

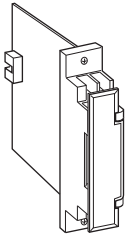
## Rack-mounted DCS Signal Conditioners 18K-RACK

### CONTROL OUTPUT ISOLATOR

(applicable to HART signal, opencircuit detection selectable)

#### Functions & Features

- Takes 4 - 20 mA DC as input
- Isolates and relays HART signals
- Opencircuit detection selectable
- Module can be retracted without removing wiring for an insulation test
- Capable of monitoring input signals at front terminals
- Optional power switch



### MODEL: 18KYCH-AA-R[1]

#### ORDERING INFORMATION

- Code number: 18KYCH-AA-R[1]
- Specify a code from below for [1].  
(e.g. 18KYCH-AA-R/S/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 (multiple selections)

Power Switch

blank: None

/S: With power switch

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) and connector

**Power:** 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)

**With power switch:** Selectable from the front (factory default: ON)

**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 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 %)

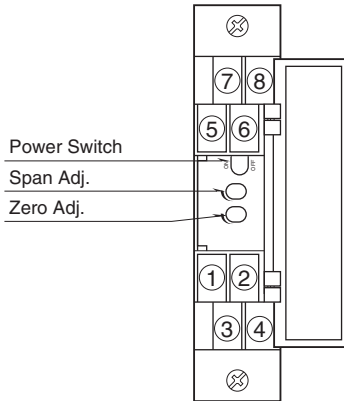
**Line voltage effect:** ±0.1 % over voltage range

**Insulation resistance:** ≥ 100 MΩ with 500 V DC

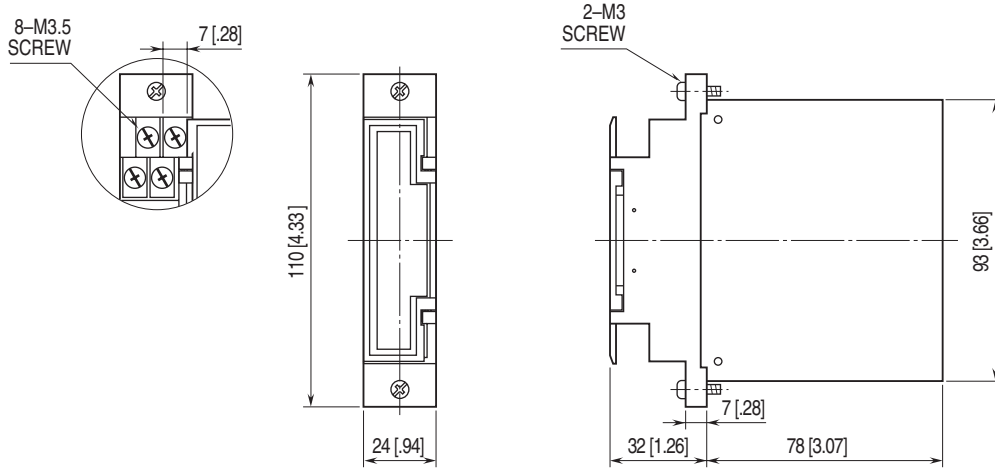
**Dielectric strength:** 500 V AC @ 1 minute (input to output to power to ground )

**EXTERNAL VIEW**

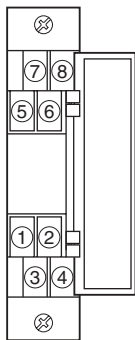
■ WITH POWER SWITCH



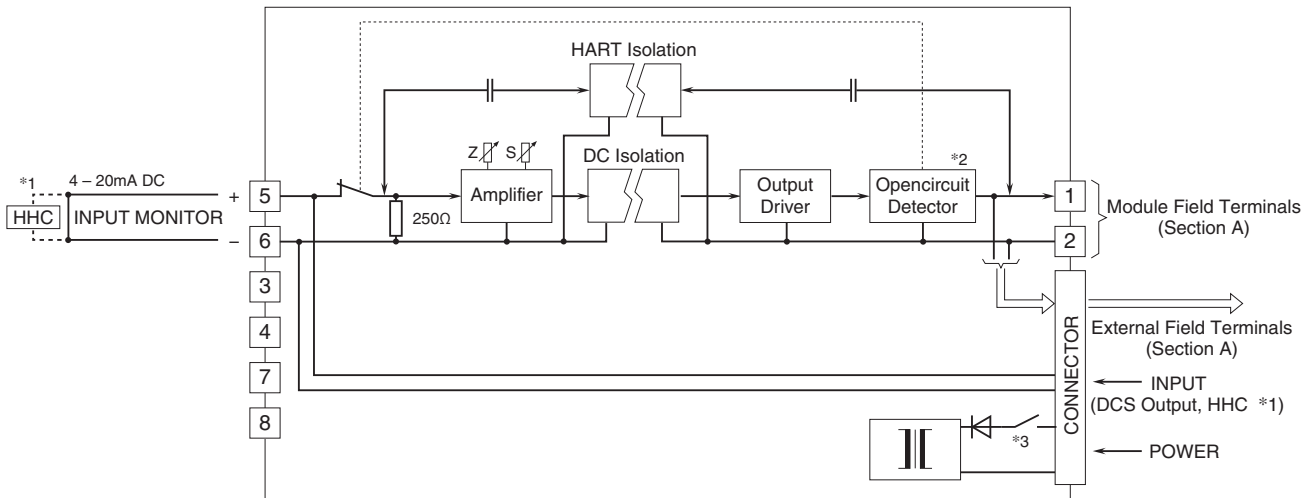
**EXTERNAL DIMENSIONS unit: mm [inch]**



**TERMINAL ASSIGNMENTS**



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



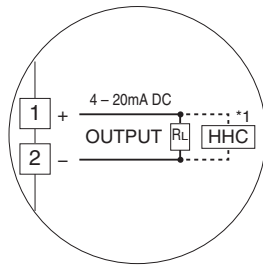
Use either of module or external field terminals.

\*1. Hand-held communicator

\*2. Included with option /B

\*3. Included with option /S

### Section A. Field Terminals



Specifications are subject to change without notice.