

IKV-1-4-1 ver. A, B, V, E vibration measuring channel

User-friendly

Design having built-in preamplifier and detachable joint allows for connection of any standard cable. Communication link length is up to 700 meters.



Amplifier in USO AS 1412 connector for ver. B, V

Reliability

The channel consists of DS-0 (DS-1, DS-2, DS-3) eddy-current transducer, USO AS 141 converter located in the connection box (or USO AS 1412 converter located in the connector), safety barrier TIK-BIS and indication block (connection box and safety barrier are supplied on request)



USO AS 141 for ver. A



USO AS 141 for ver. E



Indication block for ver. V



Connection box for ver. V



*Designed to measure the axial shift in the emergency protection system (EPS);
Output signal type: (4-20) mA, (0-10) V,
digital output*

Specifications

Metrological parameters

Range of measurement of the axial shift, mm

• DS-0, DS-1 eddy-current transducer	0.25-2.25; 0.25-2.30; 0.25-2.75;
• DS-2 eddy-current transducer	0.5-4.5; 0.5-5.5
• DS-3 eddy-current transducer	1.0-9.0; 5.5-9.5
Installation gap (default), mm	
• DS-0, DS-1 eddy-current transducer (0.25-2.25)	1.25±0.2
• DS-0, DS-1 eddy-current transducer (0.25-2.30)	1.275±0.2
• DS-0, DS-1 eddy-current transducer (0.25-2.75)	1.5±0.2
• DS-2 eddy-current transducer (0.5-4.5)	2.5±0.2
• DS-2 eddy-current transducer (0.5-5.5)	3.0±0.2
• DS-3 eddy-current transducer (1.0-9.0)	5.0±0.2
• DS-3 eddy-current transducer (5.5-9.5)	7.5±0.2
Measurement cycle time, s	
• cross-linked	0.0005
• without a jumper	1.0

Interface

Output signal type

- 4-20 mA "current loop" (for ver. A, B, V, E);
- 0-10 V "by voltage" (for ver. E);
- RS-485 digital (for ver. E)

Supply voltage, V*

*Minimum power supply voltage 10 V, for every 50 Ohms of load +1 V

Explosion protection

Kind	intrinsically safe circuit
DS-x marking	0Ex ia IIC T6...T1 Ga X
USO AS marking.....	0Ex ia IIC T6...T1 Ga X
Connection box marking	0Ex ia IIC T6...T4 Ga X

Connecting through the TIK-BIS safety barrier

Operating parameters

Operating temperature range, °C

• DS-x ver. 00 (01) eddy-current transducer	-40...+135
• DS-x ver. 02 eddy-current transducer	-40...+70
• DS-x ver. 00 (01) eddy-current transducer, HL climatic version	-60...+135
• DS-x ver. 02 eddy-current transducer, HL climatic version	-60...+70
• USO AS converter	-40...+70
• USO AS converter, HL climatic version	-60...+70

Reliability parameters and manufacturer's warranty

MTBF, hours, not less than	40 000
Warranty service life, months	24
Service life, years, not less than	10

Design parameters

Mounting type

- DS-0 eddy-current transducer
- DS-1 eddy-current transducer
- DS-2 eddy-current transducer
- DS-3 eddy-current transducer

Overall dimensions, mm

- DS-0 eddy-current transducer
- DS-1 eddy-current transducer
- DS-2 eddy-current transducer
- DS-3 eddy-current transducer
- USO AS 141 converter for ver. A
- USO AS 1412 converter for ver. B, V
- USO AS 141 converter for ver. E
- connection box for ver. A, B, E
- connection box for ver. V
- indication block

Weight, kg, not more than

- DS-0, DS-1 ver. 00, 01 eddy-current transducer
- DS-0, DS-1 ver. 02 eddy-current transducer
- DS-2 ver. 00, 01 eddy-current transducer
- DS-2 ver. 02 eddy-current transducer
- DS-3 ver. 00, 01 eddy-current transducer
- DS-3 ver. 02 eddy-current transducer
- USO AS 141 / AS 1412 converter
- connection box for ver. A, B, E
- connection box for ver. V
- indication block

Protection class

- DS-x eddy-current transducer
- USOAS 141 converter
- connection box
- indication block

Versions

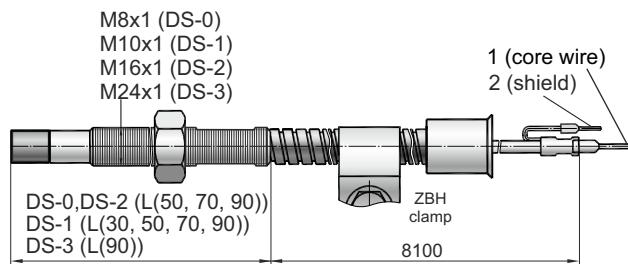
- IKV-1-4-1 ver. A (DS-x ver. 00 or ver. 01 (with connector), USO AS 141 converter, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)**;
- IKV-1-4-1 ver. B (DS-x ver. 02 with USO AS 1412 converter in the socket, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)**;
- IKV-1-4-1 ver. V (DS-x ver. 02 with USO AS 1412 converter in the socket, indication block, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)**;
- IKV-1-4-1 ver. E (DS-x ver. 00 or ver. 01 (with connector), AS 141 converter with display, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)**.

**Connection box and safety barrier available as an option (on request)

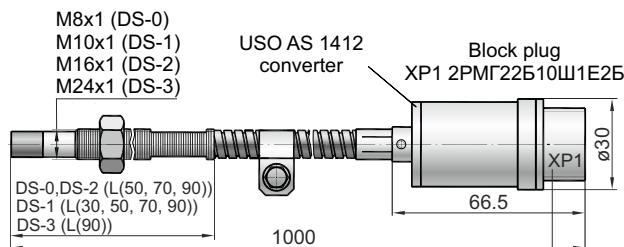


Constructive designs

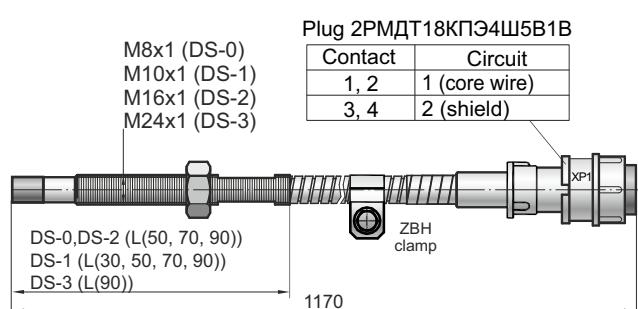
DS-x type A, ver. 00
eddy-current transducer



DS-x type A, ver. 02
eddy-current transducer

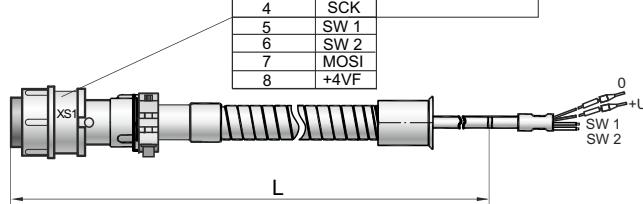


DS-x type A, ver. 01
eddy-current transducer

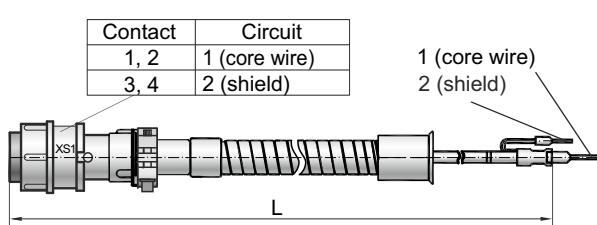


Connection cable (for ver. 02)

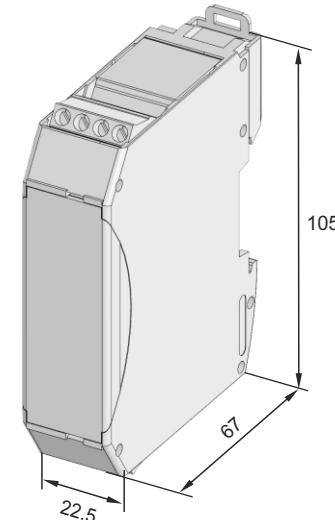
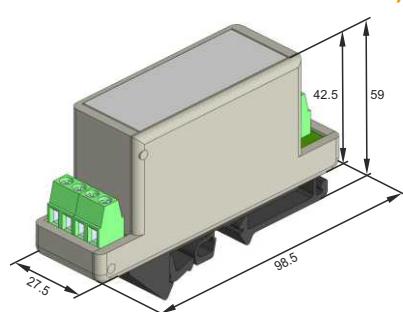
Contact	Circuit
1; 9	+U
2; 10	0
3	RESET
4	SCK
5	SW 1
6	SW 2
7	MOSI
8	+4VF



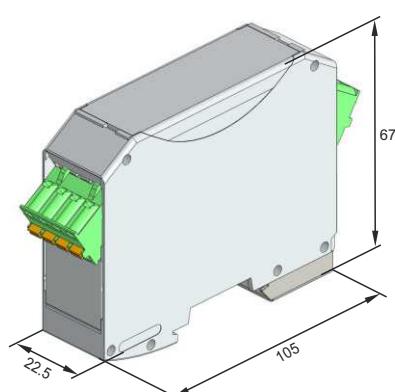
Connection cable (for ver. 01)



USO AS 141 converter (for ver. A)



Indication block (for ver. V)



Connection box (for ver. V)

