

# AXL F PM EF 1F - Special function module



2702671

<https://www.phoenixcontact.com/us/products/2702671>

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Axioline F, power measurement module, input voltage: up to 400 V AC (phase/neutral) or 690 V AC (phase/phase), input current: up to 5 A AC, transmission speed in local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connectors

## Product description

The module is designed for use within an Axioline F station. The power measurement module is used for direct measurement of AC currents up to 5 A, including neutral conductor current and phase conductor voltages up to 400 V AC (phase to neutral conductor) or outer conductor voltages up to 690 V AC (phase to phase). The module is used to perform analysis of AC networks. You can use it in distribution systems for measuring current, voltage, and power, as well as detecting distortion and harmonics. You can use the power measurement module in two operating modes. In "R.m.s. Values" mode, the module acquires mains variables in three-phase mains. Mains variables are phase currents, neutral conductor current, phase and outer conductor voltages, real power, reactive power, and apparent power as well as the power factors of phases, energy flow directions, and frequency. In "Instantaneous Values" mode, the module acquires the instantaneous (scanning) values of a measuring signal. This measuring mode is used to analyze the waveform of the measuring signal.

## Your advantages

- 4 inputs, 0 A AC ... 5 A AC for phase currents and neutral conductor current
- 3 inputs for outer conductor voltages up to 690 V AC, supports direct connection
- Harmonics analysis
- Determination of maximum values
- Energy meter
- Process data update < 500  $\mu$ s

## Commercial data

Item number	2702671
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI265
Catalog page	Page 91 (C-6-2019)
GTIN	4055626364940
Weight per piece (including packing)	293.9 g
Weight per piece (excluding packing)	222 g
Customs tariff number	85437090
Country of origin	DE

# AXL F PM EF 1F - Special function module

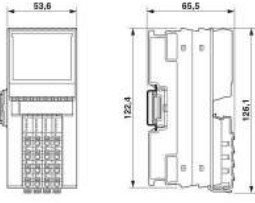


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## Technical data

### Dimensions

Dimensional drawing	
Width	53.6 mm
Height	126.1 mm
Depth	65.5 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Interfaces

#### Axioline F local bus

Number of interfaces	2
Connection method	Bus base module
Transmission speed	100 Mbps

### System properties

#### Module

Input address area	64 Byte
Output address area	0 Byte
Required parameter data	52 Byte
Required configuration data	7 Byte

### Product properties

Type	block modular
Product type	I/O component
Product family	Axioline F
Mounting position	any (no temperature derating)
Operating mode	Process data mode with 32 words

#### Insulation characteristics

Pollution degree	2
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## Electrical properties

Potentials: Axioline F local bus supply ( $U_{BUS}$ )

Supply voltage	5 V DC (via bus base module)
Current draw	max. 80 mA
	typ. 73 mA
Power consumption	max. 400 mW
	typ. 365 mW

## Connection data

Connection technology

Connection name	Axioline F connector
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline F: system and installation" user manual. Only use reinforced or double-insulated conductors with a conductor cross section of 1.5 mm <sup>2</sup> .

Axioline F connector

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline F: system and installation" user manual. Only use reinforced or double-insulated conductors with a conductor cross section of 1.5 mm <sup>2</sup> .
Conductor cross section, rigid	1.5 mm <sup>2</sup>
Conductor cross section, flexible	1.5 mm <sup>2</sup>
Conductor cross section AWG	16
Stripping length	8 mm

## Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (Up to 3000 m above sea level, from HW 01)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

## Standards and regulations

Protection class	II
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## Mounting

Mounting type	DIN rail mounting
Mounting position	any (no temperature derating)

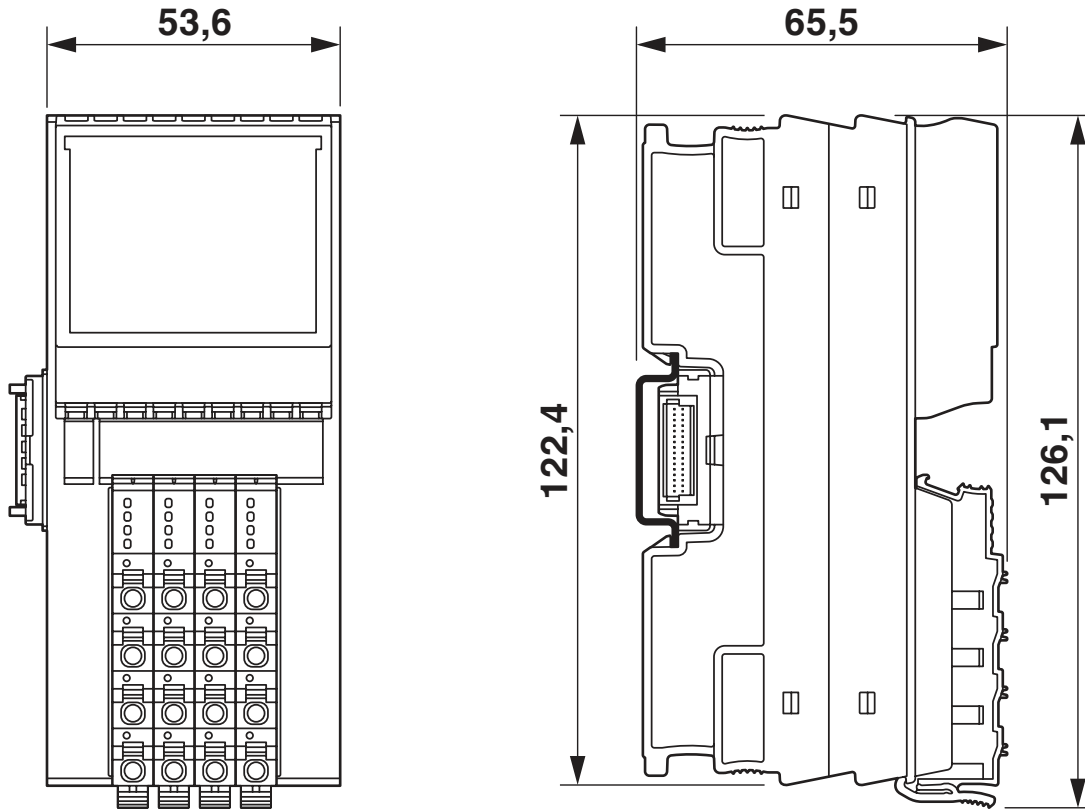
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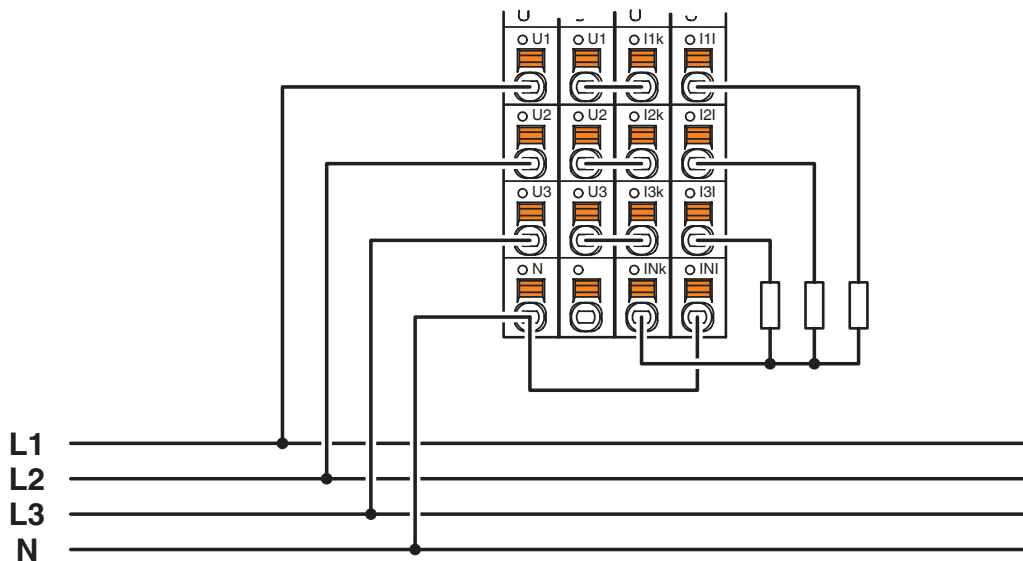
<https://www.phoenixcontact.com/us/products/2702671>

## Drawings

Dimensional drawing



Connection diagram



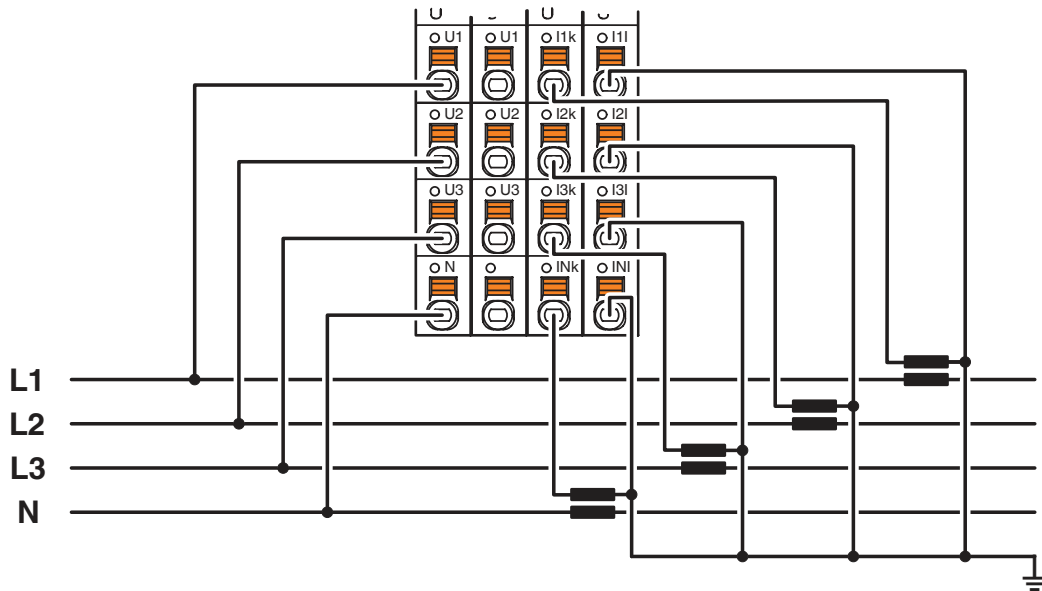
Connection of a 3-phase load for power measurement in star connection with neutral conductor current

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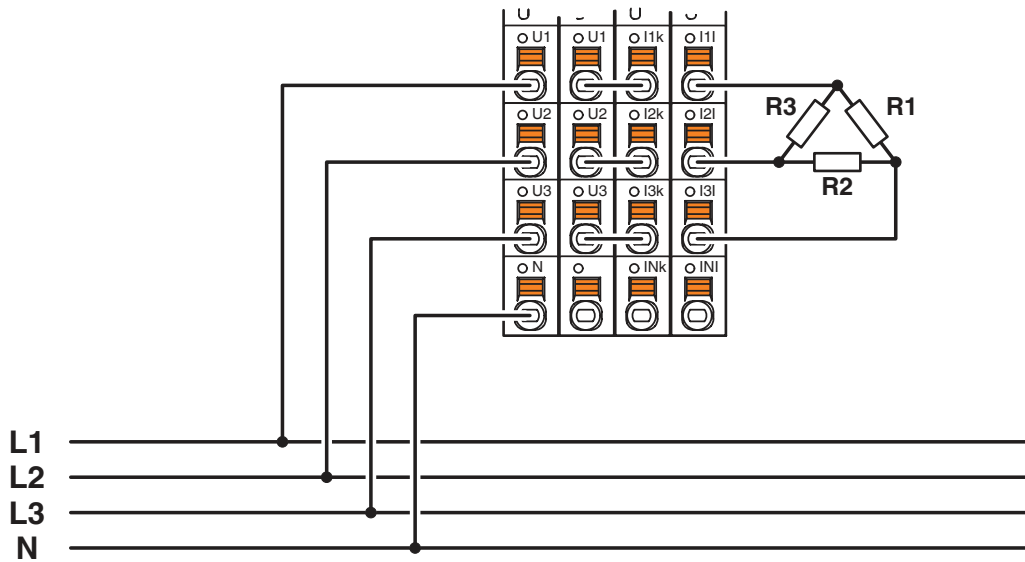
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Connection diagram



Connection of a 4-conductor network with current transformers

Connection diagram



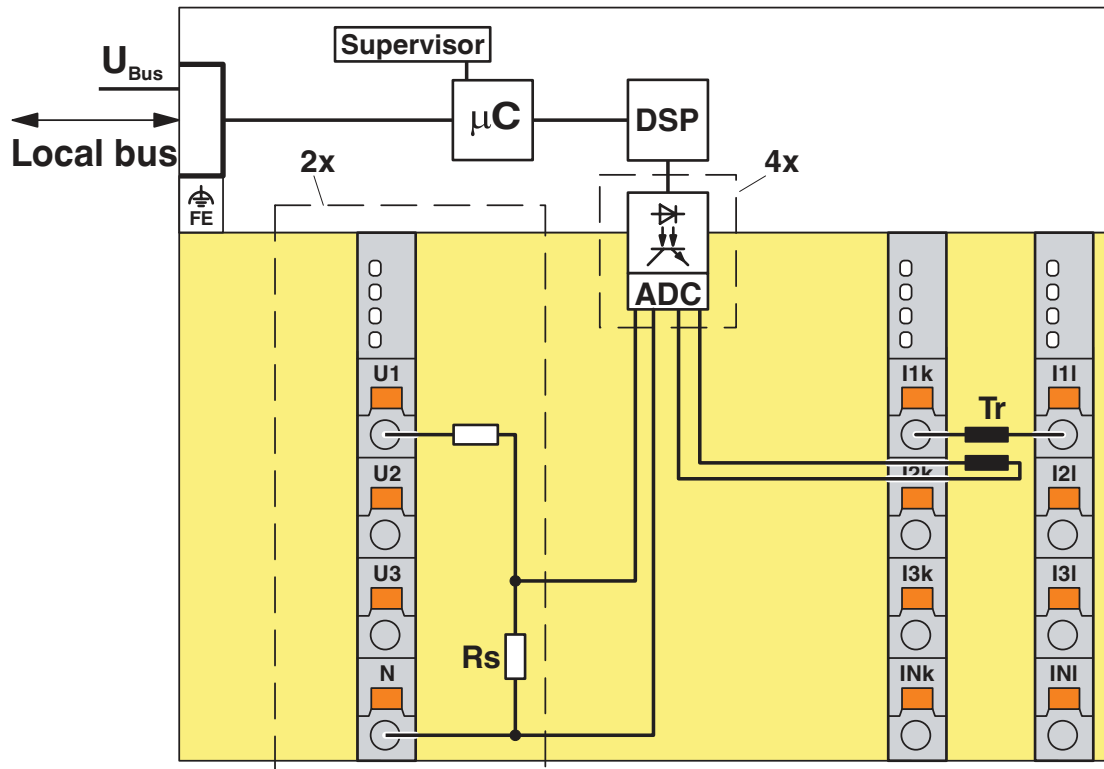
Connection of a 3-phase load for power measurement in delta circuit

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Block diagram



Internal wiring of the terminal points

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2702671>



### UL Listed

Approval ID: FILE E 357804



### cUL Listed

Approval ID: FILE E 357804

### UAE-RoHS

Approval ID: 23-02-63243

### cULus Listed

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## Classifications

### ECLASS

ECLASS-11.0	27242605
ECLASS-12.0	27242605
ECLASS-13.0	27242605

### ETIM

ETIM 8.0	EC001601
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

REACH SVHC	Dechlorane Plus
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

### AXL F BS F - Bus connector

2688129

<https://www.phoenixcontact.com/us/products/2688129>



Axioline F bus base module for housing type F

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### ZB 20,3 AXL UNPRINTED - Zack marker strip

0829579

<https://www.phoenixcontact.com/us/products/0829579>



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

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## ZBF 7,5:UNBEDRUCKT - Zack Marker strip, flat

0809942

<https://www.phoenixcontact.com/us/products/0809942>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 7.5 mm, lettering field size: 5.15 x 7.4 mm, Number of individual labels: 10

## EMT (35X46)R - Insert label

0801604

<https://www.phoenixcontact.com/us/products/0801604>



Insert label, for marking the Axioline F series from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: insert, lettering field size: 35 x 46 mm, Number of individual labels: 500

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