vibro-meter

DATA SHEET

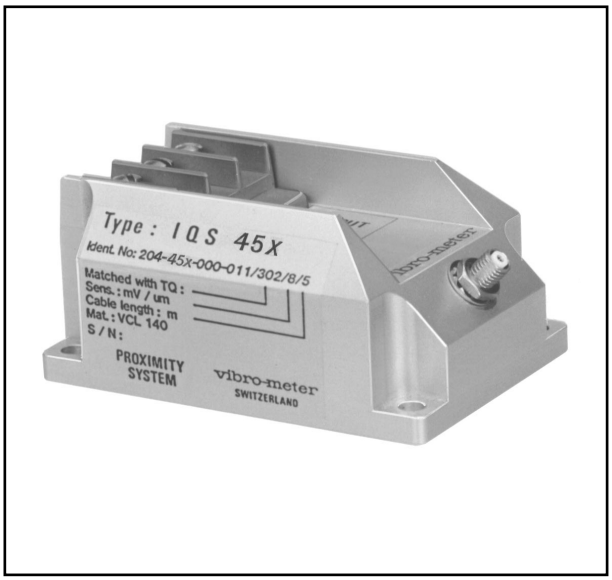
Vibration
265-254

vibro-meter
certified by

ISO 9001

IQS 451, 452, 453

PROXIMITY SYSTEM
Signal Conditioner
Type IQS 451, 452, 453



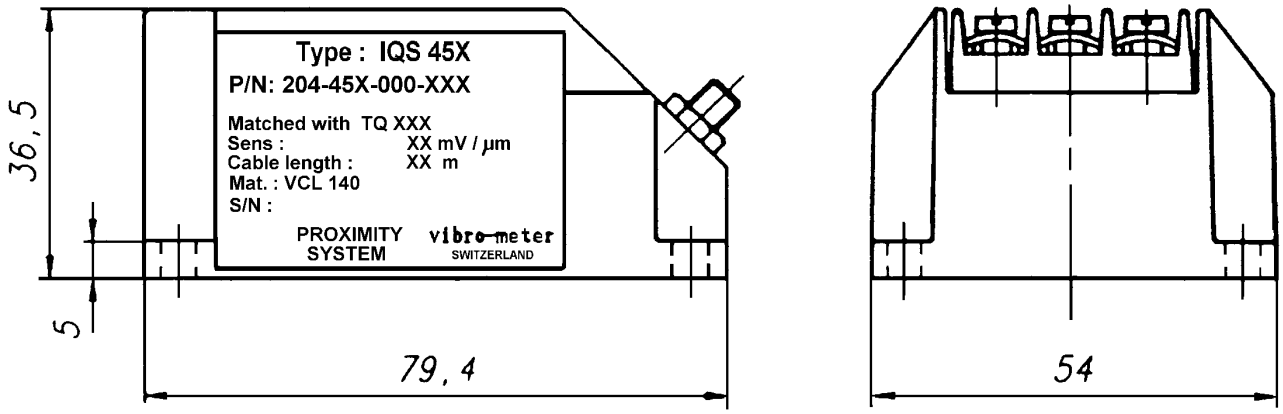
CHARACTERISTICS

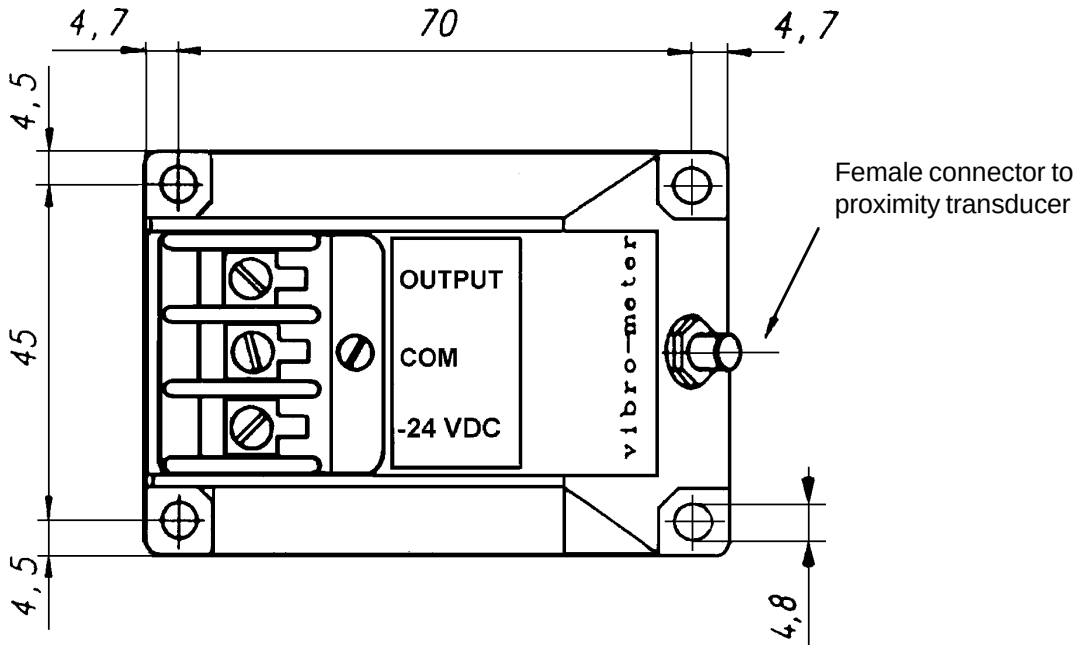
- **For use with the TQ 400 series transducers**
- **Temperature compensated**
- **Conforms to API 670 recommendations**
- **Certified to CENELEC standards**
- **Output protected against short circuits**
- **Voltage or current output**

DESCRIPTION

The HF modulator/demodulator in the IQS 451, 452, 453 signal conditioner supplies a driving signal to the matching proximity transducer. This generates the necessary electromagnetic field used to measure the gap between the transducer tip and the target, using the eddy current principle. As this gap distance varies, the output of the conditioner provides a dynamic signal proportional to the movement of the target.

The power for the transducer-conditioner system is obtained from the associated processor modules or rack power supply. The conditioner circuitry is made of high-quality components and is mounted and potted in an aluminium extrusion to seal out moisture and dust. Please refer to the accessory list for the range of available enclosures for additional protection and for multi-channel installations.


Type : IQS 45X
P/N: 204-45X-000-XXX
Matched with TQ XXX
Sens : XX mV / µm
Cable length : XX m
Mat. : VCL 140
S/N :
PROXIMITY SYSTEM
vibro-meter
SWITZERLAND
36,5
5
79,4
54


4,7
70
4,7
4,5
45
4,5
4,8
OUTPUT
COM
-24 VDC
vibro-meter
Female connector to proximity transducer

INPUT CHARACTERISTICS

Matching transducer :

All Vibro-Meter TQ 400 series proximity transducers (with combined extension cable if applicable).

TRANSFER CHARACTERISTICS

Frequency response : DC to 20 kHz (-3 dB)

Interchangeability : ≤5%

Sensitivity : See table below

OUTPUT CHARACTERISTICS

Voltage output 3 wires

- Output impedance : 500 Ω
- Short-circuit current : 45 mA

Current output 2 wires

- Current at min. GAP : 15 mA
- Current at max. GAP : 20 mA
- Dynamic range : 5 mA

SUPPLY

Voltage : -20 V to -32 V

Current : 13 ±1 mA (25 mA max.)

ENVIRONMENTAL CHARACTERISTICS

(According to DIN 40040)

Temperature range

- Operation : -30°C to +70°C
- Storage : -40°C to +80°C

Humidity

- Operation and storage: Max. 95% non condensing

Vibration

- Operation and storage: 2 g peak between 10 Hz and 500 Hz

Explosive atmosphere :

CENELEC certificate LCIE SYST 93.C 6081X EEx ib IIC T6.

PRESENTATION

Mechanical construction : Injection moulded aluminium, anodized

Protection class : IP 40

ELECTRICAL CONNECTIONS

Input : Stainless steel coaxial female socket

Output and power : Screw terminal strip

WEIGHT : Approx. 140 g
(Exi version: 220 g)

Measuring Range	Probe Type	IQS Type	Mode	Sensitivity	Cable Length	Version	Ordering Number
2 mm	TQ 4X1	IQS 451	Voltage O/P 3 wires	8 mV/µm	5 m	Standard	204-451-000-011
					10 m	Standard	204-451-000-021
					5 m	Exi	204-451-000-031
					10 m	Exi	204-451-000-041
			Current O/P 2 wires [1)]	2.5 µA/µm	5 m	Standard	204-451-000-111
					10 m	Standard	204-451-000-121
					5 m	Exi	204-451-000-131
					10 m	Exi	204-451-000-141
	TQ 4X2	IQS 452	Voltage O/P 3 wires	8 mV/µm	5 m	Standard	204-452-000-211
					10 m	Standard	204-452-000-221
					5 m	Exi	204-452-000-231
					10 m	Exi	204-452-000-241
			Current O/P 2 wires [1)]	2.5 µA/µm	5 m	Standard	204-452-000-311
					10 m	Standard	204-452-000-321
					5 m	Exi	204-452-000-331
					10 m	Exi	204-452-000-341
4 mm			Voltage O/P 3 wires	4 mV/µm	5 m	Standard	204-452-000-011
					10 m	Standard	204-452-000-021
					5 m	Exi	204-452-000-031
					10 m	Exi	204-452-000-041
			Current O/P 2 wires [1)]	1.25 µA/µm	5 m	Standard	204-452-000-111
					10 m	Standard	204-452-000-121
					5 m	Exi	204-452-000-131
					10 m	Exi	204-452-000-141
12 mm	TQ 4X3	IQS 453	Voltage O/P 3 wires	1.33 mV/µm	5 m	Standard	204-453-000-011
					10 m	Standard	204-453-000-021
					5 m	Exi	204-453-000-031
					10 m	Exi	204-453-000-041
			Current O/P 2 wires [1)]	0.417 µA/µm	5 m	Standard	204-453-000-111
					10 m	Standard	204-453-000-121
					5 m	Exi	204-453-000-131
					10 m	Exi	204-453-000-141

[1)] Current output is used in conjunction with GSI 123 galvanic separation

⚠ Due to the continual development of our products we reserve the right to modify the specifications without forewarning.

vibro-meter

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Sales Offices in :

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- Ukraine

Agents in over 30 countries

Vibro-Meter is a member of the Meggitt Aerospace Systems Division