



## HART transparent driver

### 9107A

- 24 VDC supply via power rail or connectors
- Fast response time
- High active output load 725 Ohm / 20 mA
- Output line fault detection via status relay
- SIL2 certified via Full Assessment according to IEC 61508



#### Application

- 9107A is a 1- or 2-channel isolated 1:1 driver.
- Operation and drive control of I/P converters, valves and indicators.
- Operation of HART devices is possible as the unit transmits HART® communication signals bi-directionally.
- The device can be mounted in and transmit signals to non-classified area and zone 2.
- The PR 4511/4501 displays the process value for each channel and can be used to define high and low limits for detection of loop current level. If these limits are exceeded, the status relay will activate.
- Dual channel versions can be used for signal splitter applications - 1 in and 2 out.

#### Advanced features

- The PR 4511/4501 detachable display and the green and red front LEDs indicate operation status for each channel.
- A tag number can be defined for each channel.
- Output line fault detection.
- In the 1-channel version the status relay can be used as a simple limit switch.

#### Technical characteristics

- High galvanic isolation of 2.6 kVAC.
- High accuracy better than 0.1%.
- Continuous check of vital stored data for safety reasons.

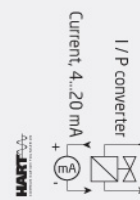
#### Mounting

- The devices can be mounted vertically or horizontally without distance between neighbouring units.

#### Applications

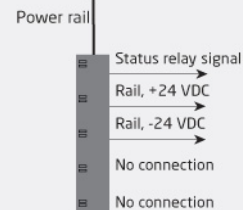
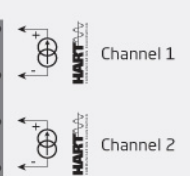
##### Output signals:

###### Channel 1

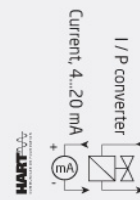


##### Input signals:

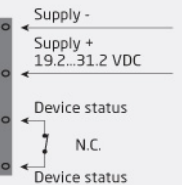
###### Analog, 4...20 mA



###### Channel 2



##### Power connection:



**Order:**

Type	Unit channels
9107A	Single : A
	Double : B

**Environmental Conditions**

Operating temperature.....	-20°C to +60°C
Storage temperature.....	-20°C to +85°C
Calibration temperature.....	20...28°C
Relative humidity.....	< 95% RH (non-cond.)
Protection degree.....	IP20
Installation in.....	Pollution degree 2 & meas. / overvoltage cat. II

**Mechanical specifications**

Dimensions (HxWxD).....	109 x 23.5 x 104 mm
Dimensions (HxWxD) w/ 4501/4511.....	109 x 23.5 x 116 / 131 mm
Weight approx.....	250 g
Weight incl. 4501 / 4511 (approx.).....	265 g / 280 g
DIN rail type.....	DIN EN 60715/35 mm
Wire size.....	0.13...2.08 mm <sup>2</sup> AWG 26...14 stranded wire
Screw terminal torque.....	0.5 Nm
Vibration.....	IEC 60068-2-6
2...13.2 Hz.....	±1 mm
13.2...100 Hz.....	±0.7 g

**Common specifications****Supply**

Supply voltage.....	19.2...31.2 VDC
Fuse.....	1.25 A SB / 250 VAC
Max. required power.....	≤ 1.0 W / ≤ 1.8 W (1 ch. / 2 ch.)
Max. power dissipation, 1 / 2 ch.....	≤ 1.0 W / ≤ 1.8 W

**Isolation voltage**

Test /working: Input to any.....	2.6 kVAC / 300 VAC reinforced isolation
Analog output to supply.....	2.6 kVAC / 300 VAC reinforced isolation
Status relay to supply.....	1.5 kVAC / 150 VAC reinforced isolation

**Response time**

Response time (0...90%, 100...10%).....	< 5 ms
Programming.....	PR 45xx
Signal dynamics, input.....	Analog signal chain
Signal dynamics, output.....	Analog signal chain
HART bi-directional communication frequency range.....	0.5...7.5 kHz
Signal / noise ratio.....	> 60 dB
Accuracy.....	Better than 0.1% of sel. range
mA, absolute accuracy.....	≤ ±16 µA
mA, temperature coefficient.....	≤ ±1.6 µA / °C
Effect of supply voltage change on output (nom. 24 VDC).....	< ±10 µA
EMC immunity influence.....	< ±0.5% of span
Extended EMC immunity: NAMUR NE21, A criterion, burst.....	< ±1% of span

**Input specifications****Current input**

Measurement range.....	3.5...23 mA
Sensor error detection: Loop break 4...20 mA.....	< 1 mA
Input voltage drop, supplied unit.....	< 2 V @ 23 mA
Input voltage drop, non-supplied unit.....	< 4 V @ 23 mA

**Output specifications****Current output**

Signal range.....	3.5...23 mA
Load (@ current output).....	≤ 725 Ω
Load stability.....	≤ 0.01% of span / 100 Ω
Current limit.....	≤ 28 mA

**Status relay**

Relay function.....	N.C.
Programmable low setpoint.....	0...29.9 mA
Programmable high setpoint.....	0...29.9 mA
Hysteresis for setpoints.....	0.1 mA
Max. voltage.....	110 VDC / 125 VAC
Max. current.....	0.3 ADC / 0.5 AAC
Max. voltage - hazardous installation.....	32 VDC / 32 VAC
Max. current - hazardous installation.....	1 ADC / 0.5 AAC
of span.....	= normal measurement range 4...20 mA

**Observed authority requirements**

EMC.....	2014/30/EU
LVD.....	2014/35/EU
RoHS.....	2011/65/EU
EAC.....	TR-CU 020/2011

**Approvals**

ATEX 2014/34/EU.....	PR 14ATEX0101 X
UL.....	UL 61010-1
DNV-GL Marine.....	Stand. f. Certific. No. 2.4
ClassNK.....	TA18527M
SIL.....	SIL 2 certified & fully assessed acc. to IEC 61508