

**ACM-PF, ACM-PF/B
ACM-PF3, ACM-PF3/B**

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**Power factor transducers
ACM-PF in single-phase grid
ACM PF3 in 3-phase grid with symmetrical load**

- measurement sinus and distorted input signal with dominant fundamental wave
- output linear with power factor $\cos \varphi$
- universal power supply 19 – 300V DC a 90 – 250V AC
- variant B loop powered
- input frequency 50 or 60Hz
- isolation input-output-power supply: 4000Vef
- measuring range 0-120% of rated input
- conversion accuracy 0,2%
- compact design
- designed for DIN 35 rail mounting



The transducer converts the size of the calculated power factor in a single-phase grid or in three-phase grid with symmetrical load to the unipolar voltage or current signal. Current input is separated from the measuring signal via the input transformer. The input signals are digitized and from them is calculated power factor. Power factor is calculated from the ratio of the instantaneous active and reactive power in the measured grid. Information is transferred through the isolation optocoupler to the output circuit. The output signal is proportional to the power factor of measuring electrical system. The current signal can lead to a greater distance even with higher levels of interference. Input and output circuit is protected against overload.

In the absence of 20-120% of rated input signal, the output signal is about 3,6 mA for output 4..20mA. If the output range starts from zero, the output signal is zero.

Electrical specifications:

- | | |
|--------------------------------------|--|
| - operating temperature range: | -25 ... +70°C |
| - storage temperature range: | -40 ... +80°C |
| - supply voltage: | universal 19 – 300V DC and 90 – 250V AC, to order 20 – 60V AC |
| variant B | 12..30V DC loop powered |
| - consumption: | max. 1,2VA |
| - protection: | resettable thermal cut-out in primary circuit |
| - rated input: | 1A, 2,5A, 5AAC
50 ... 500V AC |
| - measuring range of inputs: | 20 ... 120% of rated inputs |
| - standard measuring range: | $\cos \varphi$ 0,5 cap ... 1 ... 0,5 ind , other after agreement |
| - nominal frequency: | 50Hz (60Hz) |
| - impedance voltage input: | 1,5M Ω |
| - consumption current input: | 0,015VA |
| - input overload capacity voltage | 2 Ujm – 1s |
| current | 2 Ijm – 1min., 20 Ijm – 1s |
| - output: | 4-20mA, 0-20mA, 0-10V, other after agreement |
| - output limit: | about 125% of rated output |
| - maximum burden of current loop: | 15V / Iout (ohm) |
| - maximum current of voltage output: | max. 10mA |
| - transmission: | linear with $\cos \varphi$ |
| - maximum transmission error: | <0,2% |
| - temperature induced error: | <0,01%/°C |
| - test voltage: | 400Vrms |
| - response time: | 300ms |
| - weight: | 100g |
| - protection housing: | IP40 |
| - protection terminal board | IP20 |
| - pollution degree: | 2 |
| - installation category: | III |

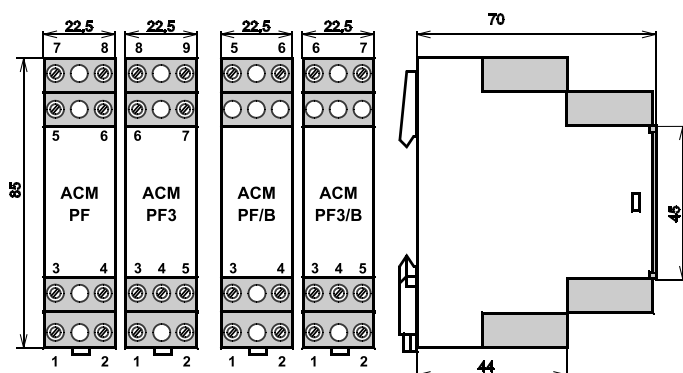
Type test:

- | | |
|------------------|-----------------------------------|
| Basic type test: | in compliance with ČSN EN 60688 |
| EMC: | in compliance with ČSN EN 61326-1 |
| Safety: | in compliance with ČSN EN 61010-1 |

Connection terminals:

The terminals accept conductors up to 4 mm². We recommend using a cable with a core cross section of 0.5 mm². In noisy environments, use shielded cable.

Dimensional drawing:



Terminals:

ACM-PF:

1,2 ... current input
3,4 ... voltage input
5,6 ... output signal (6 is +)
7,8 ... auxiliary power supply without polarity

ACM-PF/B:

1,2 ... current input
3,4 ... voltage input
5,6 ... output current loop 4..20mA (6 is +)

ACM-PF3:

1,2 ... current input phase L1
3,4,5 ... voltage input (phase L1,L2,L3)
6,7 ... output signal (7 is +)
8,9 ... auxiliary power supply without polarity

ACM-PF3/B:

1,2 ... current input phase L1
3,4,5 ... voltage input (phase L1,L2,L3)
6,7 ... output current loop 4..20mA (6 is +)

Ordering instructions:

Your order should include:

- transducer type
- rated input voltage
- rated input current
- measuring range of power factor
- output range
- other requirements (other power supply...)
- quantity (No. of pieces)



Likvidaci po ukončení životnosti provést odděleným sběrem.
Rawet s.r.o. je členem sdružení RETELA www.retela.cz

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