



# AFQm-4WF-100R-400

AFQm-4WF-100R-400, Active multifunctionfilter, 4 wires

Code: R7RR2F.

- > System: 4 wires, 230...400 V
- > Phase current (A): 100
- > Peak current (A): 200
- > Max.neutral current (A): 300
- > Mounting: Rack

## Specifications

### AC power supply

|                       |                             |
|-----------------------|-----------------------------|
| Installation category | 4 kV, CAT III Class 1       |
| Consumption           | 2070 W                      |
| Frequency             | 50 / 60 Hz (± 5 %)          |
| Nominal voltage       | 208 ... 400 V~ F-F (± 10 %) |

### Mechanical characteristics

|                                  |                                                                                                                            |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Size (mm) width x height x depth | 482.5 x 266 x 714.5 (mm)                                                                                                   |
| Envelope                         | Galvanized steel 1,5 mm                                                                                                    |
| Connection type                  | Network: M8 ring terminal, Ground: M10 ring terminal, Current: 6-pole connector, RS-485: 3-pole connector, Ethernet: RJ-45 |
| Weight (kg)                      | 55                                                                                                                         |

### Environmental characteristics

|                                          |                |
|------------------------------------------|----------------|
| Protection class                         | IP 20          |
| Relative humidity (without condensation) | 0 ... 95 %     |
| Storage temperature                      | -20 ... +50 °C |
| Working temperature                      | -10 ... +45 °C |

### Electrical characteristics

|                                            |             |
|--------------------------------------------|-------------|
| Current crest factor                       | 2:1         |
| Maximum phase current                      | 100 A (RMS) |
| Maximum neutral current                    | 300 A (RMS) |
| Rated diversity factor (RDF), simultaneity | 1           |
| Earthing system                            | TN, TT      |

### Current measurement circuit

|                      |                 |
|----------------------|-----------------|
| Transformation ratio | 5 ... 5000 / 5A |
|----------------------|-----------------|

### Communications

|                   |                                           |
|-------------------|-------------------------------------------|
| Fieldbus (ModBus) | RS-485                                    |
| Protocol          | Modbus RTU / Ethernet: TCP/IP, Modbus TCP |
| Speed             | 9600                                      |



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## Standards

|                                       |                                                                                      |
|---------------------------------------|--------------------------------------------------------------------------------------|
| Electrical safety, Maximum height (m) | 3000 (2000 m without performance degradation)                                        |
| Standards                             | IEC 62477-1:2012, IEC 55011:2011, IEC 61000-6-2, IEC 61000-6-4:2007,IEC 61439-1:2011 |

## User interface

|              |                             |
|--------------|-----------------------------|
| Display type | TFT color, 3.5" touchscreen |
|--------------|-----------------------------|

## Measurement accuracy

|                         |            |
|-------------------------|------------|
| Voltage harmonics (THD) | 25 % (max) |
|-------------------------|------------|

## Features / performance

|                                    |                                                                                        |
|------------------------------------|----------------------------------------------------------------------------------------|
| Phase compensation                 | Selectable                                                                             |
| Reactive power compensation (Kvar) | selectable                                                                             |
| Filtering / Response time          | 2° ... 50° harmonic (selectable) / < 100 µs                                            |
| Parallel assembly/installation     | Up to 100 units, with different gauges. Transformer connection only to the Master unit |
| Priority scheduling                | selectable                                                                             |

## Power supply output

|       |          |
|-------|----------|
| Power | 69000 VA |
|-------|----------|

## AFQm

| CODE                                 | TYPE               | System               | Phase current (A) | Peak current (A) | Max.neutral current (A) |
|--------------------------------------|--------------------|----------------------|-------------------|------------------|-------------------------|
| 3 wires 480 V, Wall-mounted cabinet  |                    |                      |                   |                  |                         |
| R7MM0F.                              | AFQm-3WF-030M-480  | 3 wires, 230...480 V | 30                | 60               |                         |
| R7MMAF.                              | AFQm-3WF-075M-480  | 3 wires, 230...480 V | 75                | 150              |                         |
| R7MM2F.                              | AFQm-3WF-100M-480  | 3 wires, 230...480 V | 100               | 200              |                         |
| 4 wires 400 V, Wall-mounted cabinet  |                    |                      |                   |                  |                         |
| R7RM0F.                              | AFQm -4WF-030M-400 | 4 wires, 230...400 V | 30                | 60               | 90                      |
| R7RMAF.                              | AFQm -4WF-075M-400 | 4 wires, 230...400 V | 75                | 150              | 225                     |
| R7RM2F.                              | AFQm-4WF-100M-400  | 4 wires, 230...400 V | 100               | 200              | 300                     |
| 3 wires 480 V, Floor-mounted cabinet |                    |                      |                   |                  |                         |
| R7MF2F.                              | AFQm-3WF-100C-480  | 3 wires, 230...480 V | 100               | 200              |                         |
| R7MF3F.                              | AFQm-3WF-200C-480  | 3 wires, 230...480 V | 200               | 400              |                         |
| R7MF4F.                              | AFQm-3WF-300C-480  | 3 wires, 230...480 V | 300               | 600              |                         |
| R7MF5F.                              | AFQm-3WF-400C-480  | 3 wires, 230...480 V | 400               | 800              |                         |
| 3 wires 690 V, Floor-mounted cabinet |                    |                      |                   |                  |                         |
| R7JF6F.                              | AFQm-3WF-070C-690  | 3 wires, 400...690 V | 70                | 140              |                         |
| R7JF7F.                              | AFQm-3WF-140C-690  | 3 wires, 400...690 V | 140               | 280              |                         |



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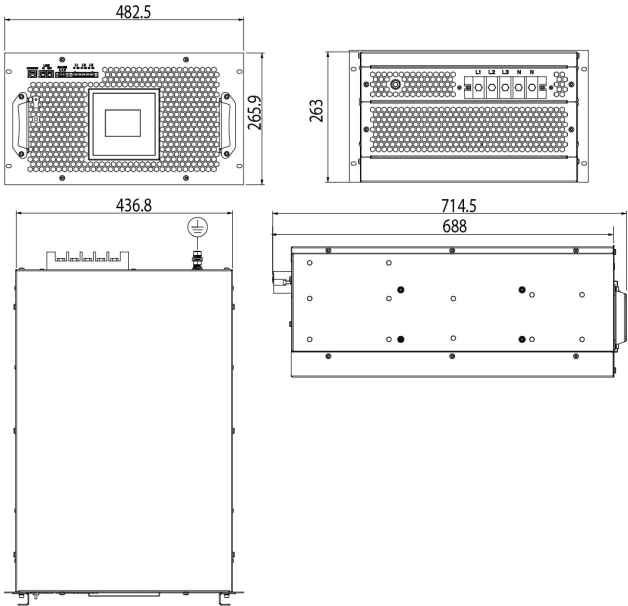
| CODE                                 | TYPE              | System               | Phase current (A) | Peak current (A) | Max.neutral current (A) |
|--------------------------------------|-------------------|----------------------|-------------------|------------------|-------------------------|
| R7JF8F.                              | AFQm-3WF-210C-690 | 3 wires, 400...690 V | 210               | 420              |                         |
| R7JF9F.                              | AFQm-3WF-280C-690 | 3 wires, 400...690 V | 280               | 560              |                         |
| 4 wires 400 V, Floor-mounted cabinet |                   |                      |                   |                  |                         |
| R7RF2F.                              | AFQm-4WF-100C-400 | 4 wires, 230...400 V | 100               | 200              | 300                     |
| R7RF3F.                              | AFQm-4WF-200C-400 | 4 wires, 230...400 V | 200               | 400              | 600                     |
| R7RF4F.                              | AFQm-4WF-300C-400 | 4 wires, 230...400 V | 300               | 600              | 900                     |
| R7RF5F.                              | AFQm-4WF-400C-400 | 4 wires, 230...400 V | 400               | 800              | 1200                    |
| 4 wires 550 V, Floor-mounted cabinet |                   |                      |                   |                  |                         |
| R7NF6F.                              | AFQm-4WF-070C-550 | 4 wires, 400...550 V | 70                | 140              | 210                     |
| R7NF7F.                              | AFQm-4WF-140C-550 | 4 wires, 400...550 V | 140               | 280              | 420                     |
| R7NF8F.                              | AFQm-4WF-210C-550 | 4 wires, 400...550 V | 210               | 420              | 630                     |
| R7NF9F.                              | AFQm-4WF-280C-550 | 4 wires, 400...550 V | 280               | 560              | 840                     |
| Rack module                          |                   |                      |                   |                  |                         |
| R7JR6F.                              | AFQm-3WF-070R-690 | 3 wires, 400...690 V | 70                | 140              |                         |
| R7NR6F.                              | AFQm-4WF-070R-550 | 4 wires, 400...550 V | 70                | 140              | 210                     |
| R7MR2F.                              | AFQm-3WF-100R-480 | 3 wires, 230...480 V | 100               | 200              |                         |
| R7RR2F.                              | AFQm-4WF-100R-400 | 4 wires, 230...400 V | 100               | 200              | 300                     |



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## Dimensions



## Connections

