

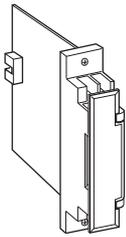
Rack-mounted DCS Signal Conditioners 18-RACK

CONTROL OUTPUT ISOLATOR

(applicable to HART signal, opencircuit detection selectable)

Functions & Features

- Accepting a 4 - 20 mA DC input and providing an isolated 4 - 20 mA DC output
- Input from the Standard Rack connector can be monitored at the front terminals
- Isolates and relays HART signals
- Opencircuit detection selectable



MODEL: 18YCH-AA-R[1]

ORDERING INFORMATION

- Code number: 18YCH-AA-R[1]
- Specify a code from below for [1].
(e.g. 18YCH-AA-R/B)

INPUT

Current

A: 4 - 20 mA DC (Input resistance approx. 250Ω)

OUTPUT

Current

A: 4 - 20 mA DC (Load resistance 600 Ω max.)
250 Ω ±10 % for HART communication

POWER INPUT

DC Power

R: 24 V DC

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

[1] OPTIONS

Opencircuit detection

blank: none

/B: Opencircuit detector

GENERAL SPECIFICATIONS

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

Connection

Input: Connector

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

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

Power input: Supplied from connector

Screw terminal: Nickel-plated steel

Isolation: Input to output to power

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

Span adjustment: 95 to 105 % (front)

Opencircuit detection: Input current 0 mA when the output loop is open.

Photo MOSFET Relay ON Resistance; 3 Ω max.

INPUT SPECIFICATIONS

■ DC Current: Input resistor incorporated

Input current: ≥ 0 mA

OUTPUT SPECIFICATIONS

The output goes below 0 % when the input is open.

HART COMMUNICATION

Transmission gain: Approx. -3 dB (within 1 - 3 kHz) measured with 250 Ω at output

Loop impedance: 250 Ω ±10 %

Communication directions: Bidirectional

INSTALLATION

Current consumption: Approx. 60 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: 110 g (0.24 lb)

PERFORMANCE in percentage of span

Accuracy: ±0.1 %

Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)

Response time: ≤ 0.5 sec. (0 - 90 %)

Line voltage effect: ±0.1 % over voltage range

Insulation resistance: ≥ 100 MΩ with 500 V DC

Dielectric strength: 1500 V AC @ 1 minute

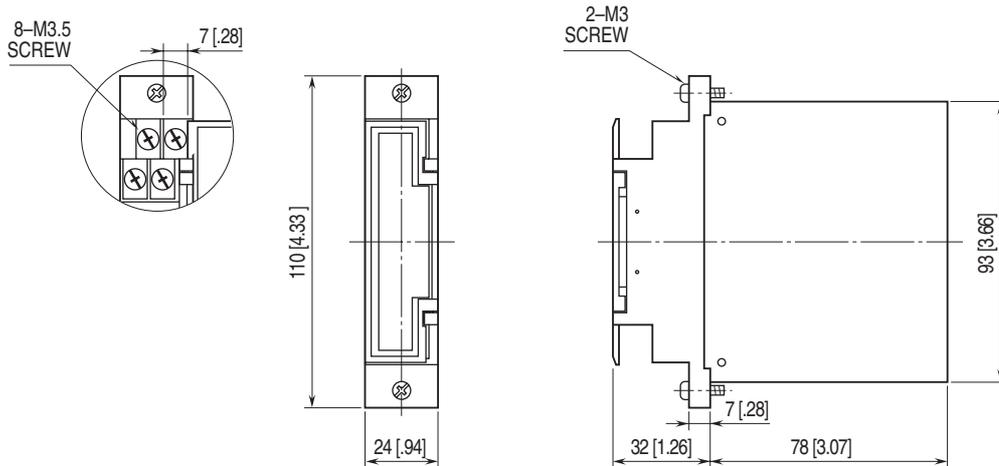
(output to input or power)

500 V AC @ 1 minute (input to power)

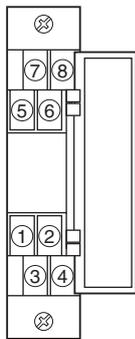
1500 V AC @ 1 minute

(input or output or power to ground)

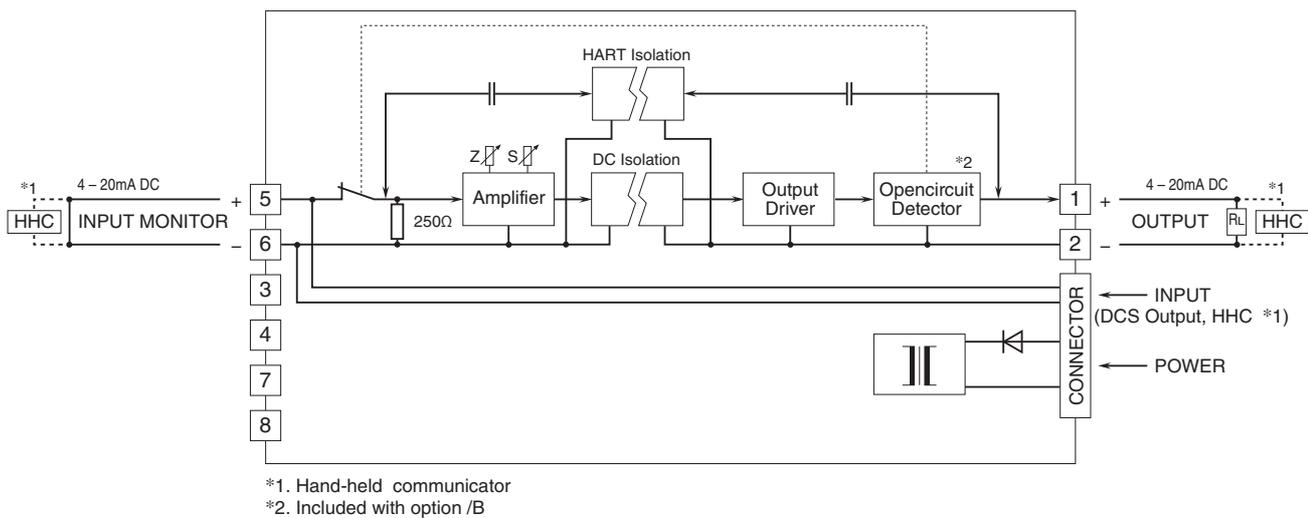
EXTERNAL DIMENSIONS unit: mm [inch]



TERMINAL ASSIGNMENTS



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.