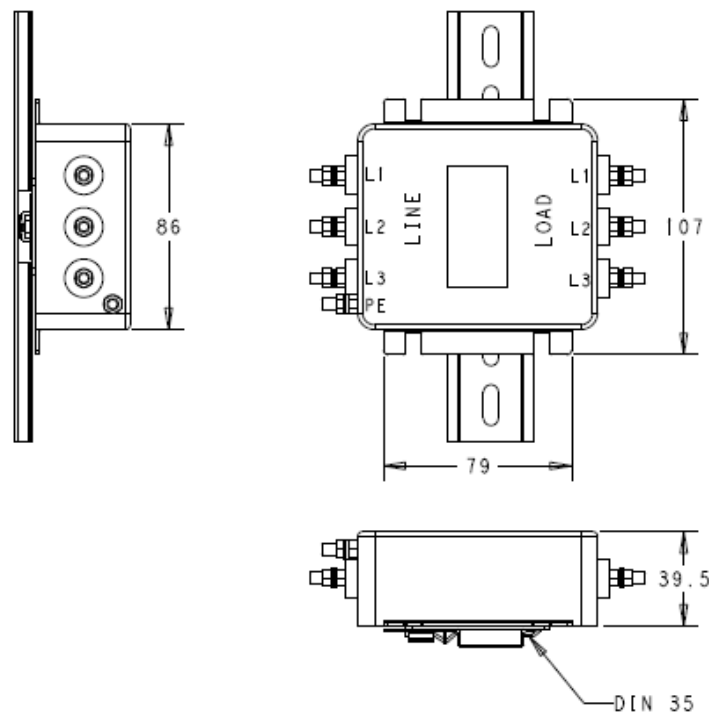
### 1 to 10A Quick Connect (6.35mm) Types – Dual Mount

*Note: Din Rail not supplied*



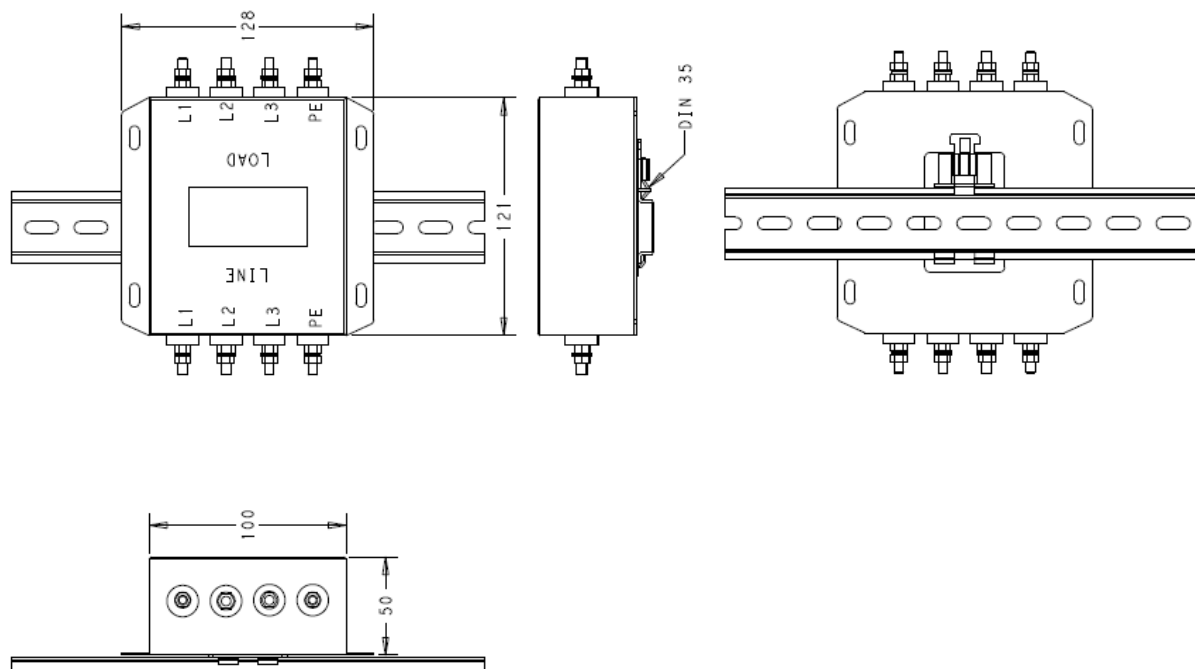
### 15A to 40A Nut & Bolt Types - Dual Mount

*Note: Din Rail not supplied*



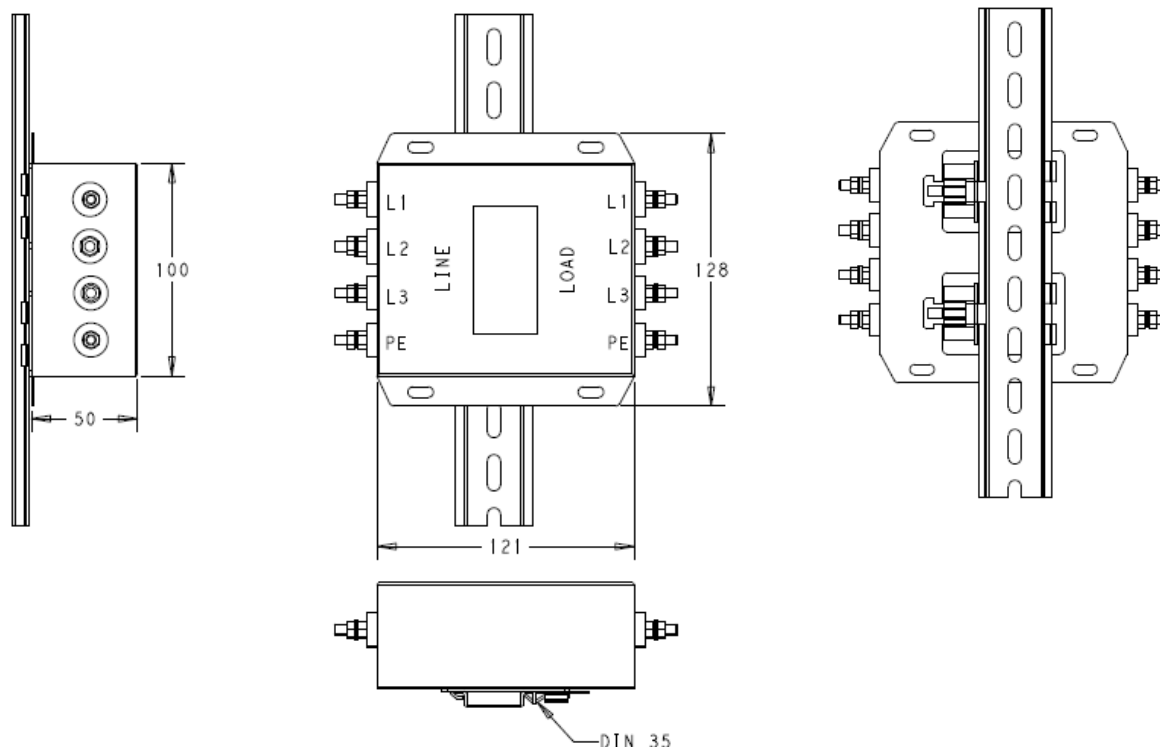
## 50A to 60A Nut & Bolt Types – Horizontal Mount

Note: Din Rail not supplied



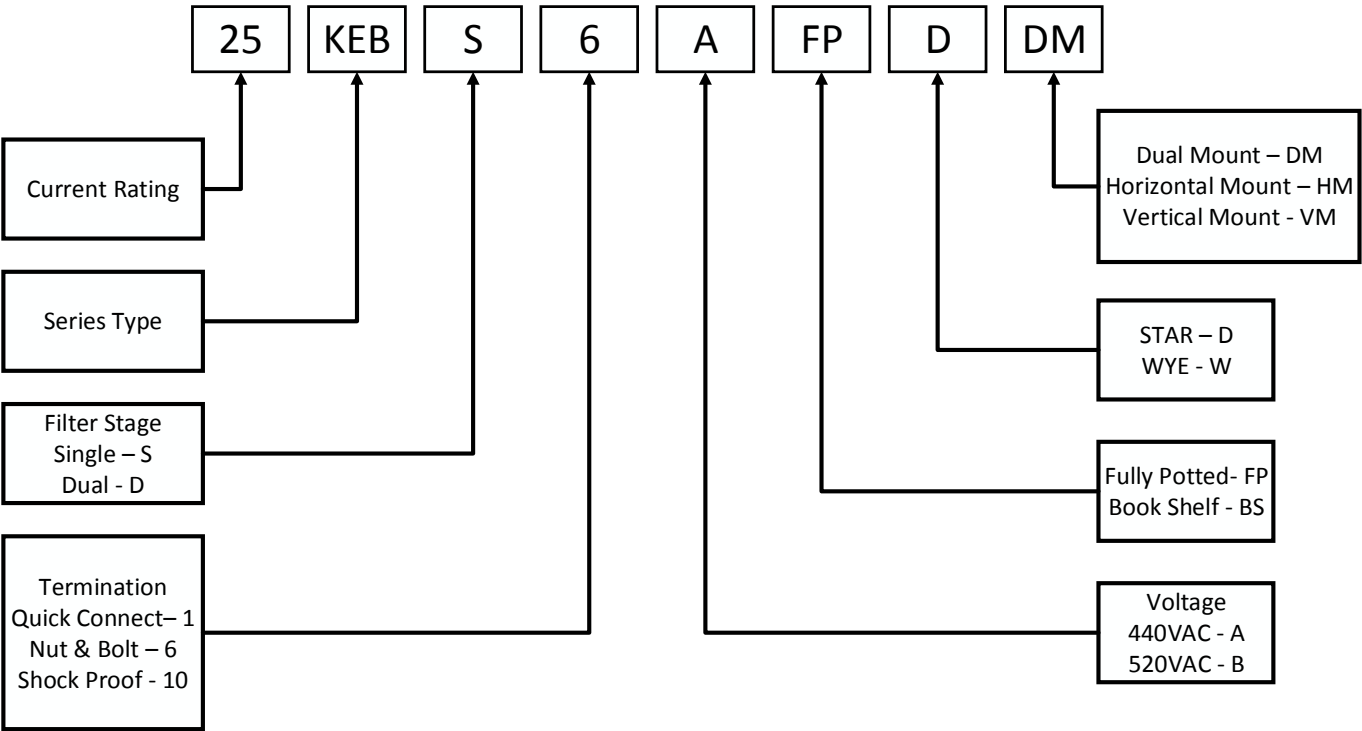
## 50A to 60A Nut & Bolt Types – Vertical Mount

Note: Din Rail not supplied



All dimensions in mm; Tolerances according: ISO2768-m

How to Order



# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[TE Connectivity:](#)

[100KEBS6AFPD](#)