

Rack-mounted DCS Signal Conditioners 18-RACK

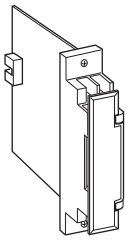
POWER FACTOR TRANSDUCER

Functions & Features

- Providing two DC output signals in proportion to power factor
- DC output containing little ripple is ideal for computer input

Typical Applications

- Centralized monitoring and control of power management system in a manufacturing facility or building
- Measuring power factor for a motor



MODEL: 18PF-1[1][2]66-R

ORDERING INFORMATION

- Code number: 18PF-1[1][2]66-R
- Specify a code from below for each [1] and [2].
(e.g. 18PF-11P66-R)

CONFIGURATION

1: 3-phase / 3-wire

[1] INPUT (balanced load)

- 1: 110 V / 5 A AC
- 2: 110 V / 1 A AC
- 3: 220 V / 1 A AC
- 4: 220 V / 5 A AC

[2] OUTPUT SIGNAL POLARITY

- P: Negative in lag, positive in lead
- M: Negative in lead, positive in lag

OUTPUT 1

Voltage

6: 1 - 5 V DC (Load resistance 5000 Ω min.)

OUTPUT 2

Voltage

6: 1 - 5 V DC (Load resistance 5000 Ω min.)

POWER INPUT

DC Power

R: 24 V DC

(Operational voltage range 24 V ±10 %, ripple 10 %p-p max.)

GENERAL SPECIFICATIONS

Construction: Rack-mounted; terminal access via screw terminals on the front and connector on the rear; terminal cover provided

Connection

Input: M3.5 screw terminals (torque 0.8 N·m)

Output 1: Connector

Output 2: Connector

Power input: Supplied from connector

Screw terminal: Nickel-plated steel

Isolation: Voltage input to current input to output 1 to output 2 to power

Overrange output: Approx. -10 to +120 % at 1 - 5 V

Zero adjustment: -5 to +5 % (front)

Span adjustment: 95 to 105 % (front)

INPUT SPECIFICATIONS

Remark: A device which employs different measuring methods may show different outputs from that of M-System's.

Frequency: 50 or 60 Hz

•Current Input

Input burden: 0.1 VA (input 1 A)

0.5 VA (input 5 A)

Operational range: 10 - 120 % of rating

Overload capacity: 1000 % of rating for 3 sec., 200 % for 10 sec., 120 % continuous

•Voltage Input

Input burden: Approx. 0.5 VA

Operational range: 85 - 120 % of rating

Overload capacity: 150 % of rating for 10 sec., 120 % continuous

■ Input range:

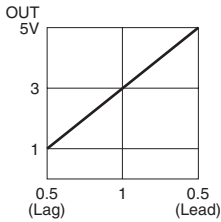
Lag 0.5 - 1 - lead 0.5

Lead 0.5 - 1 - lag 0.5

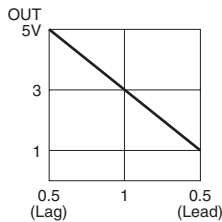
OUTPUT SPECIFICATIONS

■ OPERATION DIAGRAM (example)

• Negative in lag, positive in lead



• Negative in lead, positive in lag



Remark: When there is no input voltage or 5% or less of rated input current, the output may become unstable (hunting).

INSTALLATION

Power consumption

•DC: Approx. 80 mA

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Standard Rack 18BXx or 18KBXx

Weight: 200 g (0.44 lb)

PERFORMANCE in percentage of span

Accuracy:

±2 % with input 1 - 0.866, balanced load

±4 % with input 0.866 - 0.5, balanced load

Temp. coefficient: ±0.4 %/°C (±0.22 %/°F)

Response time: ≤ 1 sec. (0 - 90 %)

Ripple: 0.5 %p-p max. (50/60 Hz)

Line voltage effect: ±0.1 % over voltage range

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 2000 V AC @ 1 minute

(voltage input to current input to output 1 or output 2 or power)

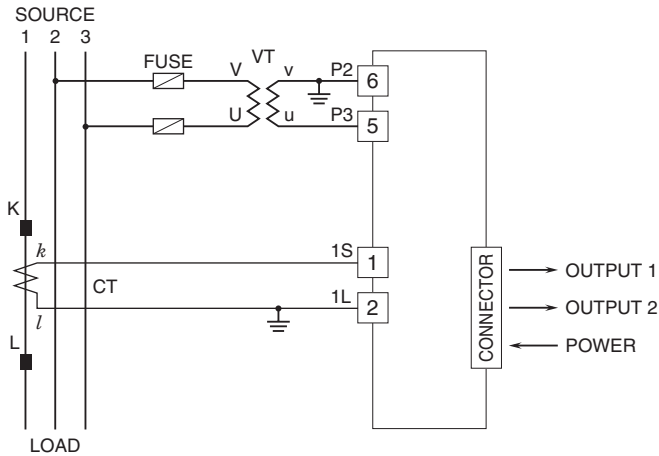
500 V AC @ 1 minute (output 1 to output 2 to power)

2000 V AC @ 1 minute (input or output or power to ground)

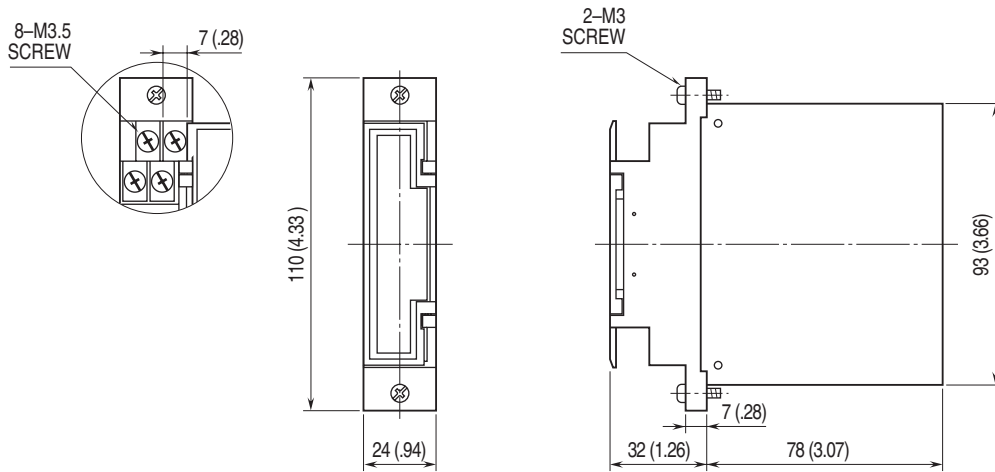


CONNECTION DIAGRAM

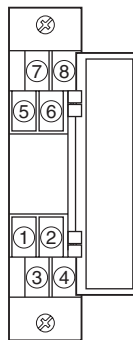
■ 3-PHASE/3-WIRE




DIMENSIONS unit: mm (inch)



TERMINAL ASSIGNMENTS



 Specifications are subject to change without notice.

