

# AHV SERIES

## THREE PHASE HIGH PERFORMANCE EMI FILTER

### Single stage delta configuration

#### INTRODUCTION

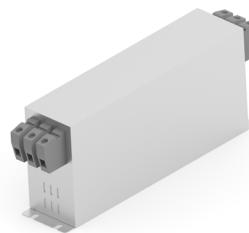
Bookshelf design for motor drive applications requiring minimum space and convenient installation with superior performance at significant interference levels

#### APPLICATION

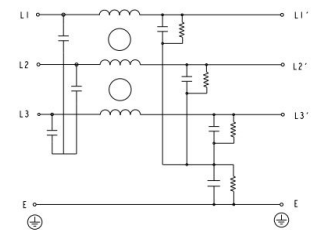
- IT power distribution network
- Three phase drives
- Renewable energy systems
- Process automation equipments
- Energy conversion devices

#### FEATURES

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



STANDARD



TYPICAL CIRCUIT  
DIAGRAM

#### APPROVALS AND COMPLIANCE

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



### 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% Rated current for 15 minutes    |

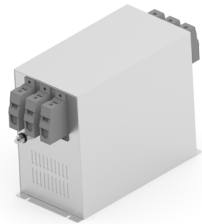
## AHV Series

### Single 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 Type |
|--------------------|----------------|---------------------|---------------------|----------------------|--------------|------------------|
| 2405077-1          | 7 AHV S BS     | 7A                  | 760                 | 2.5mA                | 2            | 1                |
| 2405077-2          | 10 AHV S BS    | 10A                 | 760                 | 2.5mA                | 2            | 1                |
| 2405077-3          | 16 AHV S BS    | 16A                 | 760                 | 2.5mA                | 3            | 1                |
| 2405077-4          | 20 AHV S BS    | 20A                 | 760                 | 2.5mA                | 3            | 1                |
| 2405077-5          | 25 AHV S BS    | 25A                 | 760                 | 2.5mA                | 3            | 1                |
| 2405077-6          | 30 AHV S BS    | 30A                 | 760                 | 2.5mA                | 4            | 1                |
| 2405077-7          | 40 AHV S BS    | 40A                 | 760                 | 2.5mA                | 4            | 1                |
| 2405077-8          | 50 AHV S BS    | 50A                 | 760                 | 2.5mA                | 4            | 1                |
| 2405077-9          | 63 AHV S BS    | 63A                 | 760                 | 3mA                  | 5            | 1                |
| 1-2405077-0        | 75 AHV S BS    | 75A                 | 760                 | 3mA                  | 5            | 1                |
| 1-2405077-1        | 80 AHV S BS    | 80A                 | 760                 | 3mA                  | 5            | 1                |
| 1-2405077-2        | 90 AHV S BS    | 90A                 | 760                 | 3mA                  | 6            | 2                |
| 1-2405077-3        | 100 AHV S BS   | 100A                | 760                 | 3mA                  | 6            | 2                |
| 1-2405077-4        | 125 AHV S BS   | 125A                | 760                 | 3mA                  | 7            | 3                |
| 1-2405077-5        | 150 AHV S BS   | 150A                | 760                 | 3mA                  | 8            | 3                |
| 1-2405077-6        | 180 AHV S BS   | 180A                | 760                 | 3mA                  | 12           | 4                |

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

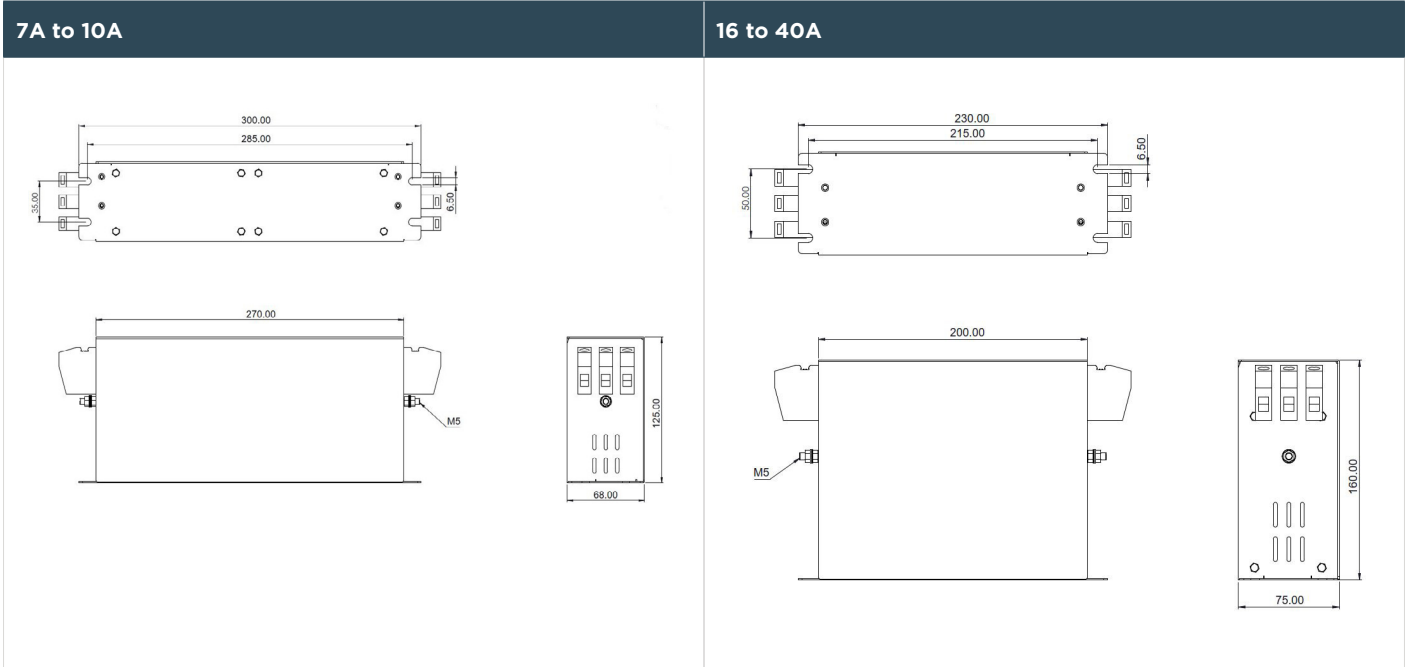
|                |      | Common Mode 50Ω/50Ω |      |      |      |      |      |      |      |      |
|----------------|------|---------------------|------|------|------|------|------|------|------|------|
|                |      | Frequency in MHz    |      |      |      |      |      |      |      |      |
|                |      | 0.01                | 0.05 | 0.15 | 0.5  | 1    | 3    | 5    | 10   | 30   |
| Current Rating | 7A   | 10.3                | 24.9 | 36.3 | 46.9 | 45.9 | 49.1 | 58.5 | 38.5 | 16.6 |
|                | 10A  | 8.0                 | 22.0 | 32.0 | 40.0 | 39.0 | 42.0 | 52.0 | 30.0 | 10.0 |
|                | 16A  | 6.0                 | 20.0 | 30.0 | 35.0 | 37.0 | 39.0 | 40.0 | 25.0 | 15.0 |
|                | 20A  | 4.0                 | 18.0 | 26.0 | 35.0 | 34.0 | 37.0 | 41.0 | 23.0 | 14.0 |
|                | 25A  | 3.9                 | 17.5 | 28.8 | 34.6 | 34.9 | 38.2 | 46.4 | 30.2 | 16.1 |
|                | 30A  | 2.5                 | 16.0 | 26.0 | 31.0 | 32.0 | 34.0 | 40.0 | 30.2 | 15.0 |
|                | 40A  | 1.0                 | 10.0 | 20.0 | 29.0 | 30.0 | 37.0 | 52.0 | 32.0 | 17.0 |
|                | 50A  | 0.0                 | 7.2  | 16.8 | 27.9 | 32.6 | 42.1 | 55.9 | 37.1 | 20.9 |
|                | 63A  | 0.3                 | 7.2  | 14.0 | 25.0 | 30.0 | 38.0 | 49.0 | 35.0 | 19.0 |
|                | 75A  | 0.1                 | 3.6  | 12.9 | 23.7 | 25.9 | 35.1 | 48.4 | 33.7 | 22.1 |
|                | 80A  | 0.2                 | 2.5  | 8.0  | 10.0 | 21.0 | 31.0 | 42.0 | 25.0 | 13.0 |
|                | 90A  | 0.1                 | 1.0  | 5.0  | 7.0  | 18.0 | 24.0 | 34.0 | 22.0 | 15.0 |
|                | 100A | 0.1                 | 0.5  | 2.8  | 8.1  | 13.2 | 25.1 | 44.5 | 24.3 | 14.6 |
|                | 125A | 0.1                 | 0.5  | 3.0  | 6.0  | 14.0 | 24.0 | 40.0 | 25.0 | 12.0 |
|                | 150A | 0.1                 | 0.3  | 4.0  | 7.0  | 12.0 | 26.0 | 38.0 | 20.0 | 10.0 |
|                | 180A | 0.1                 | 0.5  | 4.6  | 15.5 | 18.5 | 30.4 | 43.1 | 23.4 | 13.9 |

AHV Series

Single 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   | 13.9                      | 33.2 | 66.5 | 68.4 | 73.2 | 88.8 | 78.1 | 77.9 | 46.1 |
|                | 10A  | 10.0                      | 25.0 | 58.0 | 65.0 | 66.0 | 79.0 | 70.0 | 65.0 | 36.0 |
|                | 16A  | 7.0                       | 20.0 | 50.0 | 67.0 | 61.0 | 72.0 | 65.0 | 61.0 | 25.0 |
|                | 20A  | 11.0                      | 19.0 | 48.0 | 70.0 | 63.0 | 65.0 | 60.0 | 58.0 | 22.0 |
|                | 25A  | 14.7                      | 21.5 | 54.7 | 77.5 | 65.5 | 56.3 | 54.3 | 55.0 | 18.2 |
|                | 30A  | 13.0                      | 25.0 | 40.0 | 65.0 | 67.0 | 46.0 | 50.0 | 48.0 | 24.0 |
|                | 40A  | 10.0                      | 24.0 | 34.0 | 65.0 | 68.0 | 43.0 | 50.0 | 46.0 | 27.0 |
|                | 50A  | 14.8                      | 26.6 | 38.8 | 64.3 | 58.2 | 49.6 | 47.4 | 44.6 | 36.0 |
|                | 63A  | 16.0                      | 29.0 | 42.0 | 55.0 | 50.0 | 41.0 | 45.0 | 40.0 | 30.0 |
|                | 75A  | 23.7                      | 34.0 | 71.8 | 64.0 | 55.1 | 46.3 | 43.8 | 41.1 | 32.3 |
|                | 80A  | 18.0                      | 24.0 | 64.0 | 42.0 | 38.0 | 40.0 | 31.0 | 26.0 | 18.0 |
|                | 90A  | 19.0                      | 26.0 | 60.0 | 47.0 | 40.0 | 35.0 | 32.0 | 29.0 | 18.0 |
|                | 100A | 25.7                      | 39.1 | 62.1 | 48.1 | 41.3 | 33.4 | 30.9 | 28.3 | 21.9 |
|                | 125A | 18.0                      | 30.0 | 68.0 | 37.0 | 44.0 | 35.0 | 25.0 | 22.0 | 16.0 |
|                | 150A | 20.0                      | 28.0 | 60.0 | 40.0 | 33.0 | 29.0 | 21.0 | 18.0 | 14.0 |
|                | 180A | 25.5                      | 38.4 | 64.0 | 47.0 | 39.4 | 31.2 | 28.7 | 25.9 | 17.6 |

Mechanical Diagram

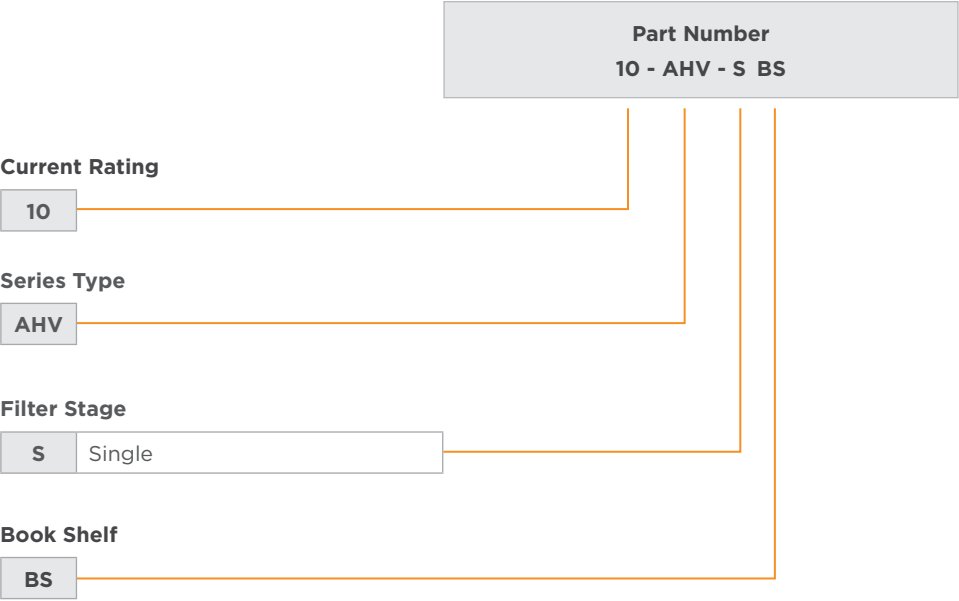


AHV Series

Single Stage Delta Configuration

|                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>50A</div> <p>Top view dimensions: 215.00 (width), 50.00 (height), 6.50 (depth).</p> <p>Front view dimensions: 200.00 (width), 230.00 (base width), M6 (mounting hole).</p> <p>Rear view dimensions: 160.00 (height), 75.00 (width).</p>  | <div>63A to 80A</div> <p>Top view dimensions: 295.00 (width), 55.00 (height), 6.50 (depth).</p> <p>Front view dimensions: 280.00 (width), 310.00 (base width), M6 (mounting hole).</p> <p>Rear view dimensions: 190.00 (height), 95.00 (width).</p>                        |
| <div>90A</div> <p>Top view dimensions: 310.00 (width), 295.00 (inner width), 55.00 (height), 6.50 (depth).</p> <p>Front view dimensions: 280.00 (width), M6 (mounting hole).</p> <p>Rear view dimensions: 190.00 (height), 95.00 (width).</p> | <div>100A</div> <p>Top view dimensions: 440.00 (width), 455.00 (inner width), 55.00 (height), 6.50 (depth).</p> <p>Front view dimensions: 502.00(REF) (width), 425.00 (inner width), M10 (mounting hole).</p> <p>Rear view dimensions: 240.00 (height), 98.00 (width).</p> |
| <div>125A and 150A</div> <p>Top view dimensions: 105.00 (height), 6.50 (depth).</p> <p>Front view dimensions: 310.00 (width), 340.00 (base width), M10 (mounting hole).</p> <p>Rear view dimensions: 205.00 (height), 165.00 (width).</p>     | <div>180A</div> <p>Top view dimensions: 325.00 (width), 105.00 (height), 6.50 (depth).</p> <p>Front view dimensions: 310.00 (width), 340.00 (base width), M10 (mounting hole).</p> <p>Rear view dimensions: 265.00 (height), 165.00 (width).</p>                           |

HOW TO ORDER



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