

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

VIBRO-METER

IQS450 204-450-000-002

PROXIMITY SENSOR SIGNAL CONDITIONER

Used with the applicable IQS450 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: IQS450 manufacturer technical reference

SPECIFICATIONS *(continued)*

IQS450 signal conditioner

Output

Voltage output, 3-wire configuration

- Voltage at min. GAP : -1.6 V
- Voltage at max. GAP : -17.6 V
- Dynamic range : 16 V
- Output impedance : 500 Ω
- Short-circuit current : 45 mA

Current output, 2-wire configuration

- Current at min. GAP : -15.5 mA
- Current at max. GAP : -20.5 mA
- Dynamic range : 5 mA

Output capacitance : 1 nF

Output inductance : 100 μ H

Supply

Voltage output, 3-wire configuration

- Voltage : -20 to -32 V*
- Current : -13 mA $\pm$ 1 mA (-25 mA max.)

Current output, 2-wire configuration

- Voltage : -20 to -32 V*
- Current : -15.5 to -20.5 mA

Supply input capacitance : 1 nF

Supply input inductance : 100 μ H

Environmental

Temperature

- Operating : -35 to +85°C*
- Storage : -40 to +85°C

Humidity : 95% max. non-condensing.
100% condensing (not submerged).

Protection rating : IP40
(according to IEC 60529)

Vibration : 2 g peak between 10 and 55 Hz
(according to IEC 60068-2-26)

Shock acceleration : 15 g peak (half sine-wave, 11 ms duration)
(according to IEC 60068-2-27)

Physical characteristics

Construction material : Injection-moulded aluminium

Mounting : Two or four M4 screws

Dimensions : See **Mechanical drawings and ordering information on page 11**

*See **Thermal considerations on page 8.**

SPECIFICATIONS *(continued)*

Electrical connections

Input	: Self-locking miniature coaxial connector (female). Note: When connecting, this should be hand-tightened, until locked.
Output and power supply	: Three screw terminals – wire section 2.5 mm ² max.

Weight

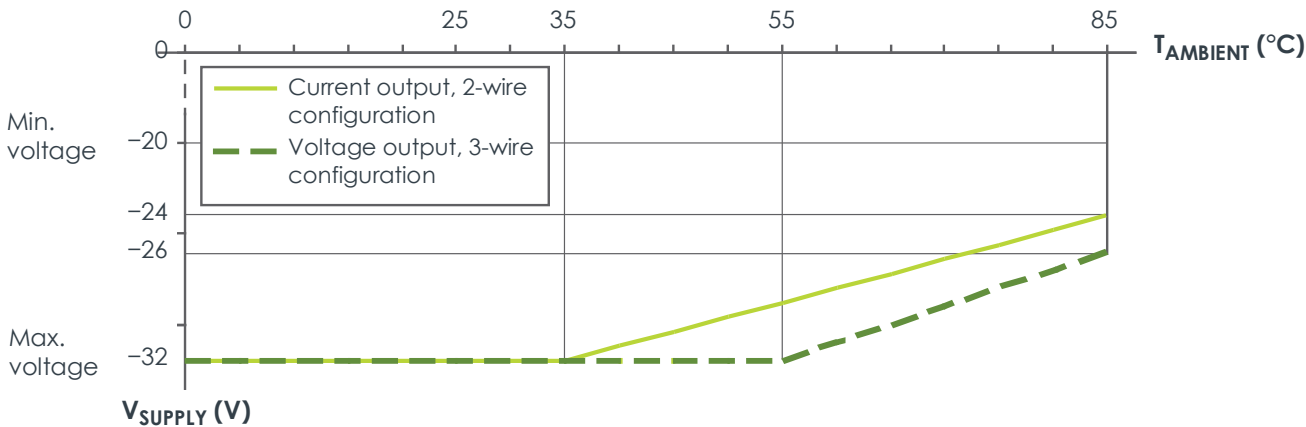
Standard version	: 140 g approx.
Ex version	: 220 g approx.

Signal conditioner with MA130 mounting adaptor (ordering option I1)

Universal DIN rail holder type	: TSH 35
DIN rail type (according to EN 50022 / IEC 60715)	: TH 35-7.5 and TH 35-15
Dimensions	: See Accessories on page 12

Thermal considerations

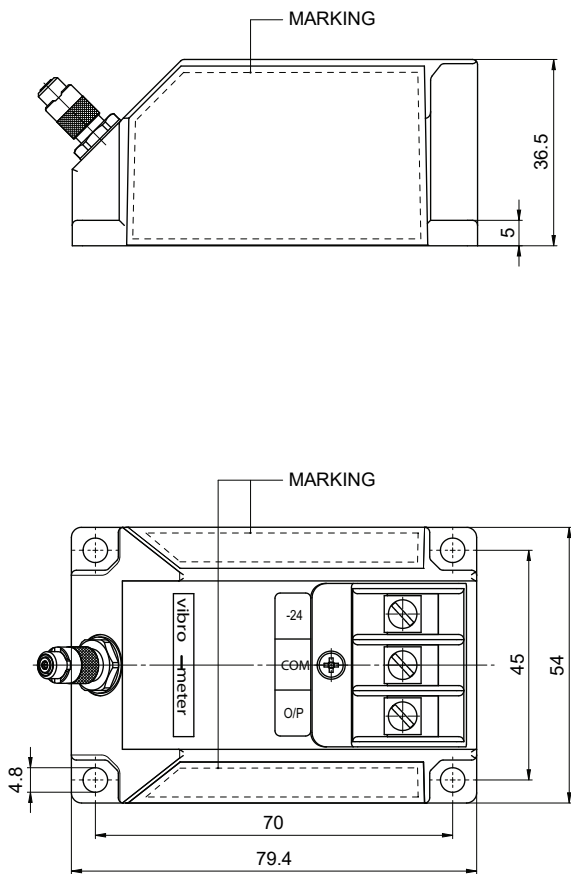
The IQS450 signal conditioner will operate at ambient temperatures as high as 85°C, but to do so, it requires derating of the maximum input voltage. The IQS450 must operate between the minimum supply voltage and the maximum supply voltage, as shown on the following graph.



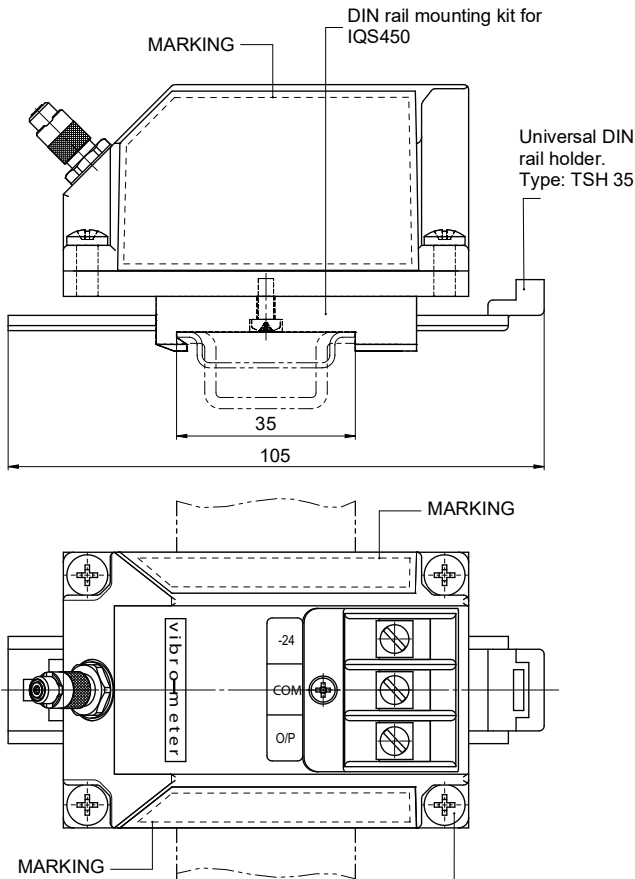
MECHANICAL DRAWINGS AND ORDERING INFORMATION *(continued)*

IQS450 signal conditioner

Signal conditioner only
(ordering option I0)



Signal conditioner
with MA130 mounting adaptor
(ordering option I1)



Note: All dimensions are in mm unless otherwise stated.

Self-tapping cross-head (Phillips) screws:
Type: WN 1411, KA40x10
Mounting torque: 0.6 N•m

Ordering number: 204 - 450 - 000 - 002 - **A** - **B** - **H** - **I**

Environment (A)	
Standard	1
Explosive Ex i	2
Explosive Ex nA	3

Measurement range	Sensitivity (B)	
2 mm	8 mV/μm	11
	2.5 μA/μm	12

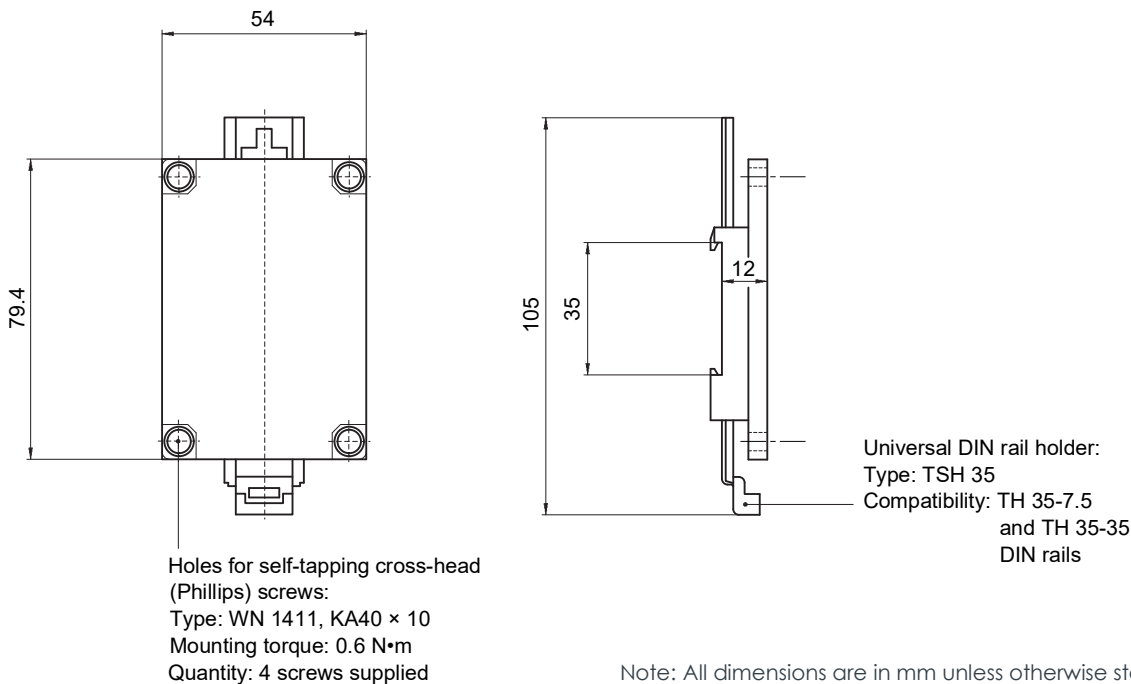
Installation (I)	
0	Signal conditioner only
1	Signal conditioner assembled on MA130 mounting adaptor

Total system length (H)	
05	5 m
10	10 m

ACCESSORIES

ABA17x	Industrial housings	: Refer to corresponding data sheet
IP172	Interconnection protection	: Refer to corresponding data sheet
JB118	Junction box	: Refer to corresponding data sheet
KS107	Flexible conduit (protection tube)	: Refer to corresponding data sheet
MA130	Mounting adaptor	: See below
SG1xx	Cable feedthroughs	: Refer to corresponding data sheets

MA130 mounting adaptor (for IQS450)



Note: All dimensions are in mm unless otherwise stated.

Ordering number (PNR): 809-130-000-011

RELATED PRODUCTS

TQ402/TQ412, EA402 and IQS450	Proximity measurement system (2 or 4 mm measurement range)	: Refer to corresponding data sheet
TQ403, EA403 and IQS450	Proximity measurement system (12 mm measurement range)	: Refer to corresponding data sheet
TQ422/TQ432, EA402 and IQS450	Proximity measurement system (2 or 4 mm measurement range, high-pressure applications)	: Refer to corresponding data sheet
TQ423, EA403 and IQS450	Proximity measurement system (12 mm measurement range, high-pressure applications)	: Refer to corresponding data sheet
TQ442, EA402 and IQS450	Proximity measurement system (2 or 4 mm measurement range, right-angle (90°) mount)	: Refer to corresponding data sheet