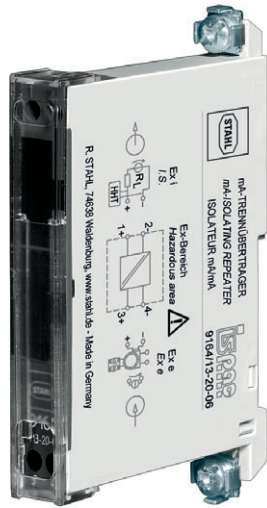


mA - Isolating Repeater

Series 9164/13-20-55



- > Interconnection of two mA-sources and active 2-wire inputs is possible
- > Ideal solution for integrating 4-conductor measuring transmitters into analogue input supplies.
- > Bidirectional HART transmission 4 ... 20 mA
- > Galvanic isolation between input and output

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Basic function: Analog signal transmission 4 mA ... 20 mA for 4-wire transmitters with HART communication, 1 channel.
 The mA - isolating repeaters are used for connection of 4-wire transmitters to active 2-wire inputs (source) as well as to galvanic isolation.
 The devices bidirectionally transfer a superimposed HART communications signal.



WebCode 9164B

mA - Isolating Repeater

Series 9164/13-20-55



Selection Table

Version	Channels	Input	Output	Order number
mA - Isolating repeater Series 9164	1	4 ... 20 mA HART (sink)	4 ... 20 mA HART (sink)	9164 / 13-20-55

Note The transmission of the HART signal can be deactivated by means of a DIP switch.

Technical Data

Electrical data

Galvanic separation	
Test voltages	
Input to output	500 V AC
Auxiliary power	without
Max. power dissipation	3.7 V x 20 mA + 20 mA x (supply voltage - R_L x 20 mA)

Electrical data

Input	
Version	passive (current sink)
Input signal	3.8 ... 20.5 mA with / without HART
Functional range	3.6 ... 25 mA
Constant voltage drop	≤ 3.7 V
Input resistance	at 0.5 ... 5 kHz (AC-Impedance HART) = load resistance at the output
Communication signal	HART FSK transmission bidirectional
Polarity reversal protection	yes
Output	
Version	passive (current sink)
Output signal	3.8 ... 20.5 mA with / without HART
Area around supply voltage of 2-wire input (active)	5 ... 30 V
Response time (10 ... 90 %)	≤ 1 ms
Input resistance	> 10 k Ω
Communication signal	HART FSK transmission bidirectional
Polarity reversal protection	yes
Error detection, input $I_e \sim 0$	
Open circuit	Output current < 3.6 mA
Short-circuit	Output current < 3.6 mA
Error limits	
Linearity error	Accuracy, typical data expressed as % of calibrated span (16 mA) at 23 °C ≤ 0.05 %
Offset error	≤ 0.05 %
Temperature influence	≤ 0.05 % / 10 K
Electromagnetic compatibility	Tested under the following standards and regulations: EN 61326-1 Use in industrial environment, NAMUR NE21

Ambient conditions

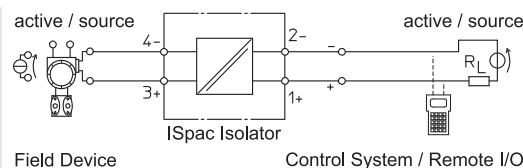
Ambient temperature	-40 ... +75 °C
Storage temperature range	-40 ... +80 °C
Relative humidity (no condensation)	≤ 90 %

Mechanical data

Connection type	4 cage terminals, each maximum 1.5 mm ² flexible / solid
Degree of protection	
Enclosure	IP30
Terminals	IP20
Weight	approx. 65 g
Enclosure material	polyamide 6GF

Mounting / Installation

Connection diagram



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mA - Isolating Repeater

Series 9164/13-20-55



Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.

A3