

Rack-mounted DCS Signal Conditioners 18-RACK

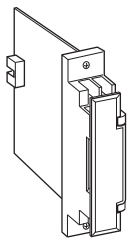
PHASE ANGLE TRANSDUCER

Functions & Features

- Providing two DC output signals in proportion to phase angle
- 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 phase angle for a motor



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

ORDERING INFORMATION

- Code number: 18PA-1[1][2]66-R
- Specify a code from below for each of [1] and [2].
(e.g. 18PA-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

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:

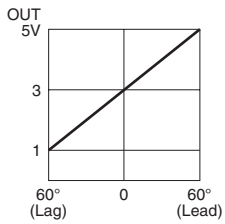
lag 60° - 0 - lead 60°

lead 60° - 0 - lag 60°

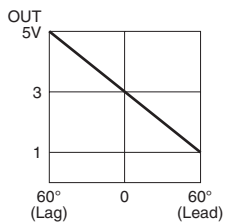
OUTPUT SPECIFICATIONS

■ OPERATION DIAGRAM (example)

- Negative in lag, positive in lead



- Negative in lead, positive in lag



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

INSTALLATION

Current consumption: 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: $\pm 2\%$ with balanced load

Temp. coefficient: $\pm 0.2\%/^{\circ}\text{C}$ ($\pm 0.11\%/^{\circ}\text{F}$)

Response time: ≤ 1 sec. (0 - 90 %)

Ripple: 1 %p-p max. (50/60 Hz)

Line voltage effect: $\pm 0.1\%$ over voltage range

Insulation resistance: $\geq 100\ \text{M}\Omega$ with 500 V DC

Dielectric strength: 2000 V AC @ 1 minute

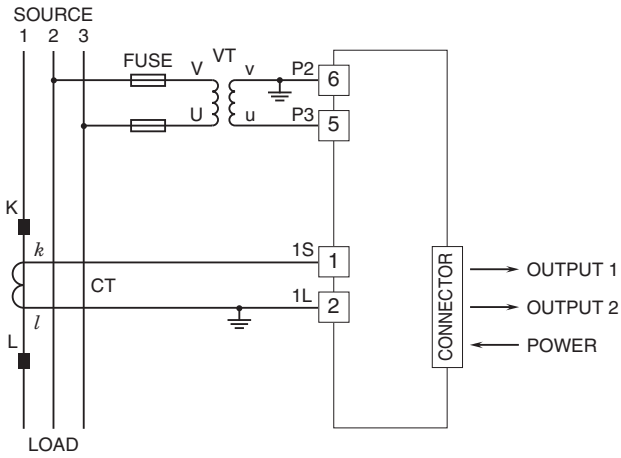
(voltage input to current input to output 1 or output 2 or power)

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

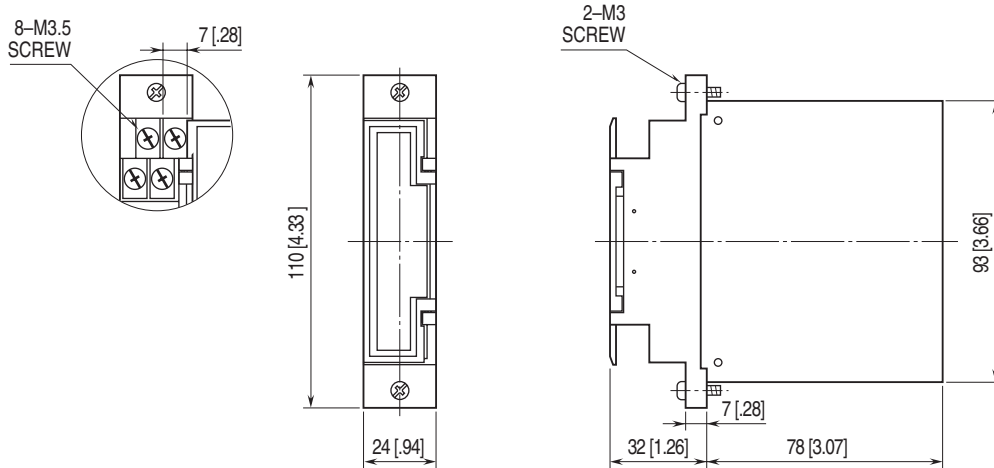
2000 V AC @ 1 minute (input or output or power to ground)

CONNECTION DIAGRAM

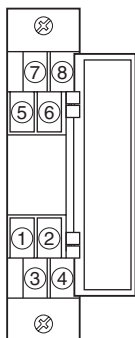
■3-PHASE/3-WIRE



EXTERNAL DIMENSIONS unit: mm [inch]



TERMINAL ASSIGNMENTS



Specifications are subject to change without notice.