

## DVA1X4.XXX vibration velocity sensors with digital output



Product appearance may vary slightly from that shown in the brochure

### Features

Designed to measure vibration velocity (along 1 or 2 coordinate(s)).

A vibration acceleration signal, passing through the mathematical processing unit, is converted into a vibration velocity signal (amplitude, root-mean-square (RMS) value, range, instantaneous value). All calculations are performed in a real-time mode with the register data refresh interval of 10 ms. The measurement error for vibration parameters is not more than 5% in the basic frequency range.

Depending on the version, the sensor is installed on the unit using the standard threaded stud M8, fastening with 3 screws or 1 screw. A threaded stud with a different thread, including inch thread, can be supplied on special order.

### Metrological parameters

Conversion coefficient	1										
Measurement ranges for vibration velocity, mm/s:											
0-10	0-12.7	0-20	0-25	0-25.4	0-30	0-40	0-50	0-50.8	0-60	0-80	0-100

Operating frequency range, Hz. . . . . 2-1000;  
 3-1000;  
 5-1000;  
 10-1000

### Climatic version

Operating temperature range, °C

- H climatic version . . . . . -40...+80
- X climatic version . . . . . -60...+80
- K climatic version . . . . . -196...+80

### Interface

Output signal type . . . . . RS-485 or RS-485 + discrete output

Sensor supply voltage, V . . . . . 10-24

Protocol . . . . . Modbus RTU

Connection via the TIK-PLC controller\* or the TIK-BIS safety barrier

\* The controller operates as EPS, sensor power source, and a safety barrier

### Protection parameters

Explosion protection

- PO Ex ia I Ma X  
 0Ex ia IIC T6...T2 Ga X  
 Ex ia IIIC T<sub>200</sub> 100°C ... T<sub>200</sub> 280°C Da X  
 Ex ib IIIC T95°C ... T275°C Db X
- 2Ex nA IIC T6...T2 Gc X
- PO Ex ia I Ma X
- 0Ex ia IIC T6...T2 Ga X
- Ex ia IIIC T<sub>200</sub> 100°C ... T<sub>200</sub> 280°C Da X
- Ex ib IIIC T95°C ... T275°C Db X

Protection class

- IP65/68

### Reliability parameters

MTBF, hours, not less than . . . . . 100 000

Warranty service life, months . . . . . 24

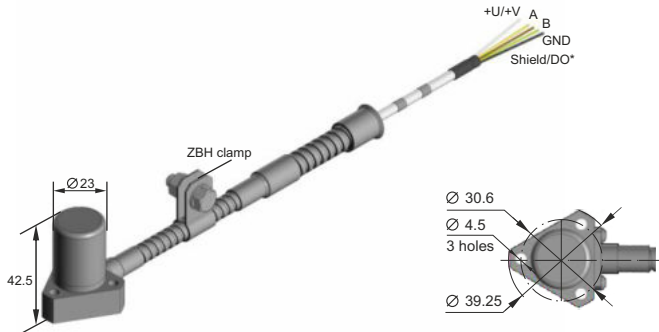
Service life, years . . . . . 20

Verification interval, years . . . . . 2



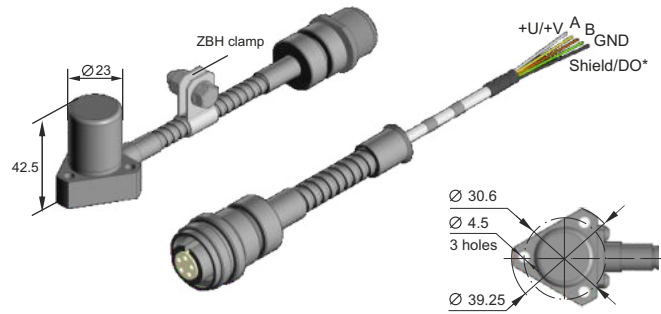
## Constructive versions

### DVA1X4.104



\*For version with discrete output

### DVA1X4.164



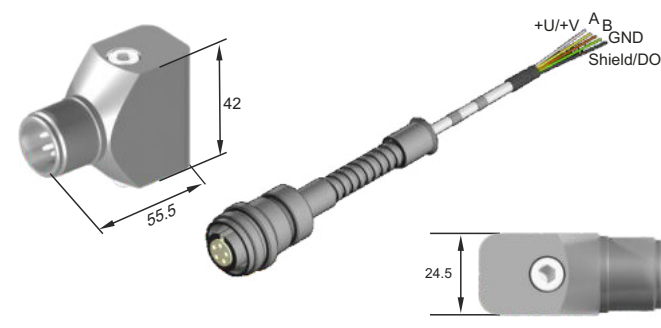
\*For version with discrete output

### DVA1X4.214



\*For version with discrete output

### DVA1X4.714



\*For version with discrete output

## Wiring diagrams

