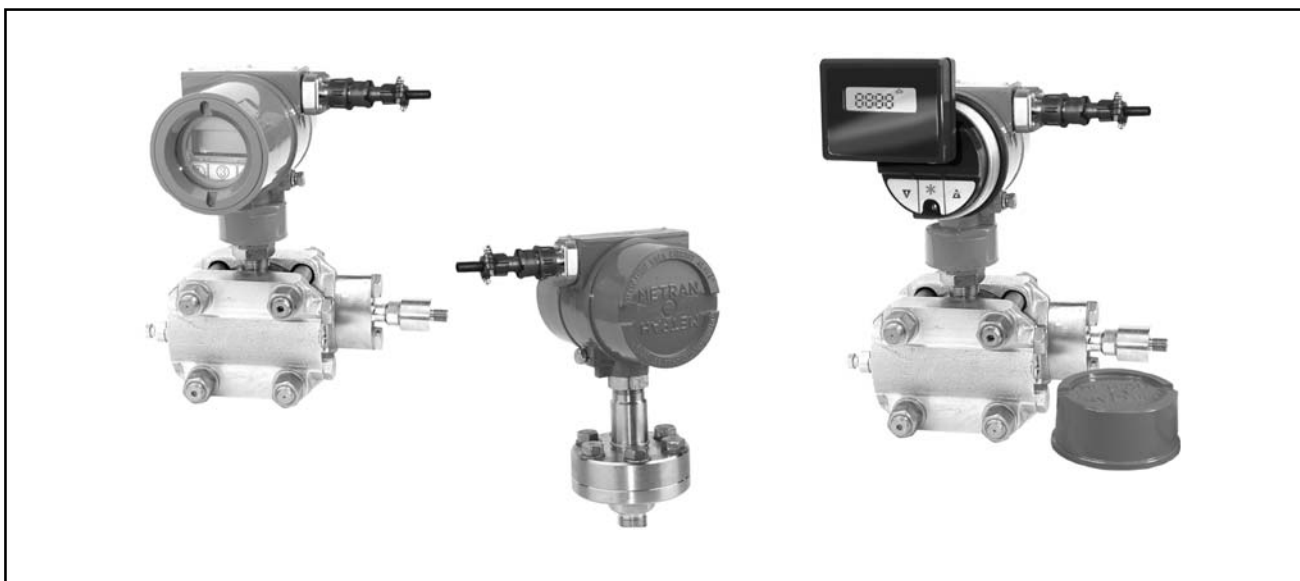


Metran-22-AS Pressure Transmitter

OKP Code 42 1200



- **Measured media - gas, liquid, steam**
- **Ambient temperature -40...70°C**
- **Output:**
0-5, 4-20, 0-20, 5-0, 20-4, 20-0 mA
- **Location group - 3 (industrial applications in partial service within contamination control areas) per OTT 08042462**
- **Application group - 1, 2, 3 per OTT 08042462**
- **Security class - 2NU, 3NU per OPB 88/97**
- **Seismic resistance - 1 as per NP-031-01**
- **Reliability group - 1 per OTT 08042462**
- **Mounting group B (built-in radio components and devices mounted on intermediate structures (pipelines, shields, brackets etc.) per GOST 29075)**
- **Climatic type: UHL3.1, U2, T3**
- **Dust and water tightness: IP65**

Metran-22-AS pressure transmitters are designed for constant conversion of measured value (absolute, gage, vacuum, gage-vacuum, differential pressure) into a unified signal in automated control systems and process monitoring systems in nuclear facilities.

Licence to manufacturing #UO-11-101-0680 of 08/01/2002.

The transmitter complies with requirements of TU 4212-011-12580824-98, Annex A, GOST 22520, GOST 12997, OTT 08042462, NP-001, specific regulations for supply of equipment, devices, materials and goods for nuclear facilities.

Verification interval - 3 years.

Warranty service life - 3 years after placing into operation.

Average service life - 15 years.

Average time between failures - 270 000 h.

Metran-22-AS pressure transmitters are designed for measuring gage pressure (DI), absolute pressure (DA), vacuum (DV), gage and vacuum (DIV), differential pressure (DD) in nuclear facilities.

Types, models, ranges are stated in tables 1, 2, 3.

Table 1

Transmitter Type	Model	URL as per GOST 22520
Absolute Pressure (AP) Transmitters		
Metran-22-DA-AS	2020	2.5; 4; 6; 10 kPa
	2030	4; 6; 10; 16; 25; 40 kPa
	2040	25; 40; 60; 100; 160; 250 kPa
	2050, 2051	0.25; 0.4; 0.6; 1; 1.6; 2.5 MPa
	2060, 2061	1.6; 2.5; 4; 6; 10; 16 MPa
Gage Pressure (GP) Transmitters		
Metran-22-DI-AS	5110*	0.06; 0.063; 0.1; 0.16; 0.25; 0.4 kPa
	5120	0.1; 0.16; 0.25; 0.4; 0.6; 1; 1.6; 2.5 kPa
	5130	0.6; 1; 1.6; 2.5; 4; 6 kPa
	2110	0.16; 0.25; 0.4; 0.6; 1; 1.6 kPa
	2120	0.4; 0.6; 1; 1.6; 2.5; 4; 6; 10 kPa
	2130	1.6; 2.5; 4; 6; 10; 16; 25; 40 kPa
	2140	10; 16; 25; 40; 60; 100; 160; 250 kPa
	2150, 2151	0.1; 0.16; 0.25; 0.4; 0.6; 1; 1.6; 2.5 MPa
	2160, 2161	1; 1.6; 2.5; 4; 6; 10; 16 MPa
	2170	4; 6; 10; 16; 25 MPa
2171	4; 6; 10; 16; 25; 40; 60; 100 MPa	
Vacuum Pressure (VP) Transmitters		
Metran-22-DV-AS	5210*	0.06; 0.063; 0.1; 0.16; 0.25; 0.4 kPa
	5220	0.1; 0.16; 0.25; 0.4; 0.6; 1; 1.6; 2.5 kPa
	5230	0.6; 1; 1.6; 2.5; 4; 6 kPa
	2210	0.16; 0.25; 0.4; 0.6; 1; 1.6 kPa
	2220	0.4; 0.6; 1; 1.6; 2.5; 4; 6; 10 kPa
	2230	1.6; 2.5; 4; 6; 10; 16; 25; 40 kPa
	2240	4; 6; 10; 16; 25; 40; 60; 100 kPa

Table 2

Transmitter Type	Model	URL as per GOST 22520, kPa	
		vacuum	gage pressure
Gage and Vacuum Pressure (GVP) Transmitters			
Metran-22-DIV-AS	5310*	0.0315	0.0315
		0.05	0.05
		0.08	0.08
		0.125	0.125
		0.2	0.2
	5320	0.315	0.315
		0.125	0.125
		0.2	0.2
		0.315	0.315
		0.5	0.5
	5330	0.8	0.8
		1.25	1.25
		2.0	2.0
		3.15	3.15
		0.08	0.08
2310	0.125	0.125	
	0.2	0.2	
	0.315	0.315	
	0.5	0.5	
	0.8	0.8	
2320	0.5	0.5	
	0.8	0.8	
	1.25	1.25	
	2	2	
	3.15	3.15	
2330	5	5	
	2	2	
	3.15	3.15	
	5	5	
	8	8	
2340	12.5	12.5	
	20	20	
	20	20	
	31.5	31.5	
	50	50	
2350, 2351	100	60	
	100	150	
	0.1 MPa	0.3 MPa	
		0.53 MPa	
		0.9 MPa	
	1.5 MPa		
	2.4 MPa		

* Gaseous fluids recommended.

Table 3

Transmitter Type	Model	URL as per GOST 22520, kPa	Maximum operating gage pressure, MPa
Differential Pressure (DP) Transmitters			
Metran-22-DD-AS	5410*	0.063; 0.1; 0.16; 0.25; 0.4	0.1
	5420	0.1; 0.16; 0.25; 0.4; 0.63; 1.0; 1.6; 2.5	0.25
	5430	0.63; 1.0; 1.6; 2.5; 4; 6.3	0.4
	2410	0.16; 0.25; 0.4; 0.63; 1; 1.6	0.1; 4
	2420	0.63; 1; 1.6; 2.5; 4; 6.3; 10	4; 10
	2430	1.6; 2.5; 4; 6.3; 10; 16; 25; 40**	16; 25
	2434		40
	2440	10; 16; 25; 40; 63; 100; 160; 250**	16; 25
	2444		40
	2450	0.1; 0.16; 0.25; 0.4; 0.63; 1; 1.6; 2.5** MPa	16; 25
	2460	0.63; 1; 1.6; 2.5; 4; 6.3; 10; 16 MPa	25
	3494*	0.4; 0.63; 1; 1.6; 2.5; 4; 6.3	4
	3494-01*	2.5; 4; 6.3; 10; 16; 25	6; 10
	3494-02*	4; 6.3; 10; 16; 25; 40; 63; 100	6; 10; 16
	3494-03*	25; 40; 63; 100; 160; 250; 400; 630	16; 25
	4420	4; 6.3; 10; 16; 25; 40; 63	6; 10
	4430	10; 16; 25; 40; 63; 100; 160	10; 16
4440	25; 40; 63; 100; 160; 250; 400; 630		

* Gaseous fluids recommended.

URL marked ** indicates that the transmitter is accepted for manufacturing only after order agreement.

LRL of DI, DV, DD and DA transmitters is 0; for DIV transmitters 0 value is within the range.

The transmitters are multilimit and can be adjusted for a range from Pmin to Pmax according to the standard pressure values stated in GOST 22520 or for an URL and a range different from standard.

The manufacturer sets transmitter URL against the order in accordance with tables 1, 2, 3. Setting of a non-standard transmitter URL is performed against mutually agreed order.

● **Version codes** according to electronic converter option and **outputs** are indicated in Table 4.

Table 4

Code	Output	Options
MP	0-5; 4-20; 0-20; 5-0; 20-4; 20-0 mA	without integral indicator; with remote indicator
MP1		with integral indicator

Analog output functions:

- linearly increasing;
- linearly decreasing;
- square root (for outputs 0-5, 4-20, 0-20 mA) - additional for DD transmitters measuring DP Flow of gases, liquids or vapors with an orifice.

Functions are set with keypad located under the lid of the electronic converter.

● **Limits of reference accuracy** (including non-linearity, hysteresis and repeatability) are stated in tables 5-9

For models 2040...2061, 2110...2171, 2210...2240, 2310...2351, 2410...2460

Table 5

Code of Reference Accuracy Limit	Reference Accuracy Limits within Range of Adjustment, $\pm\gamma$ %				Note
	Pmax	$P_{max} \geq P_u \geq P_{max}/6$	$P_{max}/6 > P_u \geq P_{max}/10$	$P_{max}/10 > P_u \geq P_{max}/25$	
015	0.15	0.2	0.25	$0.14 + 0.02 P_{max}/P_u$	for all models, except 2110, 2210, 2310, 2410
025	0.25	0.4		$0.2 + 0.025 P_{max}/P_u$	for all models
050	0.5		$0.4 + 0.02 P_{max}/P_u$		

For model 2020

Table 6

Code of Reference Accuracy Limit	Reference Accuracy Limits within Range of Adjustment, $\pm\gamma$ %		
	10 kPa	6; 4 kPa	2.5 kPa
025	0.25	0.5	1.0

For model 2030

Table 7

Code of Reference Accuracy Limit	Reference Accuracy Limits within Range of Adjustment, $\pm\gamma$ %	
	40; 25; 16; 10 kPa	6; 4 kPa
025	0.25	0.5
050	0.5	

For models 3494, -01, -02, -03; 4420, 4430, 4440

Table 8

Code of Reference Accuracy Limit	Reference Accuracy Limits within Range of Adjustment, $\pm\gamma$ %			
	Pmax	$P_{max} \geq P_u \geq P_{max}/6$	$P_{max}/6 > P_u \geq P_{max}/10$	$P_{max}/10 > P_u \geq P_{max}/25$
015 (except for models 3494-03)	0.15	0.2	0.25*	$0.14 + 0.02 P_{max}/P_u$
0.25**	0.25	0.4		$0.2 + 0.025 P_{max}/P_u$
050	0.5			$0.4 + 0.02 P_{max}/P_u$

* $\gamma = \pm 0.4\%$ - for models 4420, 4430, 3494, 3494-01.

** Except for model 3494-03 with $P_{gage} = 25$ MPa.

For models 5110...5430

Table 9

Code of Reference Accuracy Limit	Reference Accuracy Limits within Range of Adjustment, $\pm\gamma$ %			
	Pmax	$P_{max} \geq P_u \geq P_{max}/6$	$P_{max}/6 > P_u \geq P_{max}/10$	$P_{max}/10 > P_u \geq P_{max}/25$
015 (except for models 5110, 5210, 5310, 5410)	0.15	0.2	0.25*	$0.14 + k^{**} P_{max}/P_u$
025 (for all models)	0.25	0.4		$0.2 + 0.025 P_{max}/P_u$
050 (for all models)	0.5			$0.4 + k^{**} P_{max}/P_u$

* $\gamma = \pm 0.4\%$ - for models 5130, 5230, 5330, 5430.

** $k = 0.025$ - for models 5120, 5130, 5220, 5230, 5320, 5330, 5420, 5430; $k = 0.02$ - for other models.

Pmax - maximum URL for the transmitter model (sum of absolute max. URL values of gage (P_{max}) and vacuum ($P_{max(-)}$) pressure for DIV transmitters).

Pu - set pressure chosen from URLs stated in tables 1, 2 (for DIV transmitters - sum of absolute values of set DI value (P_u) and VP ($P_{u(-)}$) as per table 3).

● For transmitters with indicators measured value **indication accuracy** shall not exceed 1% of URL or span (rated at 23°C).

● The transmitter has **electronic output damping**, characterized by time of readings averaging (td). Averaging time increases time of output settling, thus levelling output at rapid change of input.

Damping can be set at 0.2; 0.4; 0.8; 1.6; 3.2; 6.4; 12.8; 25.6 sec. and is selected by the customer.

● **Transmitter turn-on time**, measured as time after power is applied to transmitter to output settling with accuracy min. 5% of set value, shall not exceed 2 sec. at min. damping.

OPERATING PERFORMANCE

● Transmitters are proof against atmospheric pressure from 84.0 to 106.7 kPa (group **P1**, GOST 12997)

● Climatic types UHL3.1 and U2 **are proof against relative humidity** up to (95±3)% at 35°C and lower temperatures without moisture condensation. TZ version transmitters are proof against relative humidity 100% at 35°C and lower temperatures with moisture condensation.

● Dust and water tightness:
IP65 as per GOST 14254

● DD transmitters stand **one-end overpressure** with maximum operating gage pressure on either upper or the lower end

● DI transmitters (with URL up to 10 MPa), VP transmitters (with URL up to 0.06 MPa), GVP transmitters (all URLs), AP transmitters (with URL 0.1 MPa or over) stand **one-end overpressure of P = 1.25 Pmax**, where Pmax is the maximum upper range limit for the transmitter model

● DI transmitters with URL 100 MPa stand overpressure P=1.1Pmax

● DI transmitters with URL from 16 to 60 MPa stand overpressure P=1.15Pmax

● **By proofness against sinusoidal vibration** the transmitters comply with the following groups as per GOST 12997:
- for mod. 2020...2061, 2110...2171, 2210...2240, 2310...2351, 2410...2460

N4 with URL from 0.4 to 100 MPa,
N3 with URL from 2.5 to 250 kPa,
L3 with URL up to 2.5 kPa;

- for mod. 5110...5130, 5210...5230, 5310...5330, 5410...5430

N4 with URL from 0.4 to 6.3 kPa,

L3 with URL up to 0.4 kPa;

- for mod. 3494, -01, -02, -03, 4420, 4430, 4440

V1 for all URLs

● **EMI proofness** of the transmitters complies with group IV, quality of EMI-proof operation - A as per GOST 50746, providing:

- **transmitter proofness against dynamic change of voltage is ensured for transmitter complete with a power supply unit;**

- **transmitter proofness against microsecond pulse interference (GOST R 51317.4.5) is ensured for transmitter complete with a Noise Filter Unit (NFU).** The transmitters are manufactured only with the corresponding NFU;

- level of RF-pulses within frequency band over 10 kHz and pulse amplitude for output signal over 10 msec are not rated for EMI

● The transmitters meet **noise emission** requirements for class B as per GOST 51318.22

● The transmitters:

- **are proof against seismic load** up to 8 on the altitude of 41.1 m;

- **are fireproof** (probability of fire caused by the transmitter does not exceed 10^{-6} per year according to GOST 12.1.004 both in normal and emergency mode);

- **are proof against influences for location group 3** (Annex 2, OTT 08042462)

● **Influencing Factors**

Table 10

Effect	Additional Error		Transmitter Types and Models
	at $P_{max} \geq P_u \geq \frac{P_{max}}{10}$	at $\frac{P_{max}}{10} > P_u \geq \frac{P_{max}}{25}$	
Ambient temperature variation within operating temperature range	Per 10°C		For all models
	Code 015 $\gamma_t = \pm(0.05 + 0.05 \frac{P_{max}}{P_u}) \%$ Code 025, 050 $\gamma_t = \pm(0.1 + 0.05 \frac{P_{max}}{P_u}) \%$	$\gamma_T = \pm(0.1 + 0.1 \frac{P_{max}}{P_u}) \%$	
Variation of operating gage pressure from zero to maximum permissible and from maximum permissible to zero	$\gamma_p = \pm k_p \Delta P_{oper} \frac{P_{max}}{P_u} \%$, where $k_p = \pm 0.025\%/10 \text{ kPa}$ or $\pm(0.03-0.2)\%/1\text{MPa}$ according to a model and code of accuracy. Variation of an output signal due to ΔP_{oper} , can be reduced by adjusting the initial output value at bilateral gage pressure on measuring cavities of the transmitter, and in the absence of drop at the transmitter inlet		For Metran-22AS-DD
EMI: - influence of radio-frequency EM field as per GOST R 51317.4.3 - other effects	% of output turndown: $\pm 0.1\%$ for transmitters with MP code; $\pm 0.4\%$ for transmitters with MP1 code $\pm 1\%$		For all models
Vibration in accordance with version groups as per GOST 12997 for the model	$\pm 0.25\%$ for URL from 10 kPa to 100 MPa, $\pm 0.5\%$ for URL from 2.5 to 10 kPa, $\pm 1.5\%$ for URL up to 2.5 kPa		For models 2020...2061, 2110...2171, 2210...2240, 2310...2351, 2410...2460
	$\pm(0.25 \frac{P_{max}}{P_u}) \%$ for all URLs		For models 5110...5130, 5210...5230, 5310...5330, 5410...5430
	$\pm(0.1 \frac{P_{max}}{P_u}) \%$ for all URLs		For models 3494, -01, -02, -03, 4420, 4430, 4440
External magnetic field, intensity 400 A/m	Max. $\pm 0.1\%$ of output turndown		For all models

P_{max} , P_u - see Table 3; ΔP_{oper} - variation of operating gage pressure.

POWER CONSUMPTION

● **Metran-49, Metran-49-Vn Transmitters** are supplied from DC power units with voltage stated in Table 11.

Table 11

Code	MP, MP1		
Output, mA	4-20 20-4	0-5 5-0	0-20 20-0
Voltage, V	12-42	22-42	

Supply voltage is stated without outer load.

● **Load resistance** values for the transmitters are stated in table 12.

Table 12

Output, mA	Load resistance, Ohm	
	Rmin	Rmax
0-5, 5-0	0	$R_{max} \leq 100(U-10)$
0-20, 20-0	0 at $U \leq 36$ V $R_{min} \geq 50(U-36)$ at $U > 36$ V	$R_{max} \leq 45(U-14)$
4-20, 20-4	0 at $U \leq 36$ V $R_{min} \geq 50(U-36)$ at $U > 36$ V	$R_{max} \leq 42(U-12)$

U - supply voltage, V.

Power supply unit for transmitters shall meet the following requirements:

- insulation resistance min. 20 MOhm;
- test voltage for insulation strength testing 1.5 kV;
- output voltage ripple (peak-to-peak) shall not exceed 0.5% of output voltage rating at harmonic frequency not exceeding 500 Hz;
- power interruption, max. 20 msec.

● **Supply voltage limits**

(resistance of devices and loop) depend on supply and shall stay within operating region (see. fig.1-3),

Rmax reduces by

20 Ohm - for output 4-20 mA;

100 Ohm - for output 0-5 mA;

50 Ohm - for output 0-20 mA.

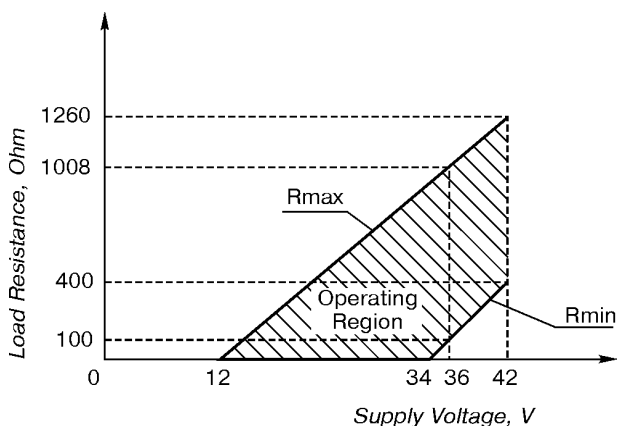


Fig.1. For Transmitters with Electronic Converter Code MP, MP1 (4-20, 20-4 mA output).

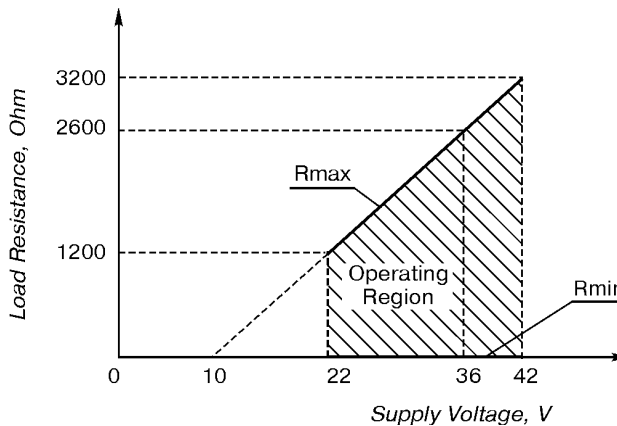


Fig.2. For Transmitters with Electronic Converter Code MP, MP1 (0-5, 5-0 mA output).

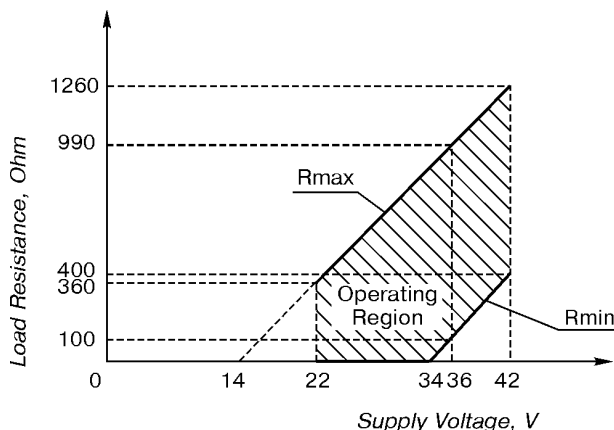


Fig.3. For Transmitters with Electronic Converter Code MP, MP1 (0-20, 20-0 mA output).

● **Power consumption**

0.5 VA - for transmitters with 0-5 or 5-0 mA output;

0.8 VA - for transmitters with 4-20 or 20-0 mA output;

1.0 VA - for transmitters with 0-20 or 20-0 mA output

WEIGHT

From 1.6 to 11.9 kg depending on model.

RELIABILITY

Average service life of AS transmitter - min. 15 years.
Average time between failures - 270000 h.

CALIBRATION

Verification interval - 3 years.
Verification Procedure MI 4212-012-2001.

WARRANTY

36 months from the date of commissioning.

DELIVERY SET

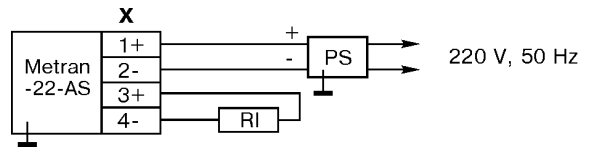
- Transmitter;
- Set of mounting parts (against customer's order);
- Remote indicator (RI) (against customer's order);
- Socket Connector 2RM14KPN4G1V1 or 2RM22KPN4G1V1;
- Operation Manual;
- Verification Procedure MI 4212-012-2001;
- Product Data Sheet;
- Setting Instructions.

The following options are available upon customer's request and at extra cost:

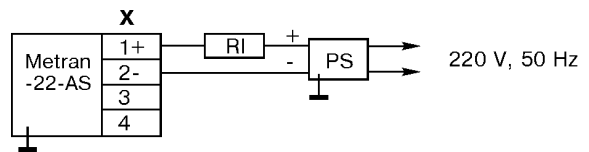
- DBS, DKS, DFK Diaphragms;
- SK, SU, SR Vessels;
- Power supply units.

WIRING DIAGRAMS

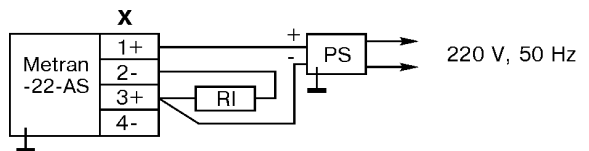
For Transmitters with 0-5, 5-0, 0-20, 20-0 mA Output



For Transmitters with 4-20, 20-4 mA Output



Connection of Load RI for Transmitters with 4-20, 20-4 mA Output



Legend:
PS - power supply unit;
RI - load resistance.

ORDERING INFORMATION

Metran-22-DD - 2420 - AS - 02 - MP - t10 - 050 - 6.3 kPa - 10 - 42 - SK - M20 - KB - ShR - VI - TU...															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

1. Transmitter type (tables 1, 2, 3).
2. Transmitter model (tables 1, 2, 3).
3. Code of transmitters for nuclear power stations.
4. Wetted material type code:

01	diaphragm - alloy 36NiCrTiAl,	flanges - carbon steel with coating (except models 3494,-01,-02,-03; 5110...5430);
02	diaphragm - alloy 36NiCrTiAl,	flanges - steel 12Cr18Ni10Ti;
11	diaphragm- titanium alloy,	flanges - 12Cr18Ni10Ti (for models 2051, 2061, 2151, 2161, 2171, 2351).
5. Type code according to electronic converter version (Table 4).
6. Climatic type code (Table 16).
7. Code of reference accuracy (Tables 5-9).
8. Transmitter URL* with indication of measurement units (Tables 1-3).
9. Maximum operating gage pressure, MPa (for DP transmitters only, Table 3).
10. Output code (Table 14).
11. Code of clamp or bracket (only for orders including clamp or bracket, Table 17).
12. Code of mounting parts (Tables 17-19).
13. Code of manifold (required for orders including DP transmitters (models 2410...2460) and manifolds for them). Manifolds are supplied at extra cost or can be included in a special order.
14. Electric connection code (Table 13).
15. Remote indicator (RI)**.
16. Specification TU 4212-011-12580824-98, Annex A.

* In legend of GVP transmitters the upper gage pressure limit is stated as URL .

** Remote indicator (RI) is designed for control, tuning, mode setting and calibration of transmitters with MP code and is an essential element for preparation of the transmitter to operation. An order can include any number of RIs. RI is supplied at additional cost or can be supplied under a special order.

ELECTRICAL CONNECTOR CODE

Table 13

Code	Electrical Connector Type
ShR14	Plug-and-socket: plug 2RMG14B4Sh1E2B GEO.364.140 TU (socket 2RM14KPN4G1V1 GEO.364.140 TU)
ShR22	Plug-and-socket: plug 2RM22B4Sh3V1 GEO.364.126 TU (socket 2RM22KPN4G3V1 GEO.364.126 TU) or plug 2PMT22B4Sh3V1V GEO.364.126 TU (socket 2RM22KPN4G3V1V GEO.364.126 TU)
S*	Gland lead-in for cable with outer diameter max. 10 mm
S1*	Gland lead-in for cable with outer diameter max. 12.4 mm

* S/S1 socket connectors are used for Metran-22-AS transmitters security class 4 (DO NOT use for transmitters security class 2, 3).

TYPE CODE

Table 15

Code	Indicator
MP	Without integral indicator, with remote indicator
MP1	Integral indicator

OUTPUT CODE

Table 14

Code	Output, mA
05	0 - 5
50	5 - 0
42	4 - 20
24	20 - 4
02	0 - 20
20	20 - 0

CLIMATIC TYPE CODE

Table 16

Code	Type of climatic version as per GOST 15150	Maximum ambient temperature for operation, °C
t 1	UHL 3.1	5...70
t 8	T3	-25...70
t 10	U2	-40...70

CODES OF MOUNTING PARTS**For models 2020...2460**

Table 17

Code	Mounting parts
K1/2	Mounting flange with threaded opening K1/2"
K1/4	Mounting flange with threaded opening K1/4"
M20	Nipple with captive nut M20x1.5
SK	Clamp, bracket

Notes

- When ordering a transmitter with a nipple without captive nut, do not specify a code of mounting parts in the transmitter denotation line.
- When ordering models 2050, 2051, 2060, 2061, 2150, 2151, 2160, 2161, 2170, 2171, 2350, 2351, code of mounting parts shall not be specified.
- Code M20 is specified as required for models 2020, 2030, 2040, 2110, 2120, 2130, 2140, 2210, 2220, 2230, 2240, 2310, 2320, 2330, 2340 and all models of Metran-22-DD.
- SK code shall not be specified for the transmitter, when ordering a set of mounting parts without a clamp or bracket for models 2020, 2030, 2040, 2110, 2120, 2130, 2140, 2210, 2220, 2230, 2240, 2310, 2320, 2330, 2340, 2410, 2420, 2430, 2434, 2440, 2444, 2450, 2460 and Metran-22-DD with manifold.

For models 4420, 4430, 4440

Table 18

Code	Mounting parts
K1/4	Mounting flange with threaded opening K1/4"
K1/2	Mounting flange with threaded opening K1/2"
M16	Nipple with captive nut M16x1.5 for joining on the outer pipe diameter 10 mm
M20	Nipple with captive nut M20x1.5 for joining on the outer pipe diameter 14 mm
BVN04	Stainless steel manifold (12Cr18Ni10Ti) with nipple and captive nut M22x1.5 for joining on the outer pipe diameter 14 mm

For models 3494, -01, -02, -03; 5110...5430

Table 19

Code	Mounting parts	Application
K1/2, TK1/2*	Fitting with threaded tapered opening K1/2"	for models 3494, -01, -02, -03; 5110...5430
K1/4, TK1/4*	Fitting with threaded tapered opening K1/4"	
M20, TM20*	Nipple with captive nut M20x1.5 for joining on the outer pipe diameter 14 mm	
M16, TM16*	Nipple with captive nut M16x1.5 or joining on the outer pipe diameter 10 mm	
A, TA*	Nipple with captive nut M12x1.25 or joining on the outer pipe diameter 6 mm	
B	Fitting for slip joints of flexible pipes with inner diameter 6 mm	for models 5110...5430
SVN	Manifold system (steel 12Cr18Ni10Ti) with nipple and captive nut M22x1.5 for joining on the outer pipe diameter 14 mm; P rel.=16 MPa	
SV	Same as above (carbon steel with coating)	
BVOZ	Manifold (carbon steel with coating) with nipple and captive nut M22x1.5 for joining on the outer pipe diameter 14 mm; Prel.=0.4 MPa	
BVNOZ	Same as above (steel 12Cr18Ni10Ti)	
SVN01, TSVN01*	Manifold system (steel 12Cr18Ni10Ti) with nipple and captive nut M22x1.5 for joining on the outer pipe diameter 14 mm; mounted from below; Pmax.=16; 25 MPa	for models 3494, -01, -02, -03
SV01, TSV01*	Same as above (carbon steel with coating)	
SVN02, TSVN02*	Manifold system (steel 12Cr18Ni10Ti) with nipple and captive nut M22x1.5 for joining on the outer pipe diameter 14 mm; mounted on top; Pmax.=16; 25 MPa	
SV02, TSV02*	Same as above (carbon steel with coating)	
BV02	Manifold (carbon steel with coating) with nipple and captive nut M22x1.5 for joining on the outer pipe diameter 14 mm Pmax.=16; 25 MPa	
BVN02	Same as above (steel 12Cr18Ni10Ti)	

* TK1/2, TK1/4, TM20, TM16, TA, TSV01, TSVN01, TSV02, TSVN02 are codes of mounting parts with a bracket for mounting of models 3494, -01, -02, -03 on a pipe diameter (50±5) mm.

When ordering manifolds or manifold systems separately, specify delivery option:

- with a set of mounting parts for the specified transmitter;
- without set of mounting parts.

OVERALL AND CONNECTION DIMENSIONS

For overall and connection dimensions of pressure transmitters Metran-22-AS refer to **Annex A of the section Metran-100 Smart Pressure Transmitters**.