



PN 103 308 (Type A2)
53mm(W) x 90mm(H) x 58mm (max. above mounting rail)

The **Micha** HART 4-20mA Transducer Modules Type A2 incorporate the STATUS SEM310 4-20mA transducer and can be used with both millivolt input signals as well as higher voltages when used with the built-in potential divider network.

PN **103 308** is Loop-Powered which means that no external power source is required to run the transducer.

The transducer is factory programmed to accept any DC input voltage from typically ± 0 -60mVDC up to ± 80 VDC. The module is configured and programmed to provide the appropriate output range, for example:

-100mV to +200mV = 4-20mA

+18VDC to +36VDC = 4-20mA

The input circuits include a resettable fuse to protect the transducer from overvoltage.

The transducers are supplied with a printed label that identifies the module configuration. Alternatively, they can be supplied with blank labels for customer configuration, using a USB cable and appropriate software. The transducers are fully HART compliant.

Transducer Specification

General:

| | |
|-----------------------------------|------------------------|
| Warm-up Time: | 120s to full accuracy |
| Input/Output Breakdown Isolation: | 500 VAC |
| Operating Range: | -40 to +85 °C |
| Storage Temperature: | -50 to +85 °C |
| Humidity Range: | 0-95% (non-condensing) |

Terminal Blocks:

Plug and socket type.
Max cable size: 2.5mm²

DIN-Rail Housing:

Grey Polycarbonate 53mm(W) x 90mm(H) x 58mm(D) Clips onto standard 35mm DIN rail

Input to Transducer:

| | |
|------------------|--|
| Maximum Range: | ± 200 mV or ± 80 V (Internal Link setting) |
| Minimum Span: | ± 5 mV |
| Basic Accuracy: | ± 10 μ V ± 0.07 % rdg |
| Input Impedance: | 10 M Ω |
| Thermal Drift | Zero 0.1 μ V/°C Span 0.01 %/°C |

Output (loop):

| | |
|----------------------|---|
| Maximum Output Load: | $[(V_{\text{supply}}-10)/21.5]$ K Ω , 250 Ω minimum loop load. For supply voltages over 30V a minimum loop load of 500 Ω is necessary. |
| Burnout Levels: | Low 3.75 mA, High 21.5 mA |
| Input Out of Range: | Low 3.8 mA, High 20.5 mA |
| Output Range: | 4 to 20mA, (Min. 3.75 mA, Max. 21.5 mA) |
| Accuracy: | ± 5 μ A |
| Thermal Drift: | 1 μ A/ °C |
| Supply Voltage: | 10 to 40VDC |

Potential Divider:

| | |
|--------------------|--------------|
| Resistor Accuracy: | ± 0.1 % |
| Thermal drift: | ± 15 ppm |

Ordering Information:

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|--|
| Micha HART 4-20mA Transducer PN: 103 308 |
| Serial No: 18-01234 |
| Transducer No: 1 |
| Output Signal: Bat Volts |
| Input Range: 18-36V |
| Micha HART 4-20mA Transducer PN: 103 308 |
| Serial No: 18-01235 |
| Transducer No: 2 |
| Output Signal: Bat Current |
| Input Range: ± 60 mV |
| Micha HART 4-20mA Transducer PN: 103 308 |
| Serial No: 18-01236 |
| Transducer No: 3 |
| Output Signal: Load Volts |
| Input Range: 22-26V |

The Transducer Modules can be ordered for user configuration, or factory configured by supplying the following information:

Transducer No: For reference when multiple transducers are used in the same cabinet

Output Signal Description of what the output (4-20mA) signal represents.

Input Range: The actual input values to which the transducer is calibrated. Voltages, such as Battery or Load, can be offset to provide a more useful range – e.g. 18-30V for a nominal 24V Battery. Current signals are typically taken from a shunt, and would represent the voltage across the shunt. Unequal inputs can be taken into account where, for example, charge and discharge currents are different. In this case, the input could be calibrated to -20mV to +60mV outputs 4-20mA. (An input of 0mV would output 8mA, +20mV would output 12mA, etc.)

Out of Range: Where feasible, the transducers can be programmed to output an 'error' value. For example, if a transducer is calibrated to have a minimum input of 18V, in the event the input falls below this level, the output will fall below 4mA. As standard, the output range is fixed at a 4mA minimum.

Country of Origin : UK

Commodity Code / HS Code: 9032 8900