

Rack-mounted DCS Signal Conditioners 18-RACK

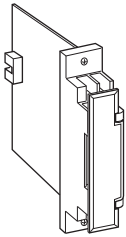
VAR TRANSDUCER

Functions & Features

- Providing two DC output signals in proportion to AC reactive power
- 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



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

ORDERING INFORMATION

- Code number: 18RP-1[1][2]66-R
- Specify a code from below for each [1] and [2]. (e.g. 18RP-11P66-R)
- Calibration range (e.g. lag 1000 - lead 1000 var)
- VT ratio, CT ratio (e.g. VT 3300/110 V, CT 250/5 A)

CONFIGURATION

1: 3-phase / 3-wire

[1] INPUT (unbalanced load)

(Voltage must be balanced.)

- 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 \pm 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**

Operational range: 0 - 120 % of rating

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

• **Voltage Input**

Operational range: 0 - 120 % of rating

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

■ **Input Range**

How To Determine Var Range:

Calibration Range [var] = Measuring Range ÷ ((VT Ratio) × (CT Ratio))

Check that the required calibration range is within the available range in the table. Specify this range when ordering.

[example]

3-phase / 3-wire, measuring range 75 kvar, VT 220 / 110 V, CT 250 / 5 A

$$75 \times 10^3 \text{ [var]} \div ((220 \div 110) \times (250 \div 5)) = 750 \text{ [var]}$$

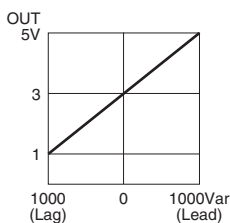
• **3-phase / 3-wire**

INPUT		AVAILABLE RANGE	BURDEN (VA)	
	STD.RANGE		VOLT.	CURR.
110V/1A	200 var	100 - 240 var	0.2 /phase	0.1/phase
110V/5A	1000 var	500 - 1200 var		0.5/phase
220V/1A	400 var	200 - 480 var	0.4 /phase	0.1/phase
220V/5A	2000 var	1000 - 2400 var		0.5/phase

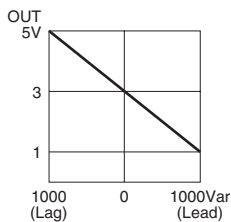
OUTPUT SPECIFICATIONS

■ **OPERATION DIAGRAM (example)**

• **Negative in lag, positive in lead**



• **Negative in lead, positive in lag**



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 18BX or 18KBX

Weight: 200 g (0.44 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.5 %

Temp. coefficient: ±0.05 %/°C (±0.03 %/°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)

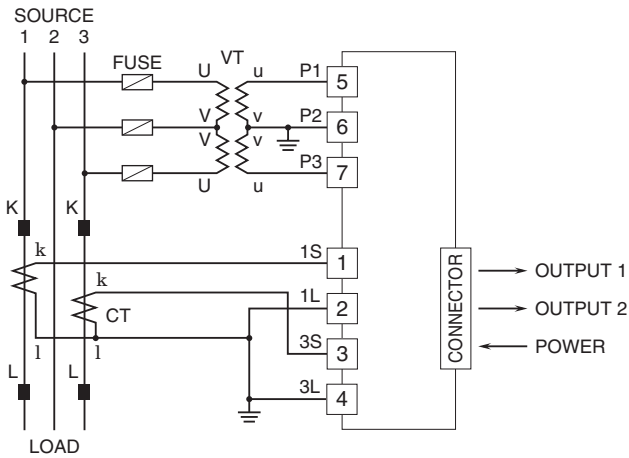
500 V AC @ 1 minute (output 1 to output 2 to power)

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

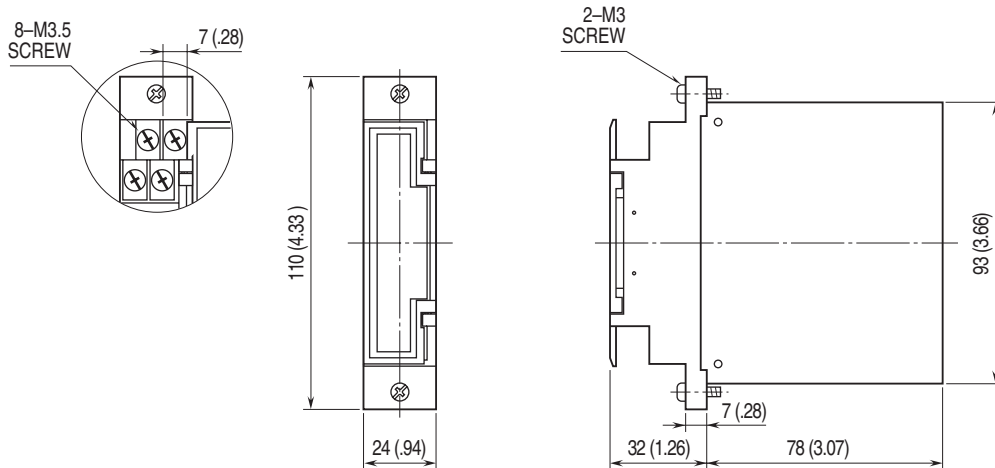


CONNECTION DIAGRAM

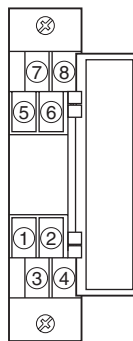
■ 3-PHASE/3-WIRE



DIMENSIONS unit: mm (inch)



TERMINAL ASSIGNMENTS



Specifications are subject to change without notice.

