

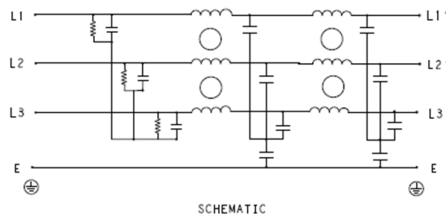
## Three Phase Superior Performance EMI Filter – Dual Stage DELTA Configuration

### DATASHEET

High attenuation and superior performance when used in applications with low Impedance load controlling pulsed, continuous and intermittent interference noise and where high levels of mains borne interference are present.



### Typical Circuit Diagram



### Specifications

#### Electrical Characteristics

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| Maximum Continuous Operating Voltage | 440/520VAC                           |
| Current Ratings                      | 10A to 250A @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 ) | Shock Proof (6-100A), Nut & Bolt (150-250A) |
| Flammability corresponding to             | UL 94 V-0                                   |

#### Reference Standards

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

### Approvals & Compliance

UL Recognised \*

CSA Certified \*\*

\*31<sup>st</sup> July 2020

\*\*31<sup>st</sup> August 2020



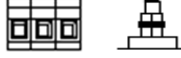
### Features

- Dual Stage Filter
- Good Attenuation
- Chassis mounting
- Low Leakage current
- Superior Performance

### Applications

- Computer Server
- Robotics and Automation
- Elevators
- SMPS

## Selection Table

| TE Ordering Number | Catalog Number | Rated Current @40°C | Rated Voltage @40°C | Leakage Current (mA) | Termination<br> |     | Weight (Kgs) |
|--------------------|----------------|---------------------|---------------------|----------------------|----------------------------------------------------------------------------------------------------|-----|--------------|
| 1-1609969-0        | 10KEHD10AFPD   | 10A                 | 440 VAC             | 5                    | 41                                                                                                 |     | 3            |
| 1-1609969-1        | 15KEHD10AFPD   | 15A                 | 440 VAC             | 5                    | 41                                                                                                 |     | 3            |
| 1-1609969-2        | 20KEHD10AFPD   | 20A                 | 440 VAC             | 5                    | 41                                                                                                 |     | 3            |
| 1-1609969-3        | 40KEHD10AFPD   | 40A                 | 440 VAC             | 6                    | 10                                                                                                 |     | 4            |
| 1-1609969-4        | 60KEHD10AFPD   | 60A                 | 440 VAC             | 6                    | 16                                                                                                 |     | 4            |
| 1-1609969-5        | 80KEHD10AFPD   | 80A                 | 440 VAC             | 10                   | 25                                                                                                 |     | 8            |
| 1-1609969-6        | 100KEHD10AFPD  | 100A                | 440 VAC             | 6                    | 25                                                                                                 |     | 8            |
| 1-1609969-7        | 150KEHD10AFPD  | 150A                | 440 VAC             | 20                   |                                                                                                    | M10 | 9            |
| 1-1609969-8        | 200KEHD10AFPD  | 200A                | 440 VAC             | 20                   |                                                                                                    | M10 | 11           |
| 1-1609969-9        | 250KEHD10AFPD  | 250A                | 440 VAC             | 20                   |                                                                                                    | M10 | 11           |
| 4-1609969-0        | 10KEHD10BFPD   | 10A                 | 520 VAC             | 5                    | 41                                                                                                 |     | 3            |
| 4-1609969-1        | 15KEHD10BFPD   | 15A                 | 520 VAC             | 5                    | 41                                                                                                 |     | 3            |
| 4-1609969-2        | 20KEHD10BFPD   | 20A                 | 520 VAC             | 5                    | 41                                                                                                 |     | 3            |
| 4-1609969-3        | 40KEHD10BFPD   | 40A                 | 520 VAC             | 6                    | 10                                                                                                 |     | 4            |
| 4-1609969-4        | 60KEHD10BFPD   | 60A                 | 520 VAC             | 6                    | 16                                                                                                 |     | 4            |
| 4-1609969-5        | 80KEHD10BFPD   | 80A                 | 520 VAC             | 10                   | 25                                                                                                 |     | 8            |
| 4-1609969-6        | 100KEHD10BFPD  | 100A                | 520 VAC             | 6                    | 25                                                                                                 |     | 8            |
| 4-1609969-7        | 150KEHD10BFPD  | 150A                | 520 VAC             | 20                   |                                                                                                    | M10 | 9            |
| 4-1609969-8        | 200KEHD10BFPD  | 200A                | 520 VAC             | 20                   |                                                                                                    | M10 | 11           |
| 4-1609969-9        | 250KEHD10BFPD  | 250A                | 520 VAC             | 20                   |                                                                                                    | M10 | 11           |

## Connectors Cross Section

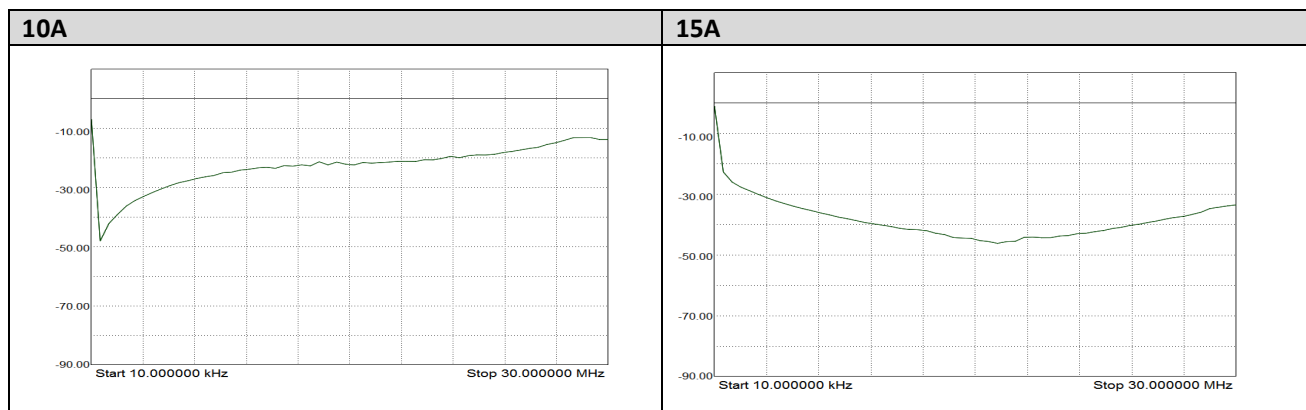
|  | 41                  | 10                   | 16                        | 25                 | 50                 |
|-------------------------------------------------------------------------------------|---------------------|----------------------|---------------------------|--------------------|--------------------|
| 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

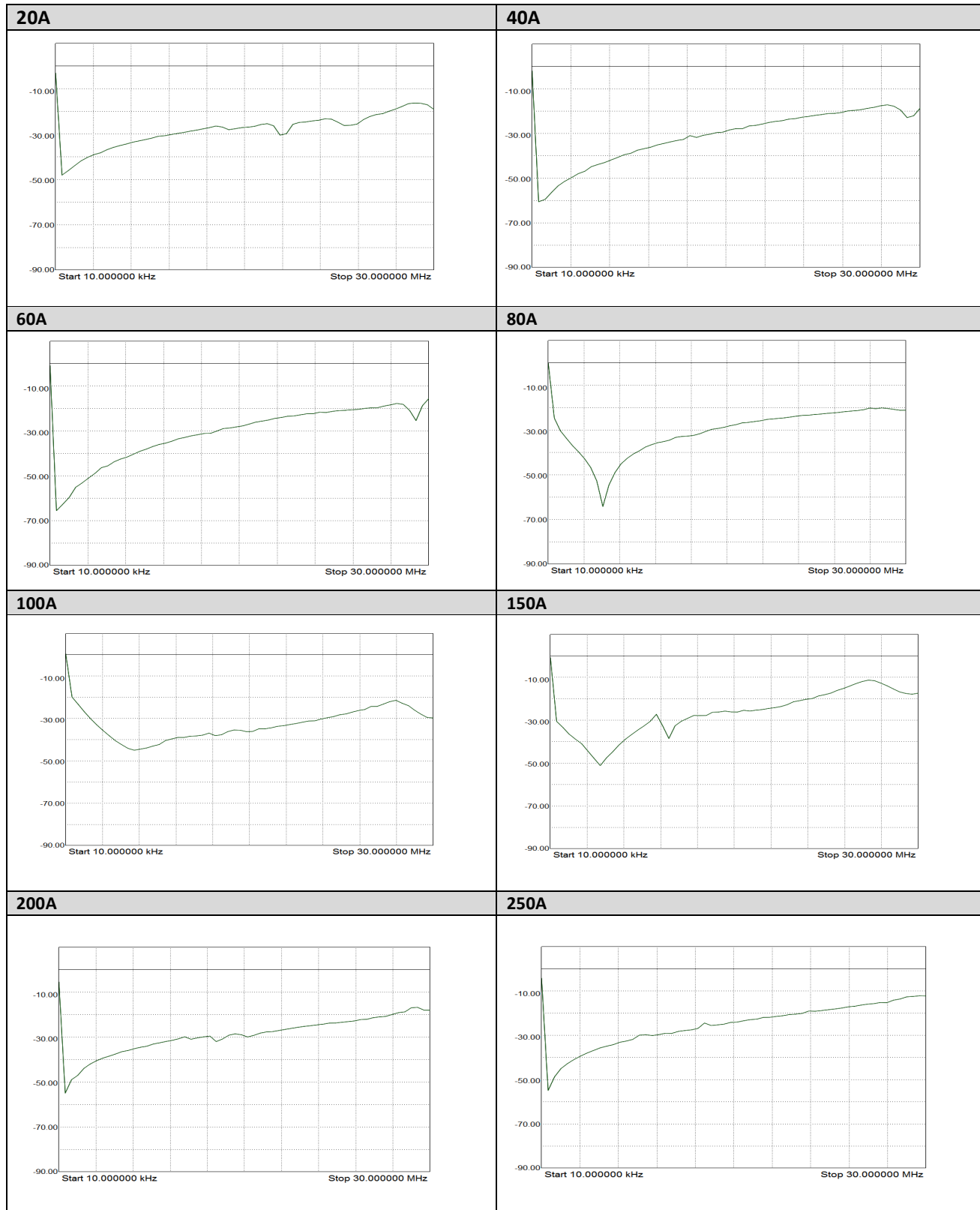
|                |      | Common Mode 50Ω / 50Ω |      |      |     |    |    |    |    |    |
|----------------|------|-----------------------|------|------|-----|----|----|----|----|----|
|                |      | Frequency in MHz      |      |      |     |    |    |    |    |    |
|                |      | 0.01                  | 0.05 | 0.15 | 0.5 | 1  | 3  | 5  | 10 | 30 |
| Current Rating | 10A  | 70                    | 71   | 75   | 86  | 81 | 63 | 54 | 40 | 38 |
|                | 15A  | 65                    | 65   | 75   | 80  | 81 | 64 | 55 | 40 | 36 |
|                | 20A  | 41                    | 44   | 55   | 72  | 67 | 58 | 51 | 38 | 21 |
|                | 40A  | 11                    | 20   | 72   | 75  | 77 | 66 | 62 | 51 | 32 |
|                | 60A  | 27                    | 26   | 41   | 78  | 72 | 70 | 65 | 43 | 24 |
|                | 80A  | 10                    | 8    | 37   | 75  | 65 | 57 | 50 | 44 | 28 |
|                | 100A | 3                     | 8    | 35   | 77  | 68 | 57 | 51 | 42 | 28 |
|                | 150A | 18                    | 24   | 54   | 58  | 53 | 44 | 40 | 35 | 32 |
|                | 200A | 19                    | 22   | 52   | 56  | 54 | 42 | 40 | 35 | 32 |
|                | 250A | 18                    | 24   | 50   | 55  | 51 | 42 | 38 | 33 | 32 |

|                |      | Differential Mode 50Ω / 50Ω |      |      |     |    |    |    |    |    |
|----------------|------|-----------------------------|------|------|-----|----|----|----|----|----|
|                |      | Frequency in MHz            |      |      |     |    |    |    |    |    |
|                |      | 0.01                        | 0.05 | 0.15 | 0.5 | 1  | 3  | 5  | 10 | 30 |
| Current Rating | 10A  | 51                          | 53   | 64   | 82  | 84 | 63 | 48 | 19 | 22 |
|                | 15A  | 50                          | 51   | 65   | 82  | 85 | 68 | 50 | 20 | 23 |
|                | 20A  | 48                          | 46   | 60   | 79  | 79 | 59 | 45 | 20 | 26 |
|                | 40A  | 29                          | 36   | 76   | 78  | 79 | 64 | 48 | 23 | 26 |
|                | 60A  | 17                          | 20   | 24   | 50  | 61 | 60 | 50 | 46 | 72 |
|                | 80A  | 28                          | 29   | 32   | 72  | 66 | 46 | 36 | 27 | 22 |
|                | 100A | 28                          | 29   | 32   | 75  | 66 | 46 | 37 | 27 | 25 |
|                | 150A | 38                          | 41   | 55   | 51  | 47 | 40 | 37 | 30 | 25 |
|                | 200A | 38                          | 41   | 55   | 50  | 45 | 40 | 35 | 30 | 22 |
|                | 250A | 38                          | 41   | 55   | 52  | 45 | 39 | 35 | 29 | 27 |

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



# KEH SERIES



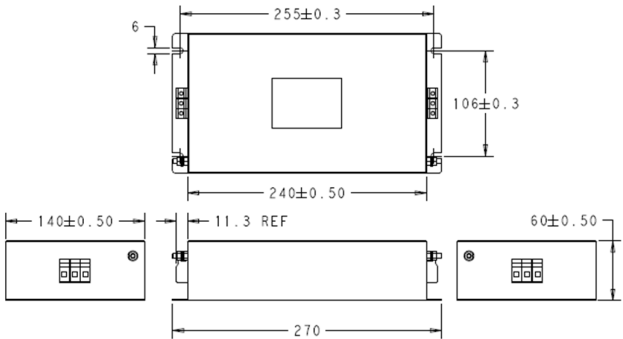
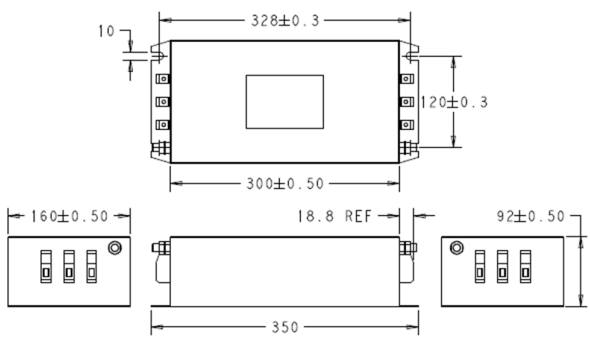
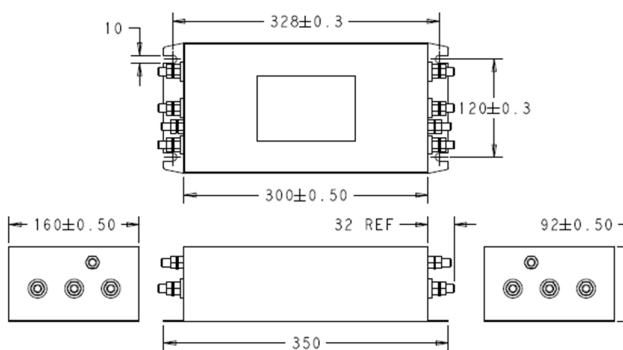
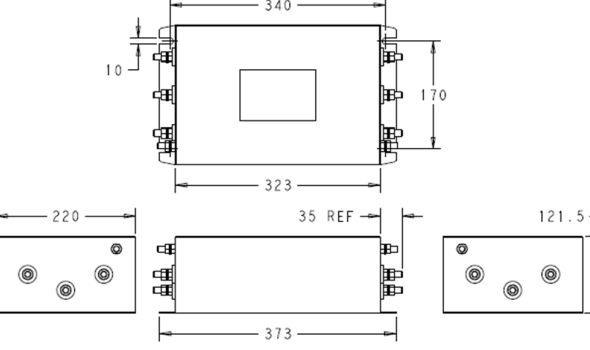
2376467-1  
Rev A  
Date: 1-Jul-2020

Dimensions in  
millimetres

Dimensions Shown for  
reference purposes only.  
Specifications subject to  
change

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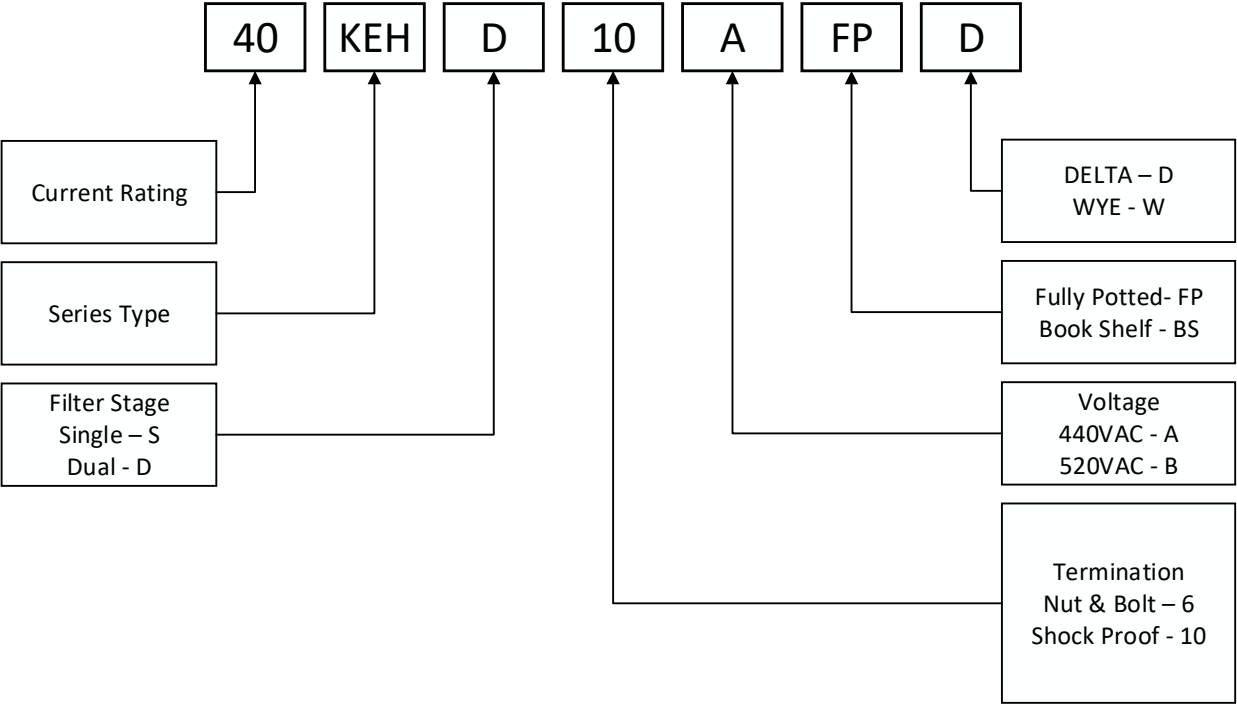
Case Dimensions

| 10A to 60A Shock Proof Types                                                       | 80A to 100A Shock Proof Types                                                       |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|   |   |
| 150A Nut & Bolt Type                                                               | 200A to 250A Nut & Bolt Types                                                       |
|  |  |

All dimensions in mm; Tolerances according: ISO2768-m



## How to Order



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