RIA15
Loop powered indicator
for displaying HART® or 4 to 20mA signals

- Flexible:
  Display the 4 to 20 mA signal or the HART® digital values
- Low requirements:
  Very small voltage drop in the measuring circuit
- System capability:
  Can display up to 4 HART® values
- Versatile:
  Versions in field mounted or panel mounted housings
- Informative:
  Large display for indicating measurement value, bar graph and engineering units
- Simple:
  Intuitive operation and fast commissioning via front mounted push buttons
- Compact:
  Panel mounted device with dimensions 96 x 48 x 41.5 mm (3.78 x 1.89 x 1.63 in)
  Field device with dimensions 131 x 81.5 x 55.5 mm (5.16 x 3.21 x 2.19 in)

Endress+Hauser
People for Process Automation

Flexible process value display in the field or switchboard

The display of process values in the field, especially in badly accessible measurement points is imperative. The new loop powered indicator from Endress+Hauser provides an insight into the process, both analog 4 to 20mA signals and digital HART® values can displayed!

Applications combined with other Endress+Hauser devices can be found in many industrial branches which include some of the following:

- Process monitoring in power stations
- Display of parameters in chemical processes
- Tank and level monitoring
- Temperature monitoring in metal processing

Versatile, compact and clear

All information at a glance

- 5 digit 7 segment display for measurement presentation
- Bar graph with upper and lower range display for a fast process summary
- Clear text field for TAG/engineering units

Universally applicable

- International Ex approvals
- The indicator can be used in zone 0 loops (installation in zone 1)
- GL approval
- SIL interference freeness

Excellent readability

- Large digits with a height of 17mm (0.67inch)
- Backlight can be activated or deactivated using terminal configuration which provides excellent readability under all lighting conditions

Can be mounted in every application

- Compact field unit with dimensions of 131 x 81.5 x 55.5mm (5.16 x 3.21 x 2.19in)
- Panel mounted version with standard 96 x 48mm (3.78x1.89in) dimensions for simple device exchange without the need for new panel cut-out
- Very small installation depth of only 41.5mm (1.69in)

Simple set up and operation

- 3 front mounted push buttons
- No PC or additional sofware needed

Simple installation and commissioning

- Lasered connection diagram for easy wiring
- Wall or pipe mounting for the field housing version using an optional mounting kit
- Customer specific preset possible

The indicator with added value

A large part of all process sensors used worldwide support the HART® protocol. However, there will still be a number of applications where the transfer of process parameters is only done using the analog current signal (4 to 20 mA). Even though HART® transmission offers a number of advantages.
Sensors using the HART® protocol deliver, as a rule, in addition to the primary measurement signal additional measured values and status information. An example of this is a flow sensor which in addition to the flow signal also measures the temperature and the density. The RIA15 process display can show these HART® values. Through this you can save yourself further sensors and displays and get a better overview of the process parameters since you can see several, often quality relevant parameters on one device.

Up to 4 values

- All four values (PV, SV, TV, QV) of a HART® sensor or actuator can be displayed.

HART COMMUNICATION PROTOCOL

Flexible Display

- Alternating display of the values with an adjustable scroll time
  or
- Choice of a value that is to be continuously displayed; when required the other values can be called upon by pushing “+” or “-”
- Display of the individual sensor values and the respective engineering units is automatically processed using HART®
- Bar graph for each value

Compatibility

- The RIA15 fulfills the requirements of the HCF specification revision 7.1.
- The indicator is downward compatible to all sensors/actuators with HART® version 5.x, 6.x and 7.x.

RIA15 HART® as a primary or secondary master

The RIA15 can be selected as a primary or secondary master function within the HART® loop. By these master functions the RIA15 is able to actively interrogate and display the process values of a HART® sensor.

The RIA15 with HART® communication can be connected to a sensor in a point-to-point connection in the analog HART® mode. Additionally it is possible to connect the display in a HART®-Multidrop network. Here the address of the HART® sensor whose values are to be displayed must be entered manually or adjusted using the automatic scan function in the RIA15.

Your advantages:

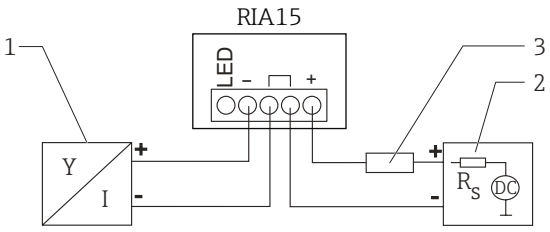
- 4 to 20mA or HART® communication possible
- Very exact readings on digital HART® communication
- Good process overview on display of up to 4 different measurement values from a sensor
- Flexible use in all sorts of network configurations
- Very small voltage drop in the current loop
- Simple parameter set-up also with HART® communication
- Can be connected to many HART® sensors thanks to downward compatibility
- Cost-cutting due to less equipment in the loop

Technical data RIA15

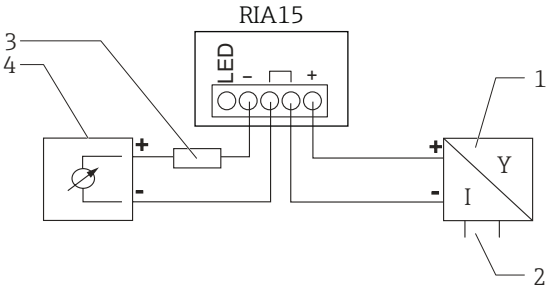
Display - Number of digits - Hight - Type	 5 17mm (0.67inch) LC display, bargraph, text
Power supply	Loop powered 0 to 4 mA
Volt drop	≤ 1V (4 to 20 mA) ≤ 1.9V (HART®) 2.9V additional with rear illumination
Input	1
Software functions	HART® indicator; Primary or secondary HART® master, Display of up to 4 HART® values (PV, SV, TV, QV)
Approvals	ATEX, FM, CSA, IECEx, GL
SIL	SIL interference freeness
Installation	Panel, field mounted
Protection class	Panel mounted: IP65 (front), IP 20 (rear) Field housing : IP66, NEMA4x
Housing dimensions	Panel mounted: 96 x 48 x 41.5mm (3.78 x 1.89 x 1.69in) Field mounted housing : 131 x 81.5 x 55.5mm (5.16 x 3.21 x 2.19in)

Order number for additional detailed technical information:
TI01043K

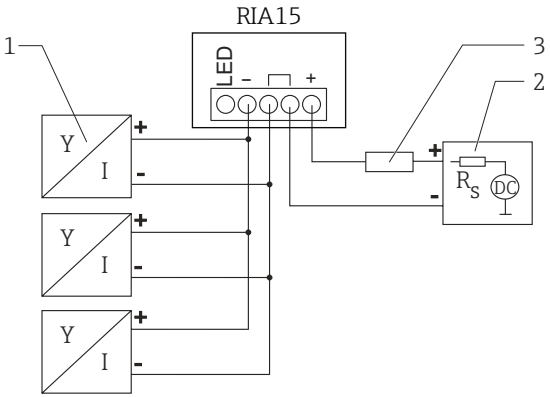
Connection example (without rear illumination)



2-wire sensor with process indicator and loop power supply



4-wire sensor with process indicator and loop power supply



Multidrop 2-wire sensor with process indicator and loop power supply

1: Sensor
2: Power supply
3: HART® resistor
4: Measurement device current

www.addresses.endress.com

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