

# AHV SERIES

## THREE PHASE VERY HIGH PERFORMANCE EMI FILTER

### Dual stage delta configuration

#### INTRODUCTION

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

#### APPLICATION

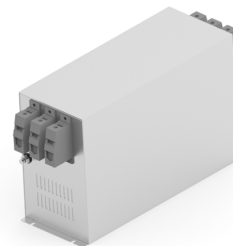
- IT power distribution network
- Three phase drives
- Renewable energy systems
- Process automation equipments
- Energy conversion devices

#### FEATURES

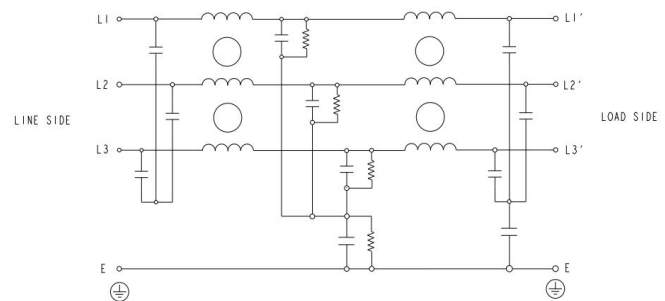
- Superior performance
- Compact
- Low leakage current
- Book shelf mounting

#### APPROVALS & COMPLIANCE

- UL recognized as per UL 60939-3 and CSA22.2 No 8



STANDARD



TYPICAL CIRCUIT  
DIAGRAM

### Specifications

| Electrical Characteristics  |                                      |
|-----------------------------|--------------------------------------|
| Agency Rated Voltage        | Line to Line: 760/750VAC             |
| Current Ratings             | 7A to 180A @ 40°C                    |
| Operating Frequency         | 50/60Hz                              |
| High Potential Test Voltage | Line to Ground: 3535VDC for 1 Minute |
|                             | Line to Line: 3268VDC for 1 Minute   |
| Overload Capability         | 135% of Rated current for 15 minutes |

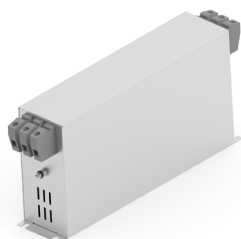
## AHV Series

### Dual Stage Delta Configuration

| Functional Characteristics              |                          |
|-----------------------------------------|--------------------------|
| Operating Temperature Range             | -25°C to +85°C           |
| Climatic Category                       | 25/85/21                 |
| Termination (Depends on Current Rating) | Quick Connect 7A to 180A |
| Flammability Corresponding to           | UL 94 V-0                |

| Reference Standards     |                              |
|-------------------------|------------------------------|
| Design Corresponding to | UL 60939-3 and CSA 22.2 No 8 |

### Selection Table - Standard Version



| TE Ordering Number | Catalog Number | Rated Current @40°C | Rated Voltage @40°C | Leakage Current (mA) | Weight (Kgs) | Termination |
|--------------------|----------------|---------------------|---------------------|----------------------|--------------|-------------|
| 2405080-1          | 7 AHV D BS     | 7A                  | 760                 | 5mA                  | 2            | 1           |
| 2405080-2          | 10 AHV D BS    | 10A                 | 760                 | 5mA                  | 2            | 1           |
| 2405080-3          | 16 AHV D BS    | 16A                 | 760                 | 5mA                  | 3            | 1           |
| 2405080-4          | 20 AHV D BS    | 20A                 | 760                 | 5mA                  | 3            | 1           |
| 2405080-5          | 25 AHV D BS    | 25A                 | 760                 | 5mA                  | 3            | 1           |
| 2405080-6          | 30 AHV D BS    | 30A                 | 760                 | 5mA                  | 4            | 1           |
| 2405080-7          | 42 AHV D BS    | 42A                 | 760                 | 5mA                  | 4            | 1           |
| 2405080-8          | 55 AHV D BS    | 55A                 | 760                 | 5mA                  | 4            | 1           |
| 2405080-9          | 63 AHV D BS    | 63A                 | 760                 | 6mA                  | 5            | 1           |
| 1-2405080-0        | 75 AHV D BS    | 75A                 | 760                 | 6mA                  | 5            | 1           |
| 1-2405080-1        | 80 AHV D BS    | 80A                 | 760                 | 6mA                  | 5            | 1           |
| 1-2405080-2        | 90 AHV D BS    | 90A                 | 760                 | 6mA                  | 6            | 2           |
| 1-2405080-3        | 100 AHV D BS   | 100A                | 760                 | 6mA                  | 6            | 2           |
| 1-2405080-4        | 130 AHV D BS   | 130A                | 760                 | 6mA                  | 7            | 3           |
| 1-2405080-5        | 150 AHV D BS   | 150A                | 760                 | 6mA                  | 8            | 3           |
| 1-2405080-6        | 180 AHV D BS   | 180A                | 760                 | 6mA                  | 12           | 4           |

AHV Series

Dual Stage Delta Configuration

Termination Type: Connectors Cross Section

|                                                                                   |          |         |         |         |
|-----------------------------------------------------------------------------------|----------|---------|---------|---------|
|  | 1        | 2       | 3       | 4       |
| Range; Flexible (mm²)                                                             | 0.5 - 16 | 10 - 25 | 16 - 50 | 35 - 95 |

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

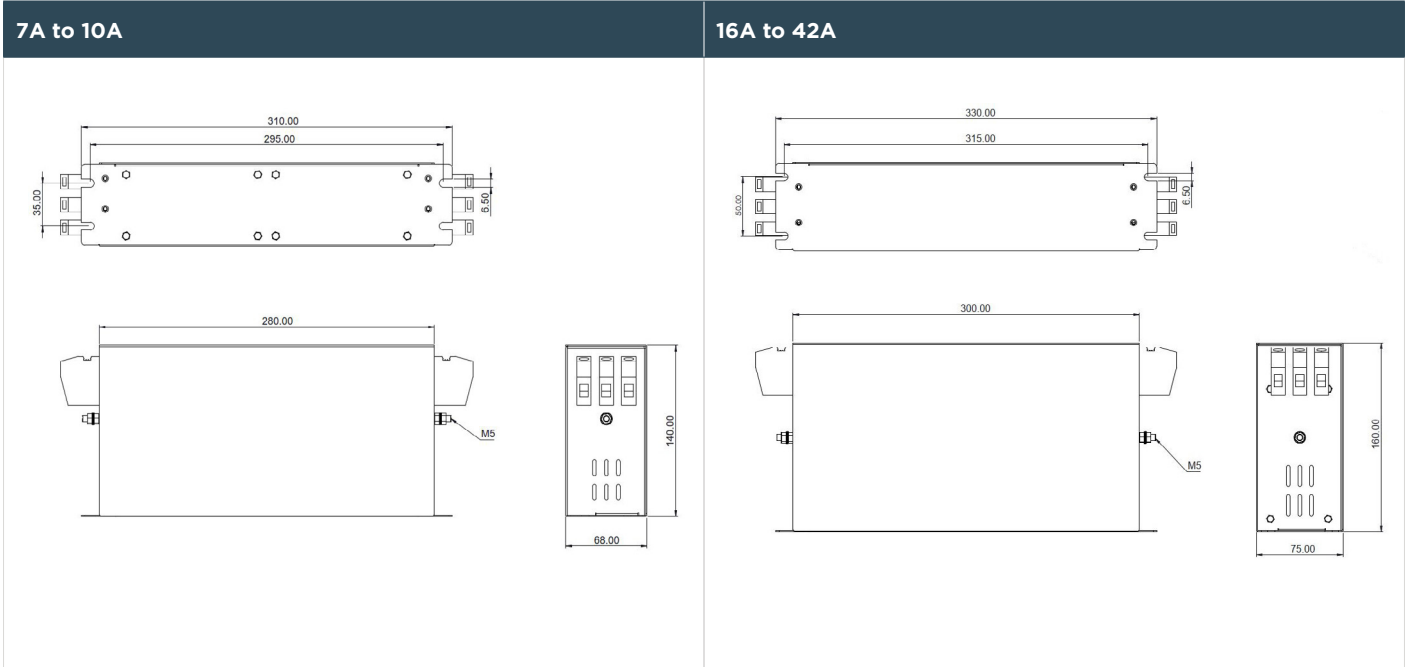
|                |      | Common Mode 50Ω/50Ω |       |      |      |      |      |      |      |      |
|----------------|------|---------------------|-------|------|------|------|------|------|------|------|
|                |      | Frequency in MHz    |       |      |      |      |      |      |      |      |
|                |      | 0.01                | 0.05  | 0.15 | 0.5  | 1    | 3    | 5    | 10   | 30   |
| Current Rating | 7A   | 14.1                | 28.7  | 64   | 78.3 | 77   | 68.3 | 60   | 48.1 | 37.8 |
|                | 10A  | 12                  | 21    | 60   | 80   | 70   | 62   | 56   | 45   | 25   |
|                | 16A  | 10.5                | 15.6  | 58.3 | 97.9 | 79.6 | 61.4 | 54   | 44.2 | 19.5 |
|                | 20A  | 9                   | 12    | 55   | 80   | 75   | 57   | 52   | 42   | 15   |
|                | 25A  | 8.28                | 10.9  | 50.4 | 76.6 | 80.1 | 62.6 | 55.6 | 44.5 | 30.4 |
|                | 30A  | 5.6                 | 7     | 35   | 60   | 68   | 57   | 44   | 32   | 18   |
|                | 42A  | 2.3                 | 5.6   | 27.2 | 60   | 65   | 52   | 42   | 30   | 20   |
|                | 55A  | 1.03                | 9.65  | 25.7 | 58.9 | 73.4 | 63.4 | 56.4 | 47.6 | 44.8 |
|                | 63A  | 0.88                | 5.2   | 23.4 | 57   | 68   | 58   | 52   | 42   | 38   |
|                | 75A  | 0.75                | 3.5   | 19.5 | 51   | 62   | 55   | 48   | 35   | 22   |
|                | 80A  | 0.52                | 2     | 10   | 35   | 40   | 47   | 41   | 30   | 18   |
|                | 90A  | 0.3                 | 1.2   | 6    | 28   | 41   | 50   | 40   | 28   | 20   |
|                | 100A | 0.178               | 0.794 | 4.29 | 18.3 | 30.5 | 51.2 | 45.9 | 39.9 | 25.5 |
|                | 130A | 0.16                | 0.9   | 4.5  | 20   | 32   | 55   | 40   | 32   | 20   |
|                | 150A | 0.15                | 1.1   | 4.5  | 22   | 35   | 55   | 38   | 30   | 21   |
|                | 180A | 0.162               | 1.27  | 4.73 | 33.5 | 41.6 | 54.4 | 48.3 | 40.8 | 25.3 |

AHV Series

Dual Stage Delta Configuration

|                |      | Differential Mode 50Ω/50Ω |      |      |      |      |       |      |      |      |
|----------------|------|---------------------------|------|------|------|------|-------|------|------|------|
|                |      | Frequency in MHz          |      |      |      |      |       |      |      |      |
|                |      | 0.01                      | 0.05 | 0.15 | 0.5  | 1    | 3     | 5    | 10   | 30   |
| Current Rating | 7A   | 16.2                      | 34.7 | 60.4 | 58.4 | 57.9 | 56.6  | 55.7 | 54.4 | 46.2 |
|                | 10A  | 18                        | 28   | 55   | 56   | 62   | 60    | 57   | 50   | 42   |
|                | 16A  | 17.1                      | 22.9 | 70.1 | 77.3 | 80.4 | 80.8  | 79.6 | 79.5 | 57.6 |
|                | 20A  | 18                        | 20   | 55   | 50   | 62   | 65    | 60   | 50   | 32   |
|                | 25A  | 17.7                      | 18.6 | 34.7 | 23.5 | 17.5 | 12.2  | 7.4  | 9.6  | 25.5 |
|                | 30A  | 15                        | 18   | 27   | 62   | 68   | 20    | 18   | 15   | 12   |
|                | 42A  | 12                        | 25   | 30   | 65   | 68   | 18    | 14   | 13   | 10   |
|                | 55A  | 18.2                      | 27   | 32.6 | 80.3 | 97.4 | 78.6  | 75.3 | 72.4 | 63.8 |
|                | 63A  | 16                        | 25   | 29   | 75   | 80   | 70    | 68   | 64   | 42   |
|                | 75A  | 13.6                      | 22.3 | 27   | 70   | 76   | 67    | 63   | 61   | 37   |
|                | 80A  | 10                        | 18   | 24   | 67   | 70   | 55    | 50   | 47   | 31   |
|                | 90A  | 12                        | 22   | 28   | 57   | 60   | 50    | 45   | 38   | 24   |
|                | 100A | 29                        | 40.4 | 61.4 | 65   | 53.8 | 45    | 42.6 | 40.1 | 32.3 |
|                | 130A | 25                        | 35   | 58   | 67   | 55   | 47    | 41   | 38   | 30   |
|                | 150A | 25                        | 37   | 60   | 63   | 56   | 48    | 42   | 40   | 27   |
|                | 180A | 29                        | 38.3 | 65   | 65   | 58.4 | 50.87 | 48.4 | 45.8 | 37   |

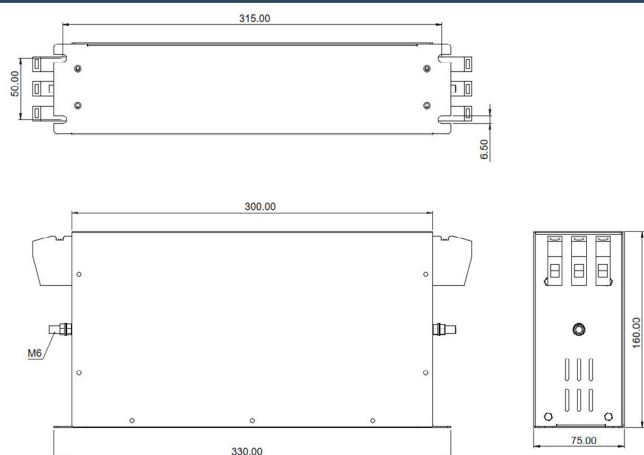
Mechanical Diagram



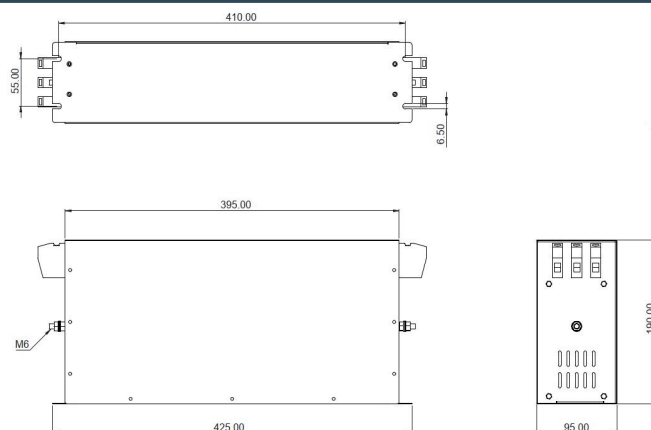
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## Dual Stage Delta Configuration

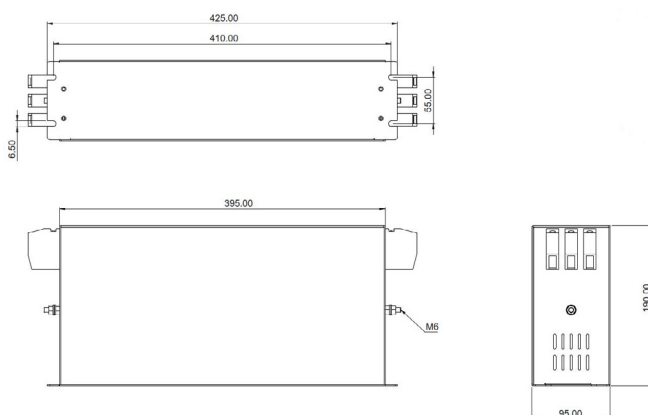
### 55A



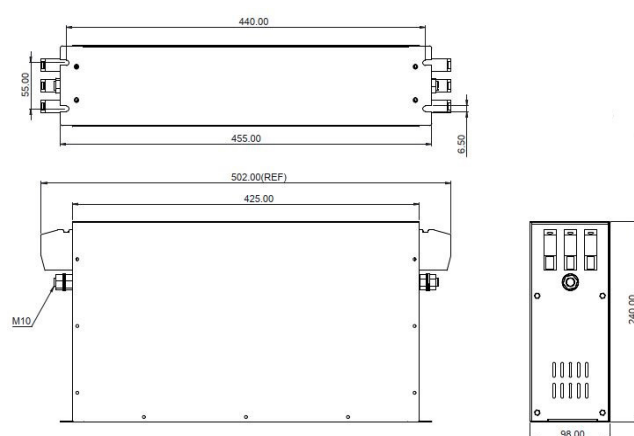
### 63A to 80A



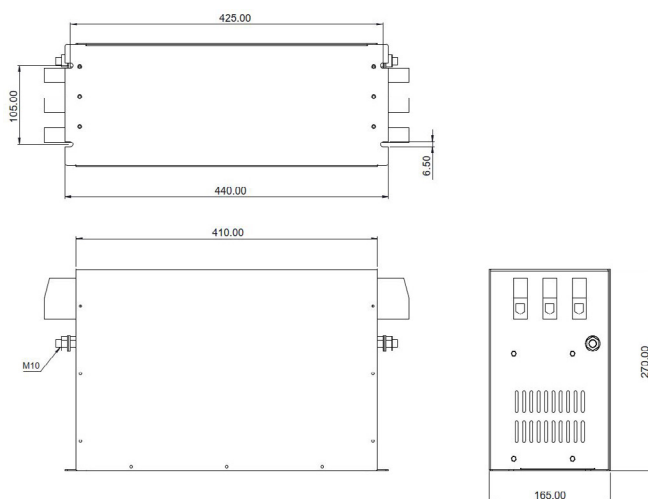
### 90A



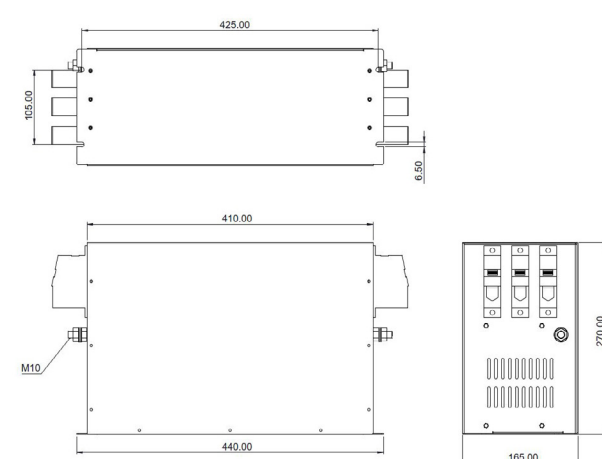
### 100A



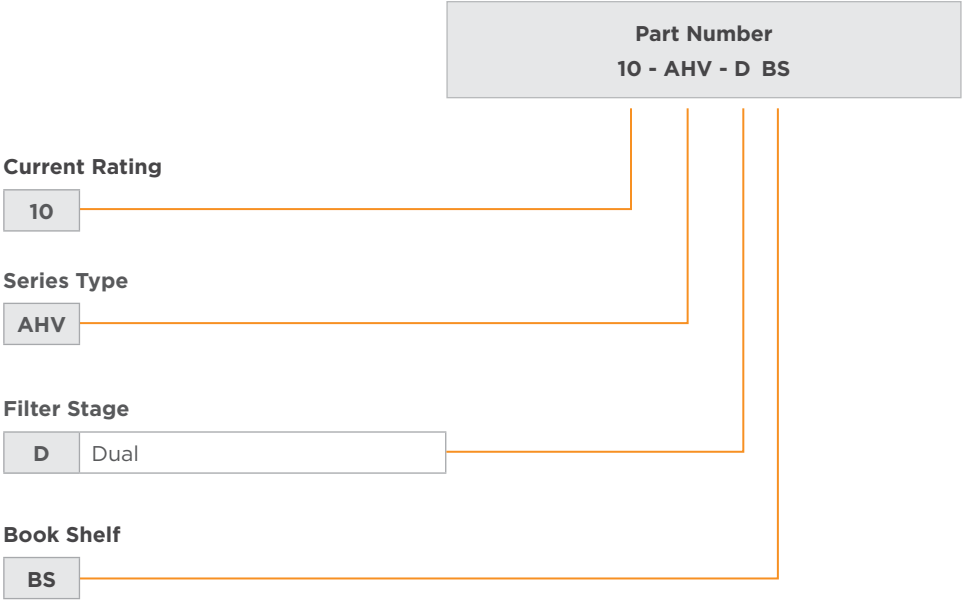
### 130A and 150A



### 180A



HOW TO ORDER



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08/22 TJ

