

Made in Russia 

Relative vibration sensors



Approval documents

Pattern approval certificate No. 61639-15 for IKV-1 vibration measuring equipment.

Valid until 09/15/2025



Certificate of conformity (GOST R) of seismic resistance
POCC RU.HE06.H10462 for IKV-1 vibration measuring equipment

Valid until 08/01/2026



Certificate of Conformity RU C-RU.MG07.V.00078/19 series RU № 0127619
on the IKV measuring equipment.

Valid until 09/04/2024



Certificate of compliance No. POCC RU C-RU.HX37.H09406
for IKV-1 vibration measuring equipment

Conforms to the requirements of normative documents:
GOST R MEC 61508-1-2012, GOST R MEC 61508-2-2012,
GOST P MEC 61508-3-2012, GOST P MEC 61508-4-2012,
GOST R MEK 61508-5-2012, GOST R MEK 61508-6-2012,
GOST R MEK 61508-7-2012 (Safety Integrity Level SIL2).

Valid until 03/24/2024





Contents

Name	Working range of measurement	Output signal	Operating frequency range, Hz	Operating temperature range, °C	Level of explosion protection	Catalog page
Vibration displacement						
IKV-1-3-1 ver. A, B, E	0-100 μm 0-250 μm 0-500 μm 0-1000 μm 0-2000 μm	4-20 mA "current loop" (ver. A, B, E); 0-10 V "by voltage" (ver. E); digital output (ver. E)	2 – 500	(-60) -40...+135 (DS-x ver. 00, 01) (-60) -40...+70 (DS-x ver. 02) (-60) -40...+70 (USO AS 1xx)	0Ex ia IIC T6...T1 Ga X (DS-x, USO AS 1xx) 0Ex ia IIC T6...T4 Ga X (connection box)	4
Axial displacement						
IKV-1-4-1 ver. A, B, V, E	0.25-2.25 mm 0.25-2.30 mm 0.25-2.75 mm 0.5-4.5 mm 0.5-5.5 mm	4-20 mA "current loop" (ver. A, B, V, E); 0-10 V "by voltage" (ver. E); digital output (ver. E)	–	(-60) -40...+135 (DS-x ver. 00, 01) (-60) -40...+70 (DS-x ver. 02)	0Ex ia IIC T6...T1 Ga X (DS-x, USO AS 1xx) 0Ex ia IIC T6...T4 Ga X (connection box)	6
IKV-1-4-4 ver. A	5.5-9.5 mm 1.0-9.0 mm	-1...-17 V "by voltage"		(-60) -40...+70 (USO AS 1xx)		8
RPM, mark detection						
IKV-1-4-1.1 ver. A, B, V, E	0-16 000 rpm	4-20 mA "current loop" (ver. A, B, V, E); 0-10 V "by voltage" (ver. E); digital output (ver. E)	–	(-60) -40...+135 (DS-x ver. 00, 01) (-60) -40...+70 (DS-x ver. 02) (-60) -40...+70 (USO AS 1xx)	0Ex ia IIC T6...T1 Ga X (DS-x, USO AS 1xx) 0Ex ia IIC T6...T4 Ga X (connection box)	10
Wiring diagrams, installation, documentation						
Mounting options						13
Wiring diagrams						14



Eddy-current sensors of RPE «TIK» on pump units

IKV-1-3-1 ver. A, B, E vibration measuring channel

Safety

Breakdown and short circuit control of the cable connecting eddy-current probe with AS 131 transducer.



Amplifier in USO AS 131 connector for ver. B



Reliability

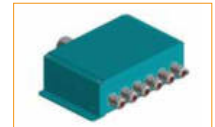
The channel consists of DS-0 (DS-1, DS-2, DS-3) eddy-current transducer, USOAS 131 converter located in the connection box (or USOAS 1312 converter located in the connector) and safety barrier TIK-BIS (connection box and safety barrier are supplied on request)



USO AS 131 for ver. A



USO AS 131 for ver. E



Connection box (for ver. A, B)

Designed to measure the vibration displacement range in diagnostic and emergency protection systems (EPS);
Output signal type: (4-20) mA, (0-10) V, digital output

Specifications

Metrological parameters

Measurement range of the vibration displacement range, μm

- DS-0, DS-1 eddy-current transducer 0-100, 0-250
- DS-2 eddy-current transducer 0-500, 0-1000
- DS-3 eddy-current transducer 0-2000

Installation gap (default), mm

- DS-0, DS-1 eddy-current transducer 1.0 ± 0.2
- DS-2 eddy-current transducer 1.5 ± 0.2
- DS-3 eddy-current transducer 5.0 ± 0.2

Operating frequency range, Hz 2-500

Interface

Output signal type

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

Supply voltage, V* 10-24

*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, $^{\circ}\text{C}$

- 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 M8x1 threaded hole
- DS-1 eddy-current transducer M10x1 threaded hole
- DS-2 eddy-current transducer M16x1 threaded hole
- DS-3 eddy-current transducer M24x1 threaded hole

Overall dimensions, mm

- DS-0 eddy-current transducer D(6.8) L(50;70;90)
- DS-1 eddy-current transducer D(8.5) L(30;50;70;90)
- DS-2 eddy-current transducer D(14.5) L(50;70;90)
- DS-3 eddy-current transducer D(22.5) L(90)
- USO AS 131 converter for ver. A 98.5x27.5x59
- USOAS 1312 converter for ver. B $\varnothing 30 \times 66.5$
- USOAS 131 converter for ver. E 105x22.5x67
- connection box for ver. A, B 277x254.5x83
- connection box for ver. E 304x224x108

Weight, kg, not more than

- DS-0, DS-1 ver. 00, 01 eddy-current transducer 0.25
- DS-0, DS-1 ver. 02 eddy-current transducer 0.35
- DS-2 ver. 00, 01 eddy-current transducer 0.30
- DS-2 ver. 02 eddy-current transducer 0.40
- DS-3 ver. 00, 01 eddy-current transducer 0.40
- DS-3 ver. 02 eddy-current transducer 0.50
- USO AS 131 / AS 1312 converter 0.1
- connection box for ver. A, B 2.5
- connection box for ver. E 3.25

Protection class

- DS-x eddy-current transducer IP65/IP68 (IP65 for DS-x ver. 02)
- USOAS 131 converter IP20
- connection box IP65/IP67

Versions

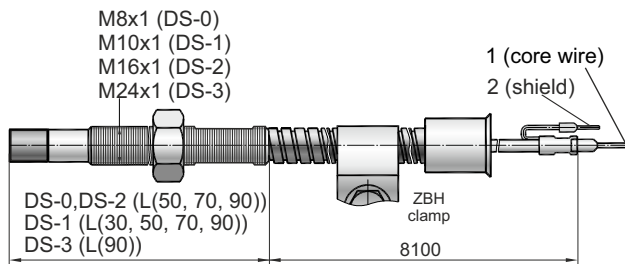
- IKV-1-3-1 ver. A (DS-x ver. 00 or ver. 01 (with connector), USO AS 131 converter, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)**;
- IKV-1-3-1 ver. B (DS-x ver. 02 with USO AS 1312 converter in the socket, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)**;
- IKV-1-3-1 ver. E (DS-x ver. 00 or ver. 01 (with connector), AS 131 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)

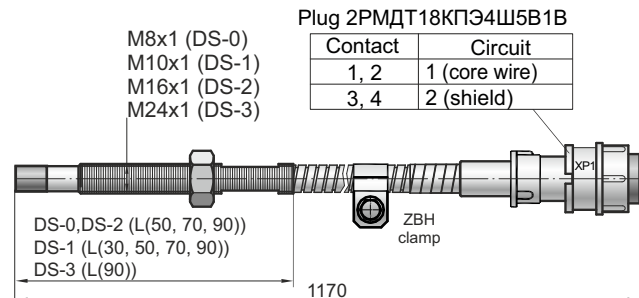


Constructive designs

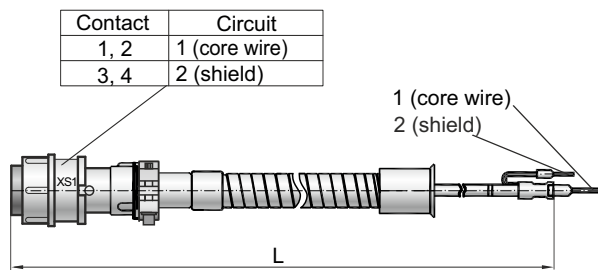
**DS-x type A, ver. 00
eddy-current transducer**



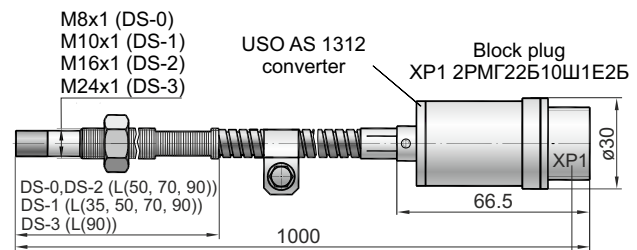
**DS-x type A, ver. 01
eddy-current transducer**



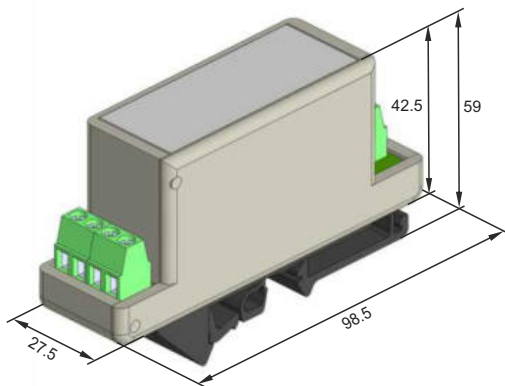
Connection cable (for ver. 01)



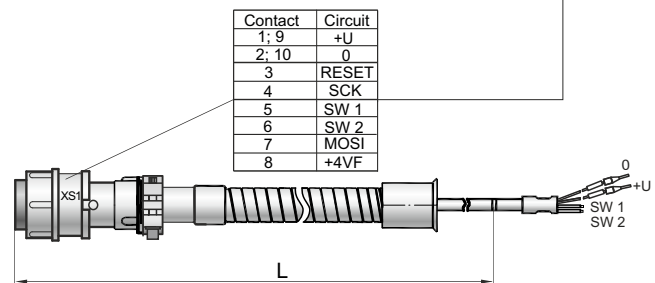
**DS-x type A, ver. 02
eddy-current transducer**



USO AS 131 converter (for ver. A)

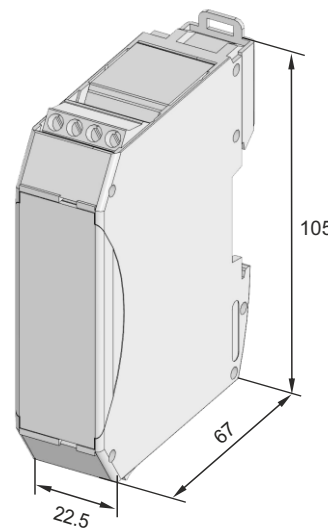
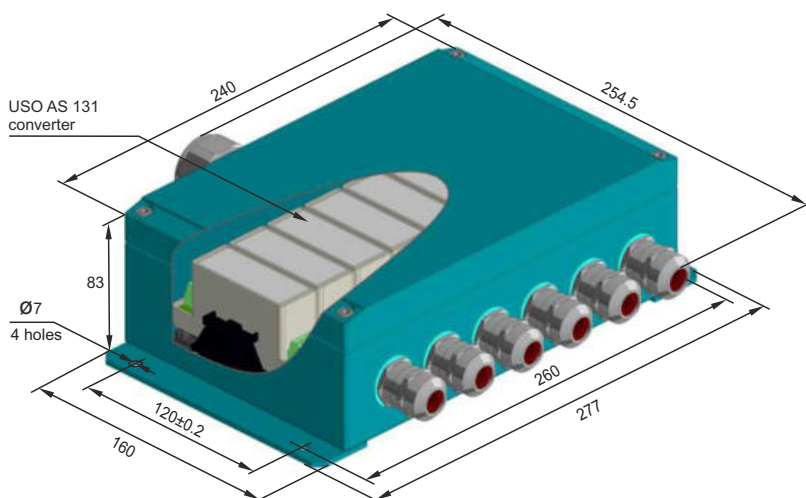


Connection cable (for ver. 02)



USO AS 131 converter (for ver. E)

Connection box (for ver. A, B)



Note: the design versions for the compressors are shown on page 12

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, USOAS 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* 10-24
- *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	M8x1 threaded hole
• DS-1 eddy-current transducer	M10x1 threaded hole
• DS-2 eddy-current transducer	M16x1 threaded hole
• DS-3 eddy-current transducer	M24x1 threaded hole
Overall dimensions, mm	
• DS-0 eddy-current transducer	D(6.8) L(50;70;90)
• DS-1 eddy-current transducer	D(8.5) L(30;50;70;90)
• DS-2 eddy-current transducer	D(14.5) L(50;70;90)
• DS-3 eddy-current transducer	D(22.5) L(90)
• USO AS 141 converter for ver. A	98.5x27.5x59
• USO AS 1412 converter for ver. B, V	ø30x66.5
• USO AS 141 converter for ver. E	105x22.5x67
• connection box for ver. A, B, E	277x254.5x83
• connection box for ver. V	304x224x108
• indication block	105x22.5x67
Weight, kg, not more than	
• DS-0, DS-1 ver. 00, 01 eddy-current transducer	0.25
• DS-0, DS-1 ver. 02 eddy-current transducer	0.35
• DS-2 ver. 00, 01 eddy-current transducer	0.30
• DS-2 ver. 02 eddy-current transducer	0.40
• DS-3 ver. 00, 01 eddy-current transducer	0.40
• DS-3 ver. 02 eddy-current transducer	0.50
• USO AS 141 / AS 1412 converter	0.1
• connection box for ver. A, B, E	2.5
• connection box for ver. V	3.25
• indication block	0.1

Protection class

• DS-x eddy-current transducer	IP65/IP68 (IP65 for DS-x ver. 02)
• USO AS 141 converter	IP20
• connection box	IP65/IP67
• indication block	IP20

Versions

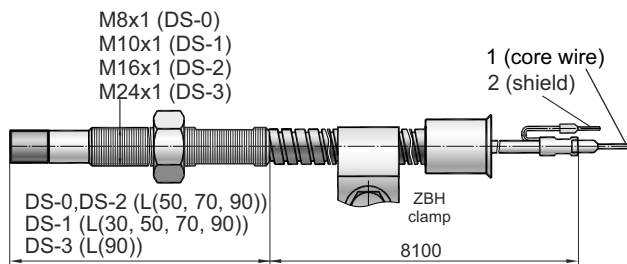
- IKV-1-4-1 ver. A (DS-x ver. 00 or ver. 01 (with connector), USO AS 141 converter, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)**;
- IKV-1-4-1 ver. B (DS-x ver. 02 with USO AS 1412 converter in the socket, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)**;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

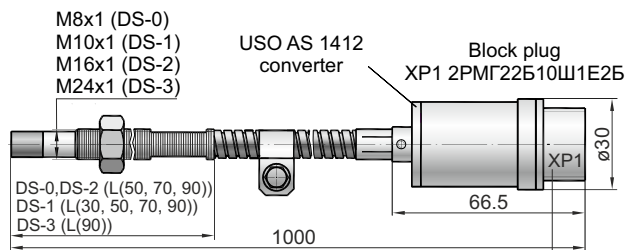


Constructive designs

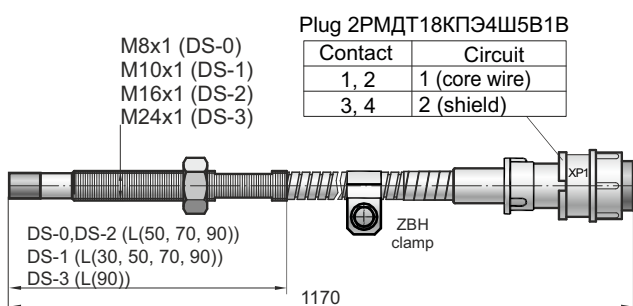
DS-x type A, ver. 00 eddy-current transducer



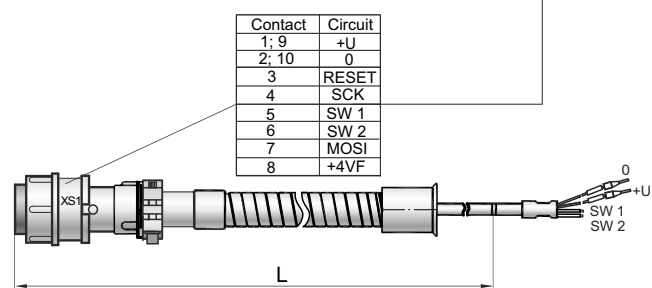
DS-x type A, ver. 02 eddy-current transducer



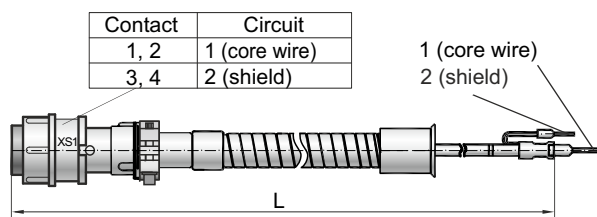
DS-x type A, ver. 01 eddy-current transducer



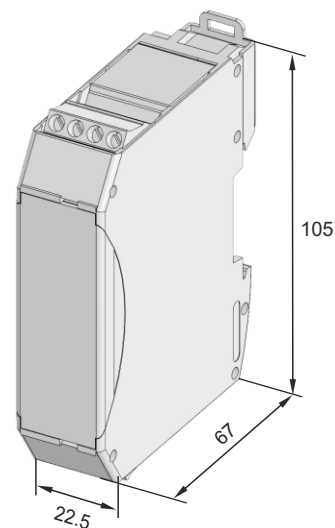
Connection cable (for ver. 02)



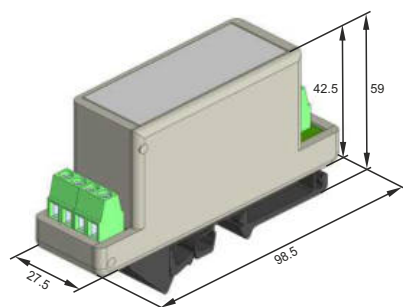
Connection cable (for ver. 01)



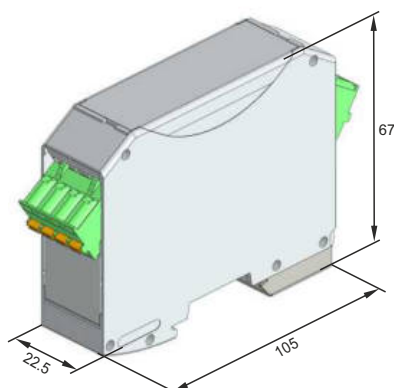
USO AS 141 converter (for ver. E)



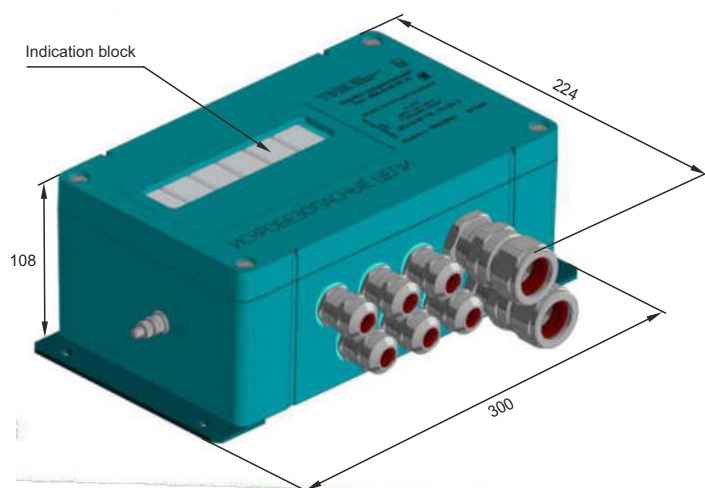
USO AS 141 converter (for ver. A)



Indication block (for ver. V)



Connection box (for ver. V)



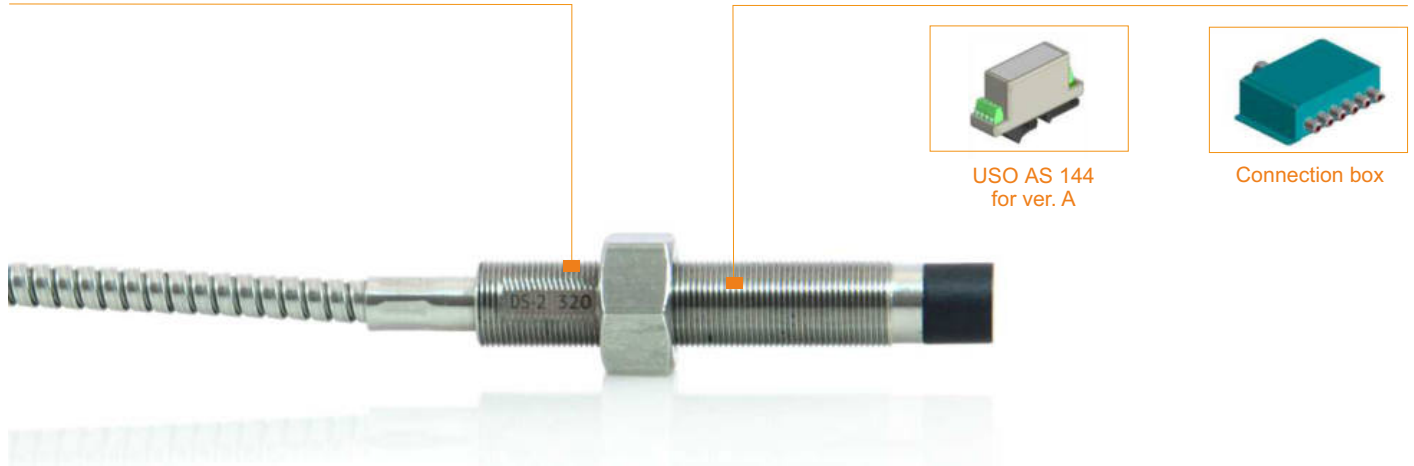
IKV-1-4-4 ver. A vibration measuring channel

Safety

Breakdown and short circuit control of the cable connecting eddy-current probe with AS 131 transducer.

Reliability

The channel consists of DS-0 (DS-1, DS-2, DS-3) eddy-current transducer and USO AS 144 converter, located in the connection box (the connection box is supplied on request)



USO AS 144 for ver. A

Connection box

*Designed to measure the axial shift in the emergency protection system (EPS);
Output signal type: -1...-17 V*

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	0.0005

Interface

Output signal type	-1...-17 V
Supply voltage, V*	-17.5...-26

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

Design parameters

Mounting type	
• DS-0 eddy-current transducer	M8x1 threaded hole
• DS-1 eddy-current transducer	M10x1 threaded hole
• DS-2 eddy-current transducer	M16x1 threaded hole
• DS-3 eddy-current transducer	M24x1 threaded hole
Overall dimensions, mm	
• DS-0 eddy-current transducer	D(6.8) L(50;70;90)
• DS-1 eddy-current transducer	D(8.5) L(30;50;70;90)
• DS-2 eddy-current transducer	D(14.5) L(50;70;90)
• DS-3 eddy-current transducer	D(22.5) L(90)
• USO AS 144 converter	98.5x27.5x59
• connection box	277x254.5x83
Weight, kg, not more than	
• DS-0, DS-1 ver. 00, 01 eddy-current transducer	0.25
• DS-2 ver. 00, 01 eddy-current transducer	0.30
• DS-3 ver. 00, 01 eddy-current transducer	0.40
• USO AS 144 converter	0.1
• connection box	2.5
Protection class	
• DS-x eddy-current transducer	IP65/IP68
• USO AS 144 converter	IP20
• connection box	IP65/IP67
Versions	
• IKV-1-4-4 ver. A (DS-x ver. 00 or ver. 01 (with connector), USO AS 144 converter, connection box)**	

**Connection box available as an option (on request)

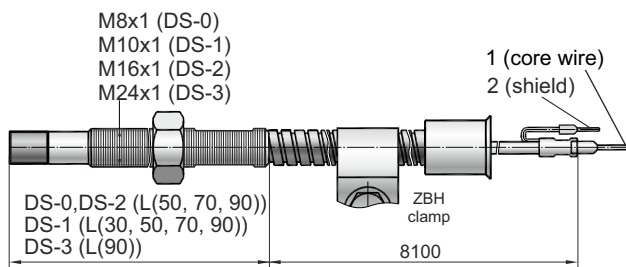
Reliability parameters and manufacturer's warranty

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

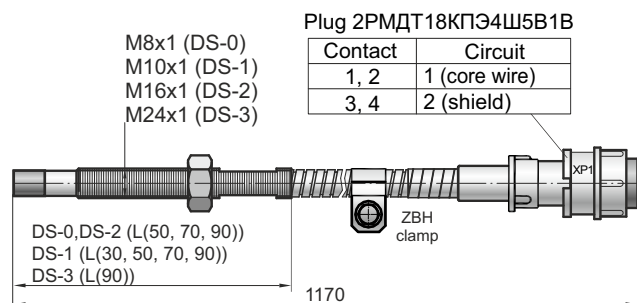


Constructive designs

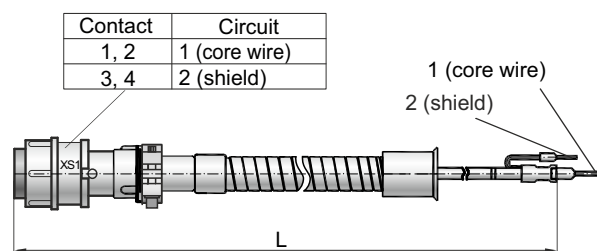
DS-x type A, ver. 00 eddy-current transducer



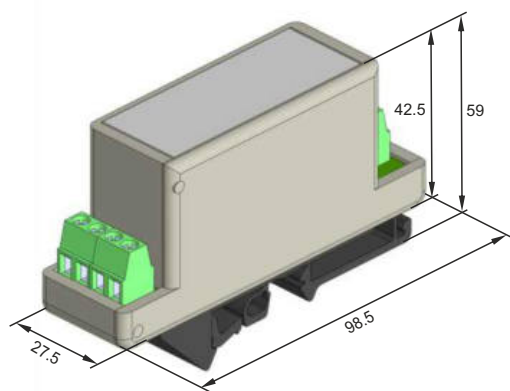
DS-x type A, ver. 01 eddy-current transducer



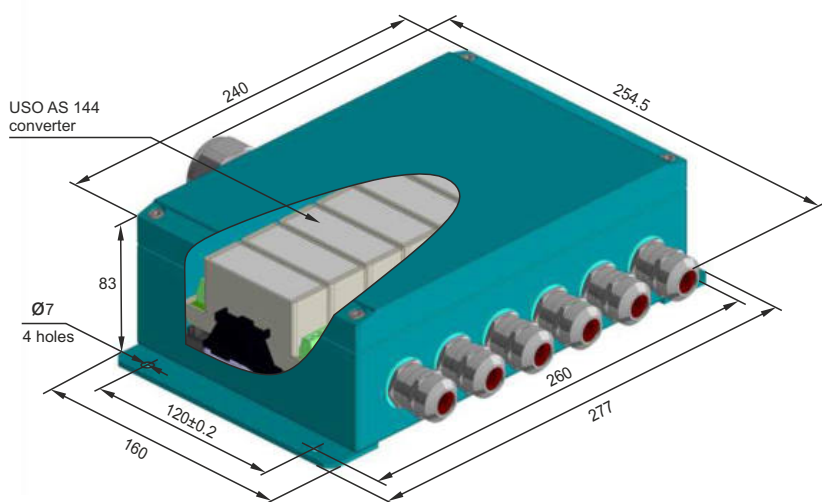
Connection cable (for ver. 01)



USO AS 144 converter



Connection box



IKV-1-4-1.1 ver. A, B, V, E vibration measuring channel

User-friendly

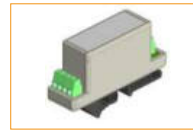
Design having built-in preamplifier and detachable joint allows for connection of any standard cable. Communication link length is up to 700 meters.



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, USOAS 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 rpm (factory mode) and phase angle (set by jumper) in emergency protection systems (EPS)*; Output signal type: (4-20) mA, (0-10) V, digital output

Specifications

Metrological parameters

Range of measurement of frequency of rotation, rpm* 0-16 000

*Can be modified according to customer requirements

Installation gap (default), mm

- DS-0, DS-1 eddy-current transducer 1.0 ± 0.2
- DS-2 eddy-current transducer 2.0 ± 0.2
- DS-3 eddy-current transducer 3.0 ± 0.2

Minimum dimensions of the mark (depth/width), mm

- DS-0 eddy-current transducer 3/12
- DS-1 eddy-current transducer 3/15
- DS-2 eddy-current transducer 5/15
- DS-3 eddy-current transducer 7/20

Measurement cycle time, s 0.0005

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** 10-24

**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
 USOAS 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 M8x1 threaded hole
- DS-1 eddy-current transducer M10x1 threaded hole
- DS-2 eddy-current transducer M16x1 threaded hole
- DS-3 eddy-current transducer M24x1 threaded hole

Overall dimensions, mm

- DS-0 eddy-current transducer D(6.8)L(50;70;90)
- DS-1 eddy-current transducer D(8.5)L(30;50;70;90)
- DS-2 eddy-current transducer D(14.5)L(50;70;90)
- DS-3 eddy-current transducer D(22.5)L(90)
- USO AS 141 converter for ver. A 98.5x227.5x59
- USO AS 1412 converter for ver. B, V ø30x66.5
- USO AS 141 converter for ver. E 105x22.5x67
- connection box for ver. A, B, E 277x254.5x83
- connection box for ver. V 304x224x108
- indication block 105x22.5x67

Weight, kg, not more than

- DS-0, DS-1 ver. 00, 01 eddy-current transducer 0.25
- DS-0, DS-1 ver. 02 eddy-current transducer 0.35
- DS-2 ver. 00, 01 eddy-current transducer 0.30
- DS-2 ver. 02 eddy-current transducer 0.40
- DS-3 ver. 00, 01 eddy-current transducer 0.40
- DS-3 ver. 02 eddy-current transducer 0.50
- USO AS 141 / AS 1412 converter 0.1
- connection box for ver. A, B, E 2.5
- connection box for ver. V 3.25
- indication block 0.1

Protection class

- DS-x eddy-current transducer IP65/IP68 (IP65 for DS-x ver. 02)
- USOAS 141 converter IP20
- connection box IP65/IP67
- indication block IP20

Versions

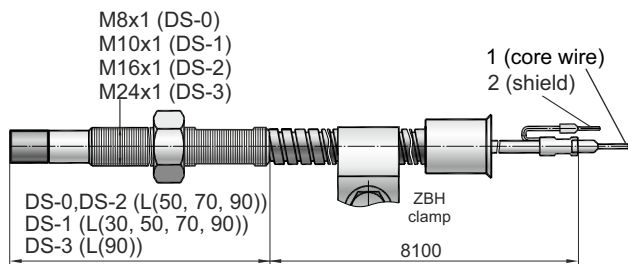
- IKV-1-4-1.1 ver. A (DS-x ver. 00 or ver. 01 (with connector), USO AS 141 converter, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002)safety barrier)***;
- IKV-1-4-1.1 ver. B (DS-x ver. 02 with USO AS 1412 converter in the socket, connection box, TIK-BIS.121.0x0x (TIK-BIS.5x7.1002) safety barrier)***;
- IKV-1-4-1.1 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-1-4-1.1 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)

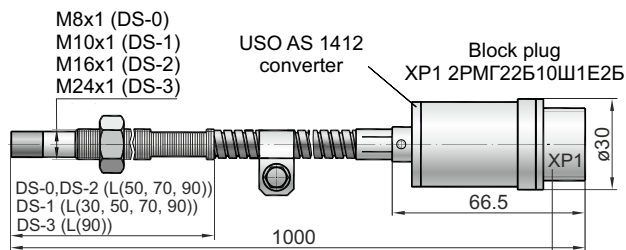


Constructive designs

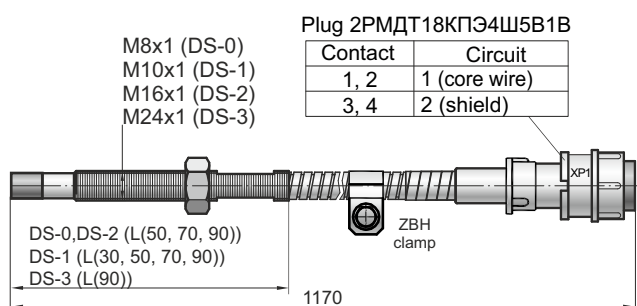
DS-x type A, ver. 00 eddy-current transducer



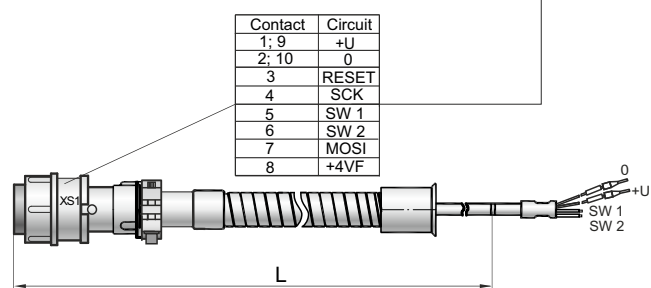
DS-x type A, ver. 02 eddy-current transducer



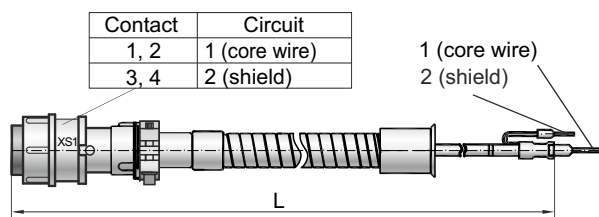
DS-x type A, ver. 01 eddy-current transducer



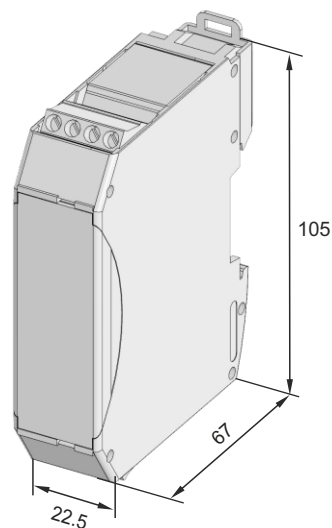
Connection cable (for ver. 02)



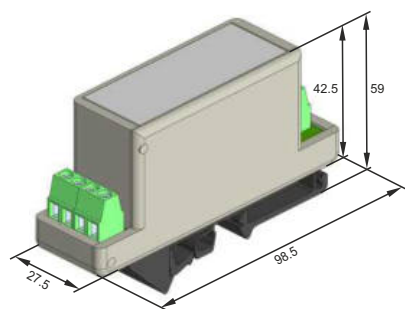
Connection cable (for ver. 01)



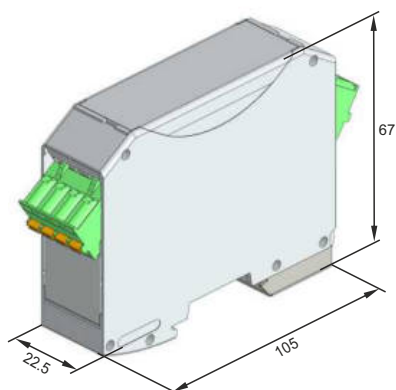
USO AS 141 converter (for ver. E)



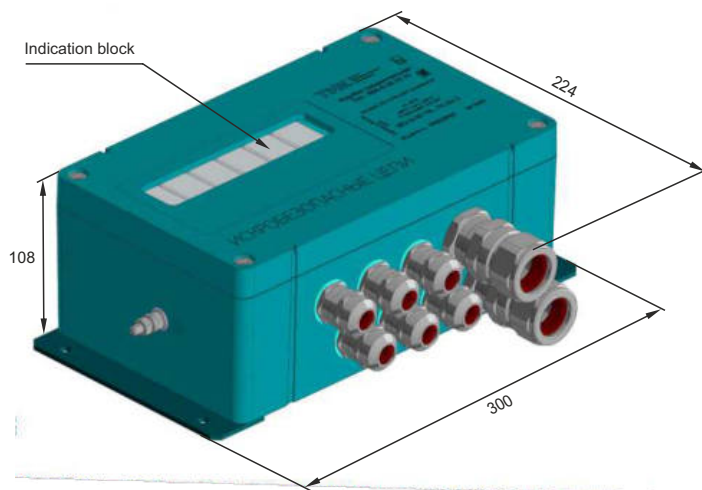
USO AS 141 converter (for ver. A)



Indication block (for ver. V)

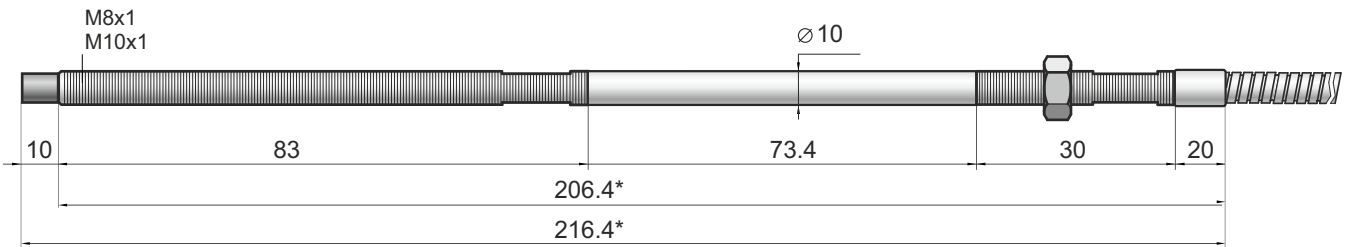


Connection box (for ver. V)

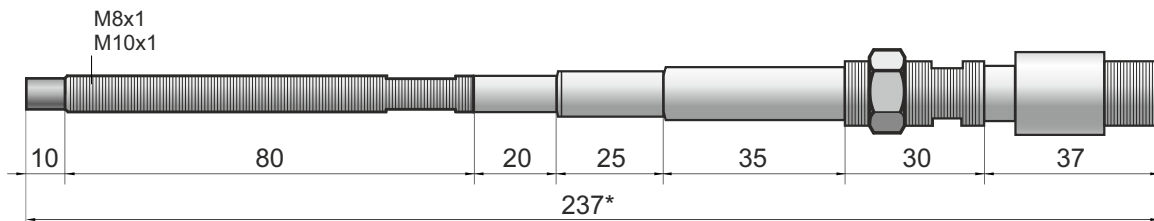


Design versions of IKV-1-3-1 for compressors

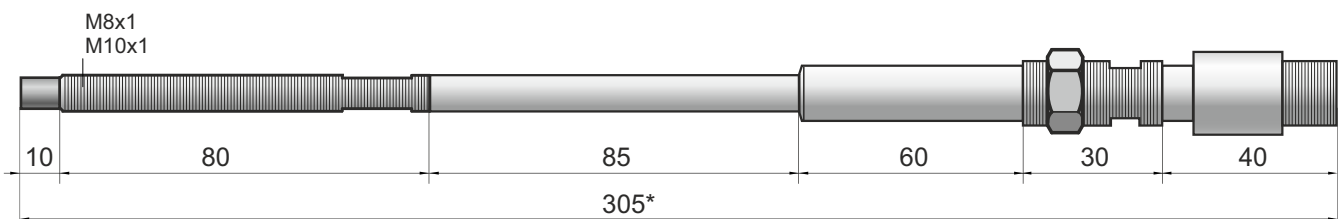
DS-1 eddy-current transducer, type B



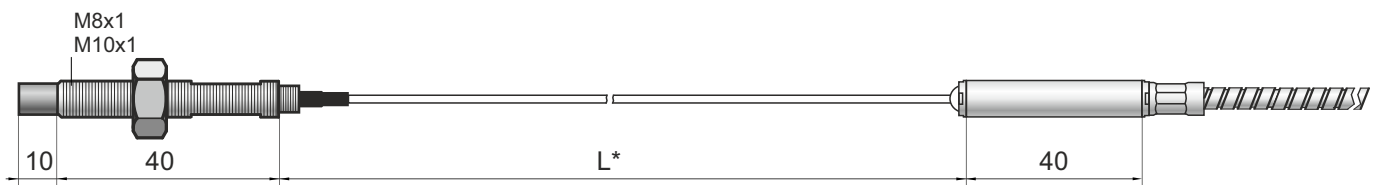
DS-1 eddy-current transducer, type C1



DS-1 eddy-current transducer, type C2



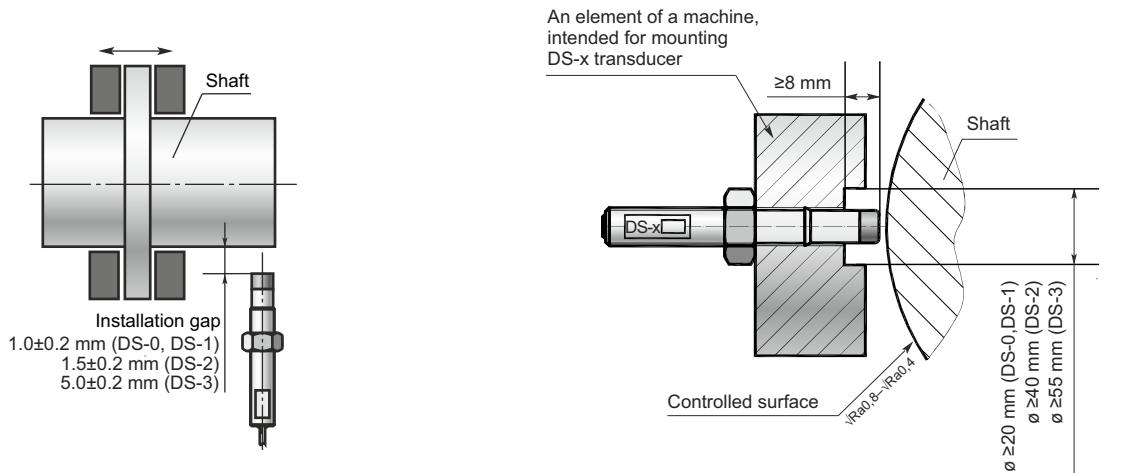
DS-1 eddy-current transducer, type D



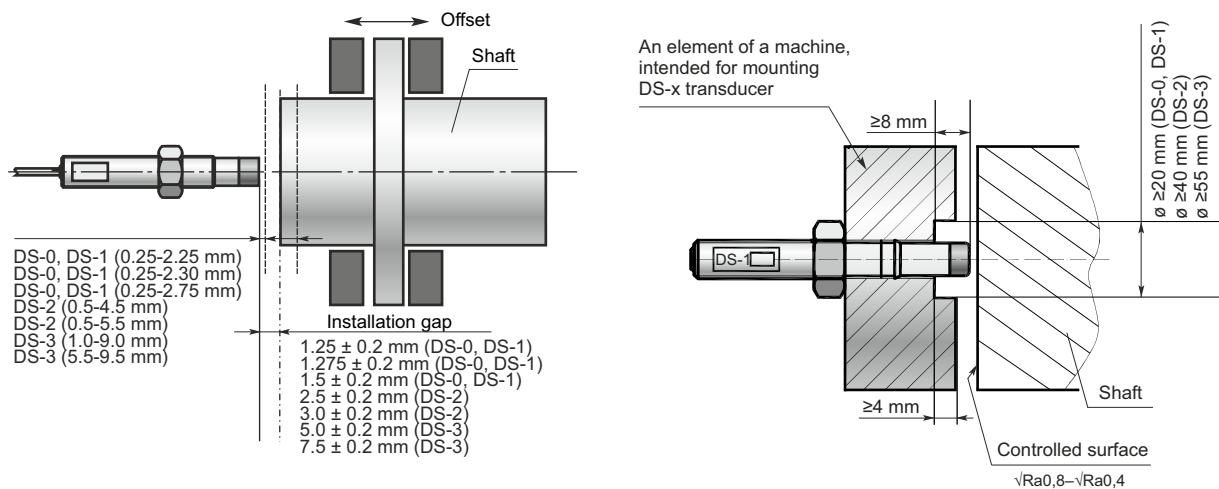
* to order according to individual dimensions

Installation of eddy-current transducers

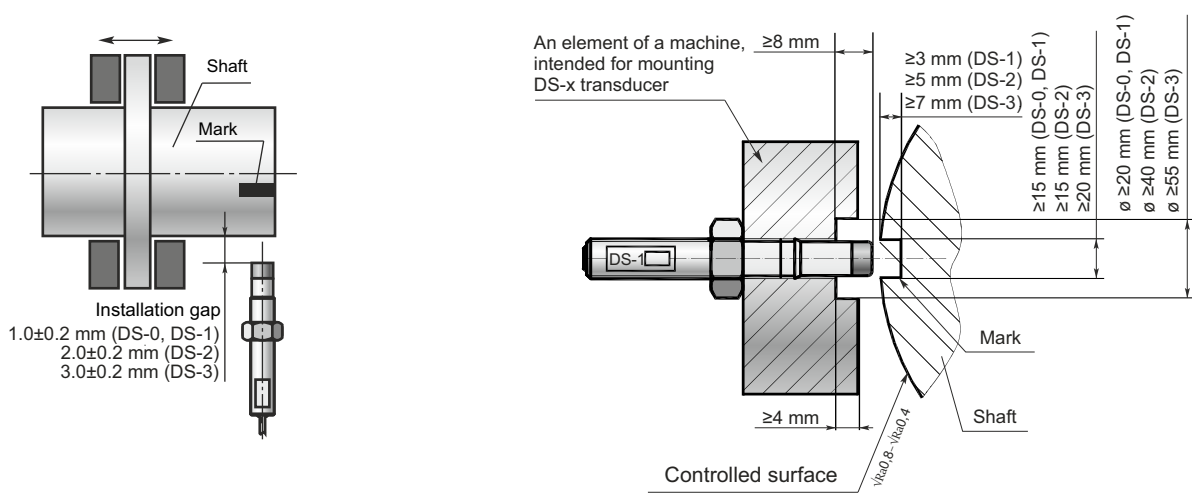
Measurement of vibration displacement



Axial displacement measurement

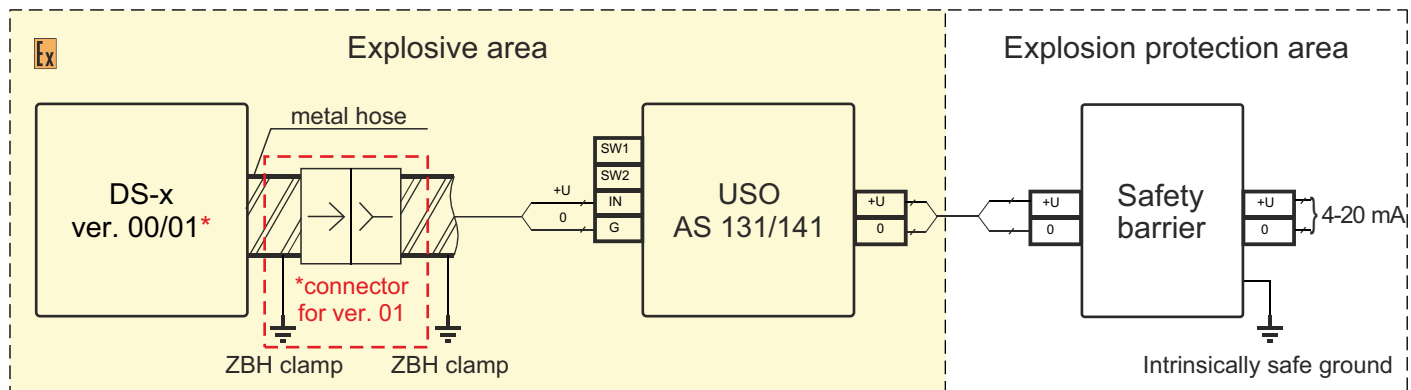


RPM measurement and mark detection

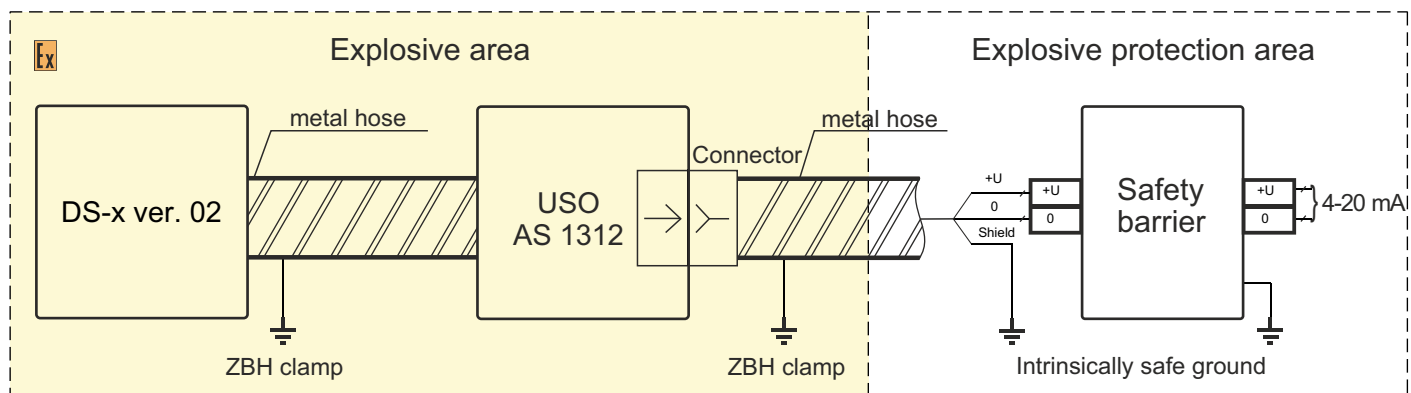


Wiring diagrams

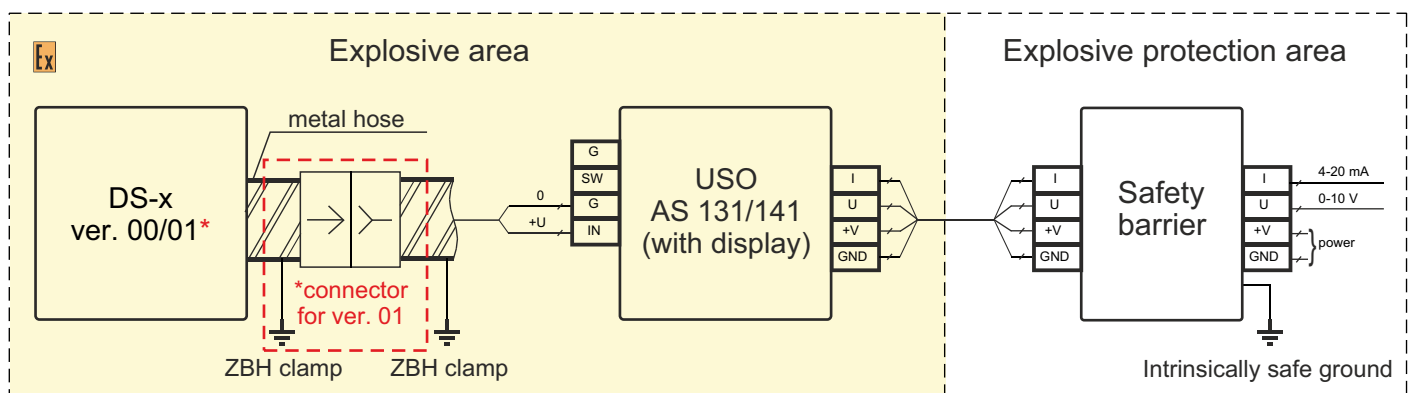
IKV-1-3-1 (IKV-1-4-1 / IKV-1-4-1.1) ver. A



IKV-1-3-1 ver. B



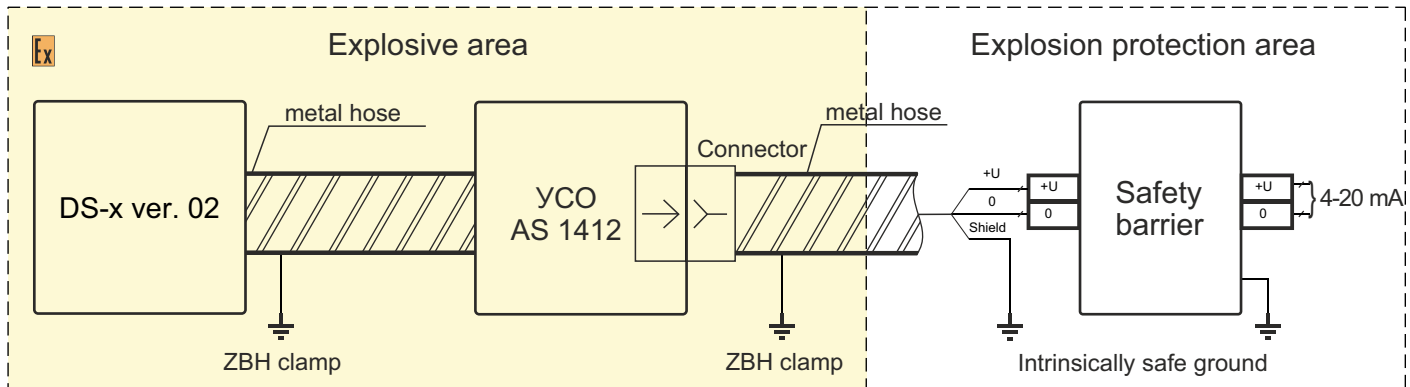
IKV-1-3-1 (IKV-1-4-1 / IKV-1-4-1.1) ver. E



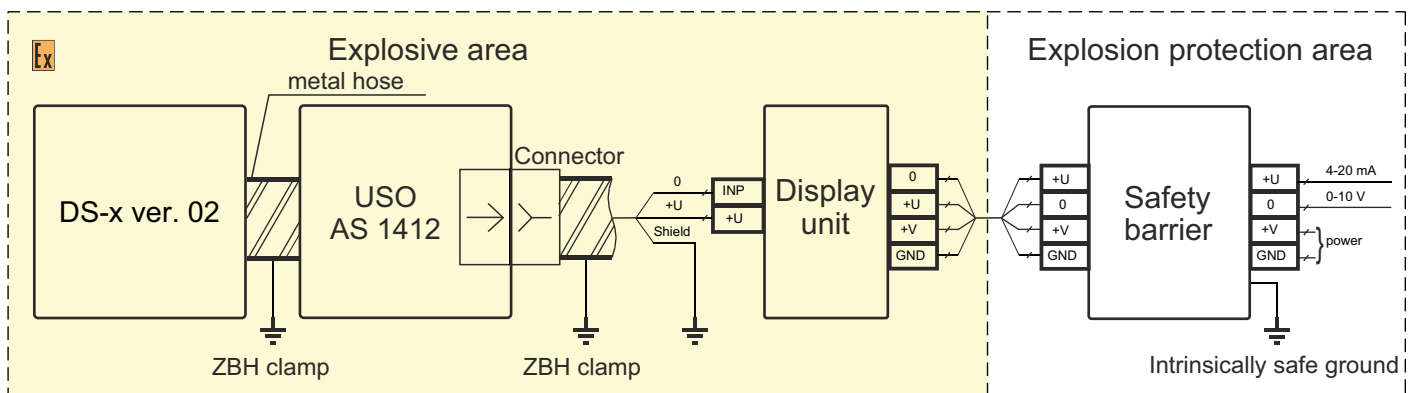


Wiring diagrams

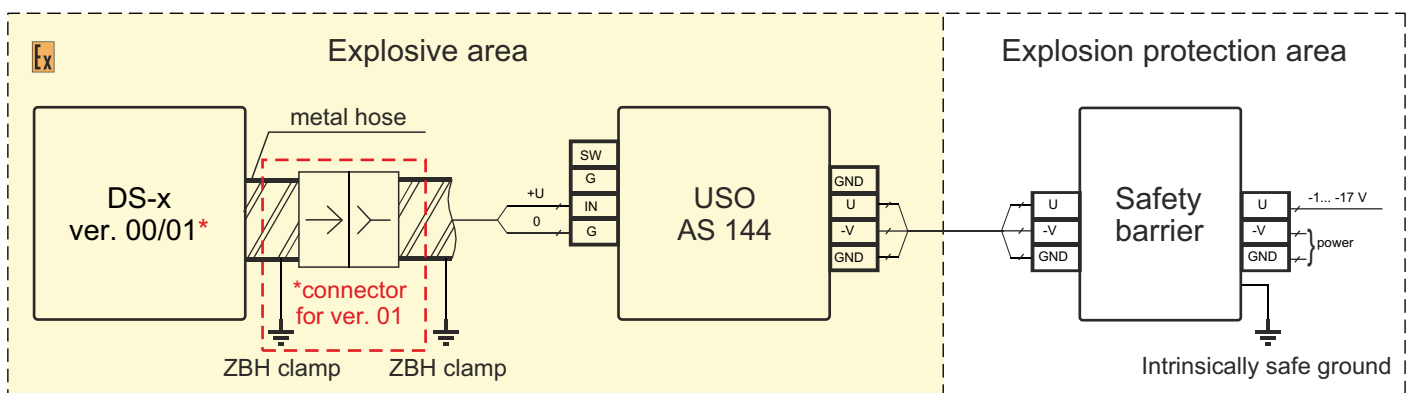
IKV-1-4-1 / IKV-1-4-1.1 ver. B



IKV-1-4-1 / IKV-1-4-1.1 ver. V



IKV-1-4-4 ver. A





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