OFPM Regd

No I 24303

Connectors 9 types

2PM, 2PMT, 2PMA, 2PMAT

Technical Specifications

TEO-364-126TY

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CONNECTORS of types

2PM , 2PMT, 2PMΔ , 2PMΔT

Technical Specifications

TE C. 364. 126 TY

The present technical specifications (ТУ) refer to connectors of types 2РМ (А1, Б1, 2РМД (А1, Б1), 2РМГ (А1, Б1), 2РМДТ (А1, Б1), meant for use in electric circuits of dc or ac with frequency upto 3 МНz under ~~elect~~ current load and voltages specified in appendix 1.

Connectors to be supplied as per the given ТУ, should satisfy to the requirements of ОСТ В 11 0121-85 (ОТУ) and the requirements set in the corresponding ~~sections~~ chapters of present ТУ.

Numbering of ~~section~~ chapters and ~~sub~~ sections, taken (& used) in the present ТУ corresponds to the numbering of analogous ~~sections~~ chapters and sections of ОТУ.

Connectors are manufactured in two climatic versions: all climatic (for all climates) "В" — of type 2РМТ, 2РМДТ and for operation in temperate [illegible] "УХЛ1" — of type 2РМ, 2РМД as per

GOST B 20 39 404-81.

List of reference documents is given in appendix 2.

1. CLASSIFICATION

1.1. Classification is as per OST B11.0121-85 00 with following additions:

connectors (plugs, sockets) [cylindrical], of space-wired interconnectors with threaded clamping of articulated position are manufactured of 8 types of 15 standard sizes of 2РМ, 2РМТ and with 13 standard sizes of 2РМД, 2РМДТ, 3095 of in compliance with figures 1-2 and Tables 1-2 of appendix 3.

2. MAIN PARAMETERS AND DIMENSIONS

2.1. КП.2.1 ОТУ. Main parameters and dimensions of connectors (plugs, sockets) should conform to the requirements given in chapter 3 and

2.2. КП.2.2 ОТУ. Conventional designations which consist of the following classification signs are attributed to the connectors (plugs, sockets).

*

2.3. Designation of connectors (plugs, sockets) while ordering and in design documents of other product consists of "Plug" ("Socket"), conventional designation of standard design of plug (socket); letters В for connectors (plugs, sockets) of all climatic version, designation of present ТУ.

Connectors of type 2РМ may be supplied along with branch pipes or without branch pipes.

Necessary view of branch pipe and nut is taken as per figs. 3-6 of appendix 3 depending on the design version and method of wiring with attribution — 2 — of following designation:

11 — branch pipes with unshielded nut

" — straight branch pipe with shielded nut

" — angular branch pipe with unshielded nut

— angular branch pipe with shielded nut

Example of designation of plugs and sockets branch pipes is

Socket 2РМТ 22 КПН 10Г 1 А1В ГЕО·364·126ТУ

Plug 2РМТ·22БПЭ 10Ш1А1В ГЕО·364·126ТУ

Example of designation of plugs and sockets branchpipes is :

Socket 2РМТ 22К 10Г1А1В ГЕО·364·126 ТУ

Plug 2РМ22Б10Ш1А1 ГЕО·364·126ТУ

Example of designation of plugs and sockets left threading is :

Socket 2РМД 30Б8Г 7А1Б ГЕО·364·126 ТУ

Plug 2РМДТ 30К 8Ш7А1БВ ГЕО·364·126ТУ

Example of designation of plugs and sockets angular branchpipes, sections on shafts of

2РМТ 22 Б(К) П(У) Н(Э) 0 10 Г(Ш) 1 А 1 Л Б Х

Type of connector

Conventional size of plug (socket)

Type of body:
Б - in blocks(instrument)
К - cable

Type of branch pipe:
П - straight
У - angular

Type of nut of branch pipe:
Э - for shielded cable
Н - for unshielded cable

Wiring tails turned relative to key and key slot through 180°

Number of terminals

Part of connector Ш - plug; Г - socket

Designation of combination of terminals:
1 - all terminals 1.0 mm,
2 - terminals 1.0 mm and 1.5 mm
3 - terminals 2.0 mm and 3.0 mm
4 - terminals 1.0 mm and 3.0 mm
5 - all terminals 1.5 mm
6 - terminals 1.5 mm and 3.0 mm
7 - terminals 1.5 mm, 2.0 mm and 3.0 mm
8 - terminals 1.5 mm and 2.0 mm
9 - all terminals 3.0 mm

Type of coating A-gold plating, B-silver plating

Heat stability (100°)

Left socket (only for plugs without flanges)

Block body (instrument) without left thread

Version or model for all climatics

Type of coating of terminal : gold or silver

contacts (terminals) of which are unwound
lative to key or key slot at 180°.

Plug	2РМ22КУН010Ш1А1	ГЕО 354.126ТУ
Socket	2РМТ22КУ-Н010Г1А1В	ГЕО.364.126ТУ

Note.

Parts of wiring of wires and cables, amps; metal brushes, covers, washers, and similarly plugs in conventional designations are taken into consideration but are pplied if there is special instruction while dering the connectors or manufactured the consumer (in the absence of parts of ring in the technical documents).

2.4. Nomenclature of unmanufactured connectors is ven in the Table 3 of appendix 3.

3. Technical Requirements

Technical requirements are as per ОСТВ 11 0121-85 with additions and revisions as stated in the present chapter.

conditions stated in clauses 3.2.5.2, 3.2.6, 3.2.7, 3.2.8, 3.2.9, 3.2.12, 3.2.17, 3.3.5, 3.5.3 are not applicable ОТУ for connectors produced as per the present conditions as per ТУ ~~are~~ where as clauses 3.1, 3.2.1, 3.2.3, 3.2.4, 3.2.5.1, 3.2.11, 3.2.15, 3.2.17, 3.2.21, 3.2.22, 3.3.1, 3.3.1.1, 3.3.1.5, 3.3.1.6, 3.3.2, 3.3.2.1, 3.3.3, 3.3.4, 3.3.4.1, 3.3.4.2, 3.3.4.3, 3.3.4.4, 3.3.4.5, 3.4.1, 3.4.2, 3.5.1, 3.5.2 specified by the present ТУ.

3.1. regarding 3.1 of ОТУ Set of design documents

ГЕ3.645.323-000 ГЕ3.647.107-000

ГЕ3.645.325-000 ГЕ3.647.123-000

ГЕ3.645.353-000 ГЕ3.647.571-000

ГЕ3.645.729-000СБ	ГЕ3.647.723-000СБ
ГЕ3.645.758-000	ГЕ3.647.777-000СБ
ГЕ3.645.900-000	ГЕ3.647.784-000СБ
ГЕ3.645.956-000СБ	ГЕ3.647.820-000
ГЕ3.645962-000СБ	ГЕ3.647.822-000

3.2. Requirements for design

3.2.1. regarding 3.2.1 of ОТУ General view, overall dimensions, ~~mentions~~ and mounting dimensions of connectors of plugs, sockets) should confirm to those given figs 1-6 and in Tables 1-2, 4-7 of appendix 3.

Lay-out diagrams of contacts (terminals) in illustrations, number of contacts (terminals) and ir diameters are given in appendix 1.

3.2.2. for cl. 3.2.3 of ОТУ. Weight of connectors (plugs, sockets) should not exceed the values specified in Table 1.2 of appendix 3, weight of branch pipes should not exceed the values specified

in Tables 4–7 of appendix 3.

3.2.3. for cl. 3.2.4 of OTY. ~~Condition~~ Forces of separation of sockets with checking pin-gauge during acceptance and supply should be in the limits of norms given in Table 1.

Table 1.

Diameter of contacts (terminals), mm	1.0.	1.5	2.0	3.0
Force of separation of sockets, N (kgf) with springs made of alloys 36 HXTHO 8M & 36HXTHO	0.5 – 2.95 (0.05 – 0.3)	0.7 – 3.92 (0.01 – 0.4)	1.0 – 4.9 (0.1 – 0.5)	1.25 – 5.9 (0.125 – 0.6)

3.2.4. for cl. 3.2.5.1. of OTY. Force of connector unmating during acceptance and supply should not exceed the values specified in appendix 1.

3.2.5 for cl. 3.2.11 of OTY design of connectors has one feather (spline) key.

3.2.6 for cl. 3.2.15 of OTY Wiring tails should

capacity to be soldered (during this) without additional
lating for 12 months from the date of
facture of connectors.

3.2.7. /к cl. 3.2.17 of ОТУ. I. Superheat temperature
of contacts (terminals) should not exceed 50°C.

3.2.8. Thread and friction parts of ~~connectors~~
nut of connectors should be lubricated
grease (lubricant) ГОСТ-54П ГОСТ 3276-74.

3.2.9. /к cl. 3.2.21 of ОТУ. — Parameters of connectors
ing minimum operation time (3.5.1) should
ism to the following norms.

/ unmating force of sockets should not be
than the norms given in Table 2.

Table 2

ameter of terminal, mm	1	1.5	2	3
Inmating force of kets, N (kgf)	0.36 (0.036)	0.48 (0.048)	0.67 (0.067)	0.9 (0.09)

a) connectors unmating force should not be more than 110% of norms specified in appendix 1.

Blackening of terminals in the form of isolated patches and (spots) and similarly change in colour of coating and painting of parts are permitted, provided, the efficiency (capacity) of connectors is not reduced.

Other requirements should conform to the requirements set by OTY and present TY during acceptance and supply.

3.2.10. for cl. 3.2.22 of OTY. Parameters of connectors during minimum storage period (cl. 3.5.2) should conform to the following norms.

i) pockets unmating force should not be less than the norms given in Table 2.

a) connectors unmating force should not be more than 105% of norms specified in appendix 1.

Blackening of terminals (contacts) in the form of isolated spots and patches, and similarly change in colour of coating and painting of parts are allowed, provided, efficiency (capacity) of connectors is not reduced.

Other requirements should conform to the requirements set by OTY and present TY during acceptance and supply.

3.3. Requirements for electric parameters and modes of operation.

3.3.1. /r cl. 3.3.1 of OTY. Electric parameters of connectors during acceptance and supply should conform to those specified in OST B 11 0124-85 with additions and revisions given in the data of section (sub division).

3.3.1.1. /r cl. 3.3.1.1 of OTY. Resistance of terminals should not exceed the values given in Table 3.

Table 3

iameter of terminals, mm	1.0	1.5	2.0	3.0
Listance of terminals, mOhm	5.0	2.5	1.6	0.8

3.3.1.2 for cl. 3.3.1.5 of OTY. Capacity between terminals (contacts) should not exceed 6pF.

3.3.1.3: for cl. 3.3.1.6. of OTY Electric strength of ulation, is shown in appendix 1.

3.3.2. for cl. 3.3.2. of OTY. Electric parameters connectors during minimum operating time should form to the following norms:

Insulation resistance

should not be less than 1000 Mohm – in normal climatic conditions;

should be 20 Mohm – at maximum positive temperatures;

should be 10 Mohm – under prolonged action of moisture;

should be 20 Mohm – under short duration action of moisture.

Other parameters should conform to the norms set by OTY and present TY (cl. 3.3.1) during acceptance and supply.

3.3.2.1 f/r cl. 3.3.2.1 of OTY. Insulation resistance during the action of factors $C_1 - C_3$, $K_1 - K_3$ and after the action of factors U_1, U_3, U_{11}, $C_1 - C_3$, $K_1 - K_3$ of group 4y & U_2 of group 3y GOST B 20.39.404-81 should not be less than 5 Mohm.

Insulation resistance during the effect of factor U_2 is determined from the graph of insulation resistance against level of acting factor U_{22} given in appendix 5. During the action of factor U_2 of group 3y, insulation resistance may be reduced upto 50 ohms during the effect of impulse.

Other parameters should conform to the norms during acceptance and supply (cl. 3.3.1.).

3.3.3. for cl. 3.3.3 of OTY. Electric parameters of connectors during minimum storage period should

conform to the following norms.

— insulation resistance should not be less than 1000 Mohms.

Other parameters should conform to the norms during acceptance and supply, set by OTY and present. TY (cl. 3.3.1.).

3.3.4 for cl. 3.3.4 of OTY Maximum values of electric parameters and operating conditions of connectors should conform to those set (specified) in OST B 11 0121 – 85 with additions and revisions given in the present section..

3.3.4.1 for cl. 3.3.4.1 of OTY. Minimum current is $1 \cdot 10^{-4}$ mA, minimum voltage is 1 mV.

3.3.4.2. for cl. 3.3.4.2 of OTY. Maximum total current to connector should not exceed the values specified in appendix 1.

Method of calculating marking (operating) current is given in appendix 6.

3.3.4.3. for cl. 3.3.4.3 of OTy. Maximum operating current to single terminal should not exceed the values specified in appendix 1.

3.3.4.4. for cl. 3.3.4.4. of OTy. Maximum (permissi transient currents to contact (terminal) and connector should not exceed twice the values specified in appendix 1.

Time of effect (of action) should not exceed 5 minutes.

3.3.4.5 for cl. 3.3.4.5 of OTy. Maximum operating voltage for normal climatic conditions should not exceed the values specified in appendix 1.

Relationship between operating voltage and atmospheric pressure is given in appendix 7.

3.4. Requirements regarding resistance to external acting factors

3.4.1. for cl. 3.4.1. of GTY. Connectors should be resistant to the action of mechanical, climatic and biological factors set in OST B. 11.0121-85 for group of version 4, with additions and revisions, given in cl. 3.4.1.1 and 3.4.1.2.

3.4.1.1. Sinoidal vibration:

acceleration amplitude 490 m/s² (50g)

mechanical impact:

of single action

shock acceleration peak value 5000 m/s² (520g)

of multiple action

shock acceleration peak value 1000 m/s² (100g)

linear acceleration, 2000 m/s² (200g)

3.4.1.2. Atmospheric working pressure

reduced 133.32 · 10^{-12} Pa (10^{-12} mm Hg)

increased upto 50.6 · 10^4 Pa (5.0 kgf/cm²).

Increased working temperature of the medium

100 °C.

change in temperatures:

from maximum temperature of connector 250°C

to reduced working temperature of the

minus

medium 60 °C –

for connectors with gold-coated terminals

and from 180°C upto minus 60°C – for

connectors with silver terminals (contacts).

of frost and dew

action (effect) of ozone

ignitability

Requirements regarding stability against static, dynamic dust, rain, atmosphere with corrosive-active agents, components of jet (engine) fuel are not applicable to control (checking) media.

3.4.2. for d. 3.4.2. OTY. Connectors should be

stable against the action of factors 4_1, 4_3, 4_{8-11}, C_1-C_3, K_1-K_3 of group 4y and factor 4_2 of group 3y. GOST B 20.39.404-81.

Connectors should be resistant to the action (effect) of factors 4_4, 4_5 with value of characteristic $4_4 = 10$.

Maximum level of factor 4_2, at which insulation resistance corresponds to the value specified in cl. 3.3.2.1, corresponds to $3.2 \cdot 10^5$.

3.5. Requirements regarding reliability.

3.5.1. For cl. 3.5.1.0TУ. Minimum operating time of connectors should be 1000 hr when the number of articulations and separations is equal to 100.

Minimum operating time of connectors ~~in cl.~~ at alleviated (reduced) temperature should conform to the values given in Table 4.

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Table 4

...imum operating of connecta, hr.	Maximum temperature of connecta, °C	Type of connector
100000	80	2РМ (А1, В1),
50000	90	
25000	100	2РМД (А1, В1),
5000	120	
4000	125	2РМТ (А1, В1),
3000	130	
2000	140	2РМДТ (А1, В1)
1000	150	
700	165	
500	180	
200	200	2РМ – А1
100	220	2РМД – А1
50	230	2РМТ – А1
6	250	2РМДТ – А1

3.5.2 for cl. 3.5.2. ОТУ. Minimum storage period connectors should be 15 years.

When connectors are stored in unheated enclosures and similarly when they are present built in in the apparatus of unprotected objects (vehicles)

storage periods in relation to place of storage should conform to the values given in Table 5.

Table 5

Storage place	Minimum storage period, yrs.	
	in the packing of manufacturer	in the form of unprotected and SPTA
Unheated storehouse	9	9
shed	3	3
open area	storage is not permitted	. . .

4. REQUIREMENTS FOR ENSURING AND CHECKING THE QUALITY DURING MANUFACTI

4.1. for cl. 4.1 OTY. Ensuring and checking of quality during manufacture should conform to that set in OST B 11 0121-83.

5. ACCEPTANCE RULES

5.1. Acceptance rules are as per OST B11 0121- additions given in the present section.

Points stated in clauses 5.2.1, 5.2.1.4, 5.3.2, 5.4.3 ОТУ, are confirmed by the present ТУ.

5.2. Qualified tests (Qualifying tests)

Qualified tests are as per ОСТ В 11 0121–85.

5.2.1. Composition of tests, division of composition of tests into groups of tests and sequence in which they are conducted within the limits of every group is as per ОСТ В 11 0121–85.

5.2.1.1 for 5.2.1. ОТУ In point 1 Table 7 ОТУ of group К-1 check the presence of lubricant.

5.2.1.2 for cl. 5.2.1.4 ОТУ. Tests of connectors in respect of (or groupwise) groups К-11, К-12 for the effect of frost and dew are not conducted. Conformity of connectors to these requirements is confirmed during ~~in the Standard~~ development.

5.3. Approval tests

Approval tests are as per ОСТ В 11 0121–85.

5.3.1. for cl. 5.3.2. QTY. In cl. 1 of Table 8 of group C-1, check for the presence of

icant.

5.4. Periodic tests

5.4.1 for cl. 5.4.3. QTY. For conducting tests groups П-1 and П-2, connectors are divided

2. design - technological groups

1 group of type 2РМ and 2РМД

2 group of type 2РМТ and 2РМДТ

Every group should include different variants version, diameter and coating of terminals

ntacts), types of branch pipes.

Note: 2 groups may be mixed into one g

lding in conditions of relative humidity of

5 ± 3% at temperature of +40°C

for 4 days — for connectors 2РМ, 2РМД,

for 10 days — for connectors 2РМТ, 2РМДТ

is permitted.

5.5. Tests for durability

Service-life tests are as per OST B 11 0121-85.

5.5.1. Making a set (or procurement) of samples for durability tests is done as per the rules set for group П-1 (cl. 5.4.1).

5.6. Tests for preservation

Preservation tests are as per OST B 110121-85 section .....

5.7. Tests are as per OSTB ~~НО~~ 61 0121-85 section .....

6. Methods of Inspection

Methods of inspection are as per OST 11 0121-85 with additions stated in the present section.

6.1. General

6.1.1. for cl. 6.1.2. ОТУ. Tests are conducted according to the operating instructions as per cl. 8.1.

6.2. Inspection for confirmity to the requirements in design.

6.2.1 for cl. 6.2.2 OTY. Presence of lubricant cl. 3.2.8) is checked by visual inspection.

6.2.2. for cl. 6.2.4. OTY. Sockets unmating force checked with reference pin-gauges, drawings which are given in appendix B.

6.2.3. for cl. 6.2.11 OTY. During inspection of fastening strength of contacts (terminals) in the insulators, apply along the axis of contacts (terminals) from the side of contact part to in the direction of wiring tails.

6.2.4. for cl. 6.2.13 OTY. During inspection of fastening strength of insulators in the body of connector, apply force from the side of contact part.

~~Before the test, connectors are checked subj.~~

6.3. Inspection for confirmity to the requirements for electric parameters and operating conditions.

6.3.1 for cl. 6.3.1 ОТУ. Electric parameters of ~~con~~ectors (cl. 3.3.1) ~~is~~ are checked by the methods, in ОСТ В 110121-85, with additions and revisions, in the data of section.

6.3.1.1. for cl. 6.3.1.1. ОТУ. Resistance of terminals 3.3.1.1) is checked by method 1 & 2.

6.3.1.2 for cl. 6.3.1.5 ОТУ, Capacity (cl. 3.3.1.2) measured at frequency of not less than 1 кHz.

6.3.1.3 for cl. 6.3.1.6 ОТУ. Electric strength of ~~i~~lation (cl. 3.3.1.3) is checked by method 1 & 2.

6.3.1.4. for cl. 6.3.1.7 ОТУ. Insulation resistance checked by method 1 & 2.

6.3.1.5 for 6.3.1.9. ОТУ. Superheat temperature terminals (contacts) is measured at terminals, ~~loc~~ of which is specified in appendix 1.

1.2.5 for cl. 6.2.15 OTY. Test for soldering capacity (cl. 3.2.6.) is carried out as per method 402-2.

Before the test, connectors are subjected to fast ageing as per method 2.

Soldering iron of type II

For terminal with diameter of 3.0 mm — diameter of the rod is upto 4.0 mm.

6.2.6 for cl. 6.2.16 OTY. Heat stability during soldering is checked by method 403-2.

Soldering iron of type II

For terminal (contact) with diameter 3.0 mm — diameter of the rod is upto 4.0 mm;

Holding time:

should not exceed 8 seconds for contacts (terminals) with diameter of 1.0 mm and 1.5 mm,

is 35 - 40 seconds for terminals with diameter of 2 mm and 3 mm.

Note. Test for vibration resistance in the frequency range of 2000 – 5000 Hz may not be cond if it is ensured by the design of connectors.

6.4.2. For cl. 6.4.1.3 OTY. Tests for vibration strength by changing frequency in compliance with the accompanying graph (fig. 1).

Tests are carried out with constant cha of frequency from minimum value to maximu and vice versa according to logarithmic law (principle) on the basis of $\log_{10}$. Total duratio of test for prolonged effect of vibration is 118 hrs. and for transient effect is 12 hrs.

During test subranges of frequencies, amplitude, acceleration an holding time are specified in Table 6.

Note

Test for vibration strength in the frequency range of 2000 – 5000 Hz may not be conducted if it is ensured by the design of connectors.

Graph of Acceleration against vibration frequency

(Acceleration - vibration frequency graph)

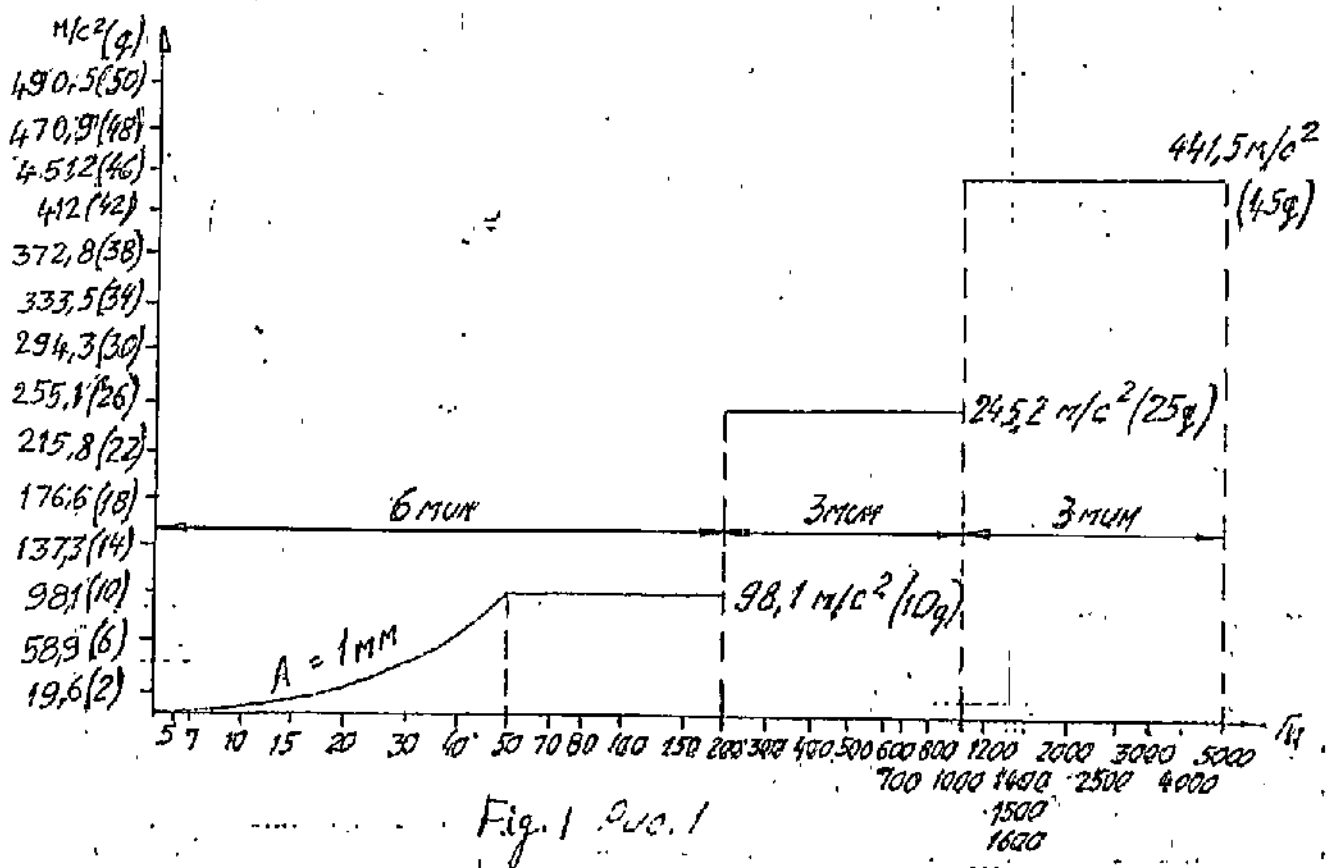


Fig. 1 Рис. 1

Table 6

Sub-range of frequencies, Hz ± 2	Acceleration, m/s² (g) ±20%	Amplitude, mm ±20%	Duration of holding in the given sub-range		Remarks
			short duration, minutes	prolonged duration, hr.	
5		1,5	60	10	
10-20		1,5	60	10	
20-30		1,0	60	10	
30-40		0,7	50	8	
40-50		0,5	45	7	
50-80		0,3	35	6	
80-100	69,8 (7)		35	6	
100-150	98,1 (10)		35	6	
150-200	147,2 (15)		30	5	
200-300	157,8 (17)		30	5	
300-400	215,8 (22)		30	5	
400-500	245,3 (25)		30	5	
500-600	294 (30)		25	4	
600-800	294 (30)		25	4	
800-1000	314 (32)		25	4	
1000-1200	334 (34)		25	4	
1200-1400	343,4 (35)		20	3	
1400-1600	354 (37)		20	3	
1500-2000	372,8 (38)		20	3	
2000-2500	392,4 (40)		20	3	
2500-3000	412,5 (42)		20	3	
3000-4000	441,5 (45)		10	2	
4000-4500	462,1 (47)		5	1	
4500-5000	490,5 (50)		5	1	

6.4.3 for 6.4.1.4 OTY During tests for impact stability; degree of rigidity is IV, duration of effect of ~~impact~~ shock acceleration is 1-3 m/s². Tests are conducted under electric load in compliance with cl. 6.4.1.1 TY.

6.4.4. for cl. 6.4.1.5 OTY. During tests for the effect of separate impacts. degree of rigidity is V; form of impulse of shock acceleration is semi sinusoidal.

6.4.5. for cl. 6.4.1.6 OTY. During the tests for the effect of increased working (ambient) temperature, the connectors are kept (held) in a chamber at maximum temperature of connector, equal to 150°C (taking reheat temperature of terminals into consideration) for 500 hours.

— during test for no-failure operation, for minimum operating time — during test for durability.

6.4.6. for cl. 6.4.1.8 OTY Connectors with silver

terminals are the tested in a chamber at temperature of 180°C, those with gold-plated ends are tested in at temperature of 250°C..

6.4.8. for cl. 6.4.1.10 QTY. Point corrosi of metallic parts of connector excluding the terminals is permitted.

6.4.9. for cl. 6.4.1.12 QTY. During the test for the effect of reduced atmospheric pressure to the connectors, constant voltage Uucm. as per appendix 1 is supplied.

Test is carried out at a pressure of 399.96 Pa (3 mm of Hg)..

6.4.10. for cl. 6.4.1.15 QTY. Point corrosion of metallic parts of connector excluding the terminals is permitted.

6.4.11. for cl. 6.4.1.17 QTY. Duration of holdin in the chamber is 2 days.

6.4.12. for cl. 6.4.2 QTY. Stability of connecto against the effect of special factors is chec

by testing for the effect of factors as characteristics set in cl. 3.4.2.

The connectors are considered to ~~have~~ have passed the test, if during and after the effect of special factors, insulation resistance confirms to the norms given in cl. 3.3.2.1.

6.4.13. for 6.4.3 OTY. After every 25 joints of connectors, it is necessary to hold for cooling.

Permissible ~~maintain~~ allowance for maintenance parameters - criteria for readiness:

1) Sockets unmating face should not be less than the values specified in Table 2.

2) connectors unmating face should not be more than 110% of the norms specified in appendix 1.

Other requirements should confirm to the requirements during acceptance and supply, set by OTY and present TY.

6.5. Inspection for conformity to the requirements in respect of reliability.

6.5.1 Test for no-failure operation

Test for no-failure operation is as per OST B 11 0121-85.

6.5.2. Test for durability

Test for durability is as per OST B 11 0121-8

6.5.2.1. fs d. 6.5.3.4 OTY. Durability tests conducted periodically may be conducted as per method of accelerated tests, after confirmation of durability as per the usual (slow) method.

Accelerated tests for durability should be periodically interchanged with tests as per usual method.

6.5.3. Storage test

Stor. test is as per OST B 11 0121-85.

6.5.4. Test is as per OST B 11 0121-85

section . . . .

6.6. Inspection for conformity to the requirements marking.

Inspection of marking is as per OSTB 110121-85.

6.7. Inspection for conformity to the requirements packing.

Inspection of packing is as per OSTB 110121-85

7. MARKING, PACKING, TRANSPORTATION AND STORAGE

7.1. Marking

7.1.1. Marking of connectors (plugs, sockets) is as per OST B 11 0121-85 with additions and ...sions stated in the present section.

Points ~~Items~~ given in cl. 7.1.3 OTY, (do not ...ain) for connectors ...ufactured as per the present TY.

7.2. Packing

7.2.1. Packing of connectors (plugs, sockets) is done as per OST B 110121-85 with additions and revisions given in the section.

Points
~~Positions~~. Stated in cls. 7.2.6. and 7.2.7. OTY, ~~7~~ connectors manufactured as per the present TY, are not applicable to cls. 7.2.2, 7.2.3 OTY and TY, are confirmed by the present TY

7.2.2. for cl. 7.2.2. OTY.. Connectors (plugs, sockets) are packed in market multipack and shipping container.

7.2.3. for cl. 7.2.3 OTY. Positioning signs are as per set of design documents (cl. 3.1.).

7.2.4. Weight of shipping container with packed connectors should not exceed 30 kg.

7.3. Transportation

Transportation is as per OST B 11 0121-85.

7.4. Storage

Storage is as per OST B 11 0121-85.

8. Operating instructions

8.1. The instructions set by OST B. 110121-85 and technical description and operating instructions ГЕО. 364. 126 ТО with additions and revisions given in the present section must be followed while using and wiring of connectors (plugs, sockets).

Points stated in cl. 8.7. OTY are not applicable to connectors manufactured as per the present TY.

8.2. for cl. 8.2 OTY Wiring tails of terminals permit connection of wires with sections, values of which are specified in Table 7.

Table 7.

Diameter of terminal, mm	1.0	1.5	2.0	3.0
Maximum section of wires for connectors 2РМ, 2РМТ mm^2	0.5	1.0	1.5	6
Maximum section of wires for connectors 2РМА, 2РМАТ mm^2	–	1.0	2.5	10

8.3. for cl. 8.3 OTY. Connection of wires with ring tails of terminals is done by soldering method.

Number of resolderings of terminals should not exceed 3.

8.4. for cl. 8.5 Relationship between the superheat temperature of terminals and current load is given in Table 8.

Table 8

Current load on connector of maximum permissible value as per TY	Superheat temperature of contacts, °C maximum	Type of connector
50	20	2РМ(А1, В1)
60	25	2РМА(А1, В1)
75	30	2РМТ(А1, В1)
85	40	
100	50	
110	65	2РМД,Т(А1, В1)
120	80	
180	120	2РМТ–А1
200	130	2РМТ–А1
220	150	2РМД,Т–А1

8.5. Connectors 2РМТ (А1, Б1) and 2РМДТ (А1, Б1) may be used in the conditions of relative humidity of air upto 98% and at temperature of 40°С (without moisture condensation).

8.6. Connectors 2РМ (А1, Б1) and 2РМД (А1, Б1) may be used in conditions of relative humidity of air upto 98% and at temperature of 40°С without moisture condensation for 10 days. During this, appearance of surface corrosion in the form of shallow white spots, which can be easily erased with a dry rag, tarnishing of anodized surfaces and similarly decrease of insulation resistance upto 2 Mohm are possible on metallic parts.

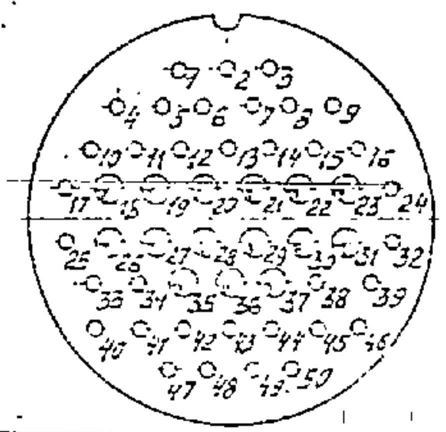
8.7. Sockets 2РМ, 2РМТ, 2РМД, 2РМДТ may be used upto 10 years along with sockets with diameter of 1.0 mm, having springs made of material 40КХНМ and БРОф with socket unmating force of 1-4.4 N (0.1 – 0.45) kgf.

8.8. for cl. 8.3 OTY. During incoming inspection of external appearance, technical description B A0. 045.210 must be followed.

9. Manufacturer's Guarantee

9.1. Manufacturer's guarantee is as per OST B 110121-

Continuation

1	2	3	4	5	6	7	8	9	10	11	12	
45		○	1,5	35	8	20 (28), 21 (29), 13	5	260	560	1850	350	3924 (40)
		⊖	2	15			7,5					

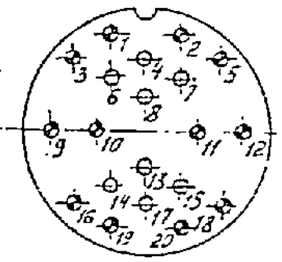
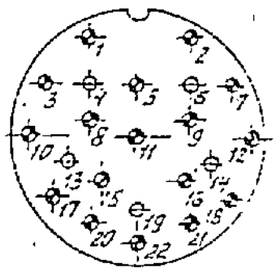
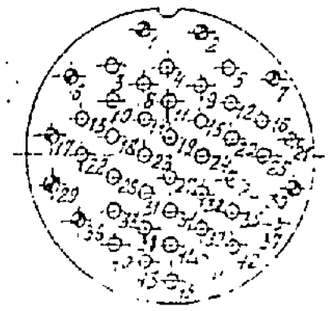
Примечания: 1. Разность потенциалов между любыми соседними контактами, а также между корпусом и соседним с ним контактом не должна превышать рабочего напряжения.

2. Нумерация контактов левых розеток-отраженный вид, шпоночный паз смещен на 90° вправо

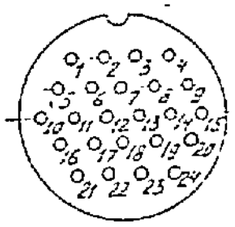
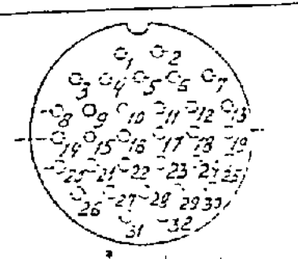
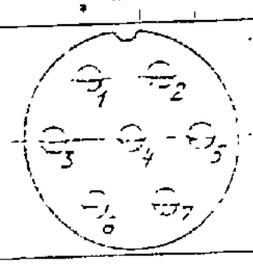
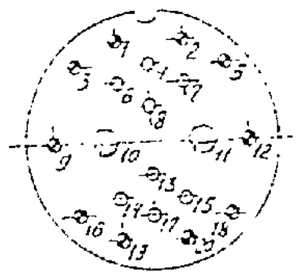
Remarks : 1. Difference in potentials between any adjacent terminals and similarly that between the body and adjacent terminal should not exceed the working voltage.

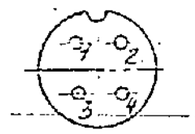
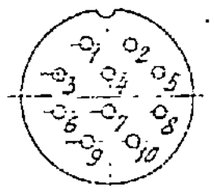
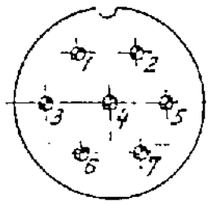
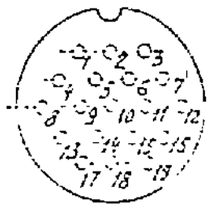
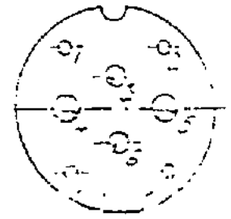
2. Numbering of terminals of left sockets is the mirror image, key & slot is moved clockwise by 90°.

Continuation

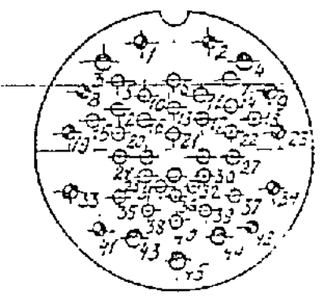
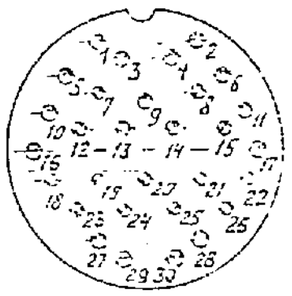
1	2	3	4	5	6	7	8	9	10	11	12	13 & 14
36		○	1,5	8	5	8(13)	8	133	560	1850	350	196.2 (20)
		⊸	1,5	12					700	2300	450	
39		⊸	1,5	5	5	11	8	146	560	1850	350	196.2 (20)
		⊸	1,5	17					700	2300	450	
42		⊸	1,5	35	5	19(27), 23(24)	5	187	560	1850	350	343.3 (35)
		⊸	1,5	10					700	2300	450	

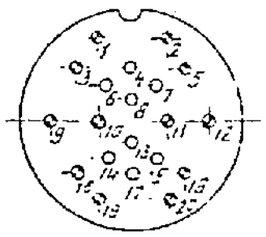
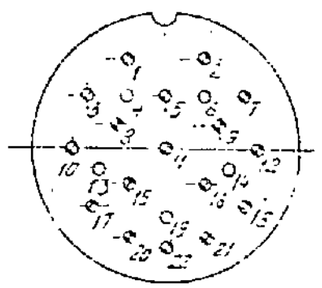
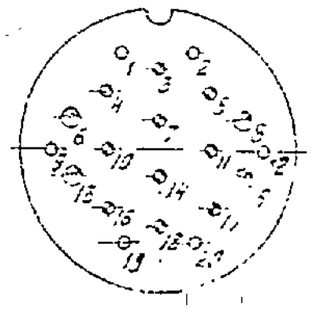
Continuation

1	2	3	4	5	6	7	8	9	10	11	12	13×14
30		○	1,5	24	5	12(13)	7	140	560	1850	350	235,44 (24)
33		○	1,5	32	5	16(17)	6	160	560	1850	350	294,3 (30)
33		○	3	7	9	4	32	128	560	1850	350	127,7 (13)
36		○	1,5	8	6	10(11), 8(13)	10	147	560	1850	350	215,82 (22)
		→	1,5	10					700	2300	450	
		⊃	3	2			36		560	1850	350	

1	2	3	4	5	6	7	8	9	10	11	12	13 & 14
18		○	1,5	4	5	any	15	50	560	1850	350	34,7 (35)
24		○	1,5	10	5	4(7)	10	83	560	1850	350	98,1 (10)
27		○	1,5	7	5	4	12	70	700	2300	450	68,6 (7)
27		○	1,5	19	5	10	7	110	560	1850	350	196,2 (20)
30		○	1,5	4	7	3(6), 4(5)	13	120	560	1850	350	98,1 (10)
		○	2	2			18					
		⊖	3	2			36					

Continuation

1	2	3	4	5	6	7	8	9	10	11	12	13	14
39		○	1,0	30	2	13(36), 21(29), 43(44)	4	167	560	1850	350	392,4 (40)	353,2 (36)
		⊖	1,0	10					700	2300	450		
		⊖	1,5	5			8		560	1850	350		
42		⊖	1,0	15	2	3, 13(14), 9, 29(30)	4,5	168	700	2300	450	343,4 (35)	294,3 (30)
		⊖	1,5	15			9		560	1850	350		
42		⊖	1,0	33	2	13 21,34(35)	4	190	560	1850	350	539,6 (55)	372,8 (38)
		⊖	1,0	10					700	2300	450		
		⊖	1,5	7			8		560	1850	350		

1	2	3	4	5	6		8	9	10	11	12	13	14
33		0	1.0	8	1	8(13)	6	100	560	1850	350	255,1 (26)	196,2 (20)
		0	1,0	12					700	2300	450		
35		0	1,0	5	1	11	6	110	560	1850	350	294,3 (30)	177,6 (18)
		0	1,0	17					700	2300	450		
35		0	1,0	6	2	6(13), 7(14)	5	100	560	1850	350	196,2 (20)	196,2 (20)
		0	1,0	10					700	2300	450		
		0	1,5	4			10		560	1850	350		

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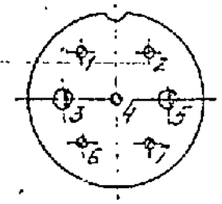
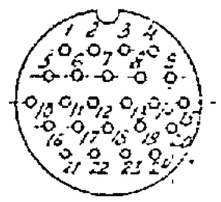
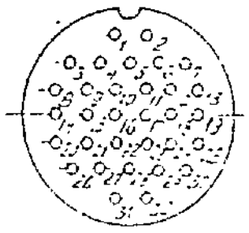
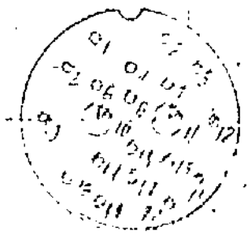
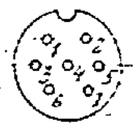
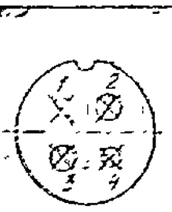
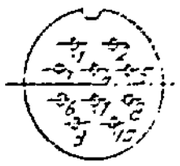
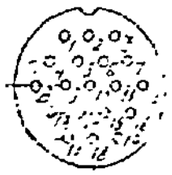
Continuation

1	2	3	4	5	6	7	8	9	10	11	12	13	14
27		○	1	5	2	4	8	60	700	2300	450	98,1 (10)	69,7 (7)
		⊖	1,5	2		3(5)	16						
27		○	1,0	24	1	12 (13)	5	100	560	1850.	350	196,2 (20)	177,5 (18)
30		○	1,0	32	1	16(17)	4	106	560	1850	350	343,4 (35)	294,3 (30)
33		○	1,0	8	4	10(11), 8(9)	6	110	560	1850	350	245,3 (25)	171,6 (18)
		○	1,0	10					700	2300	450		
		⊖	3,0	2			3,6		560	1850	350		

LAY-OUT DIAGRAMS OF TERMINALS AND ELECTRIC PARAMETERS

(42)

Conventional dimension of plug (socket)	Lay-out diagrams of terminals in insulators (Conventional numbering of terminals is given from the side of wiring part of plugs)	Conventional designation of terminals	Diameter of terminals, mm	Number of terminals, pcs.	Combination number of terminals	Number of terminals for measuring superheat temperature	Maximum current load, A		Maximum direct (d.c.) voltage or amplitude value of alternating voltage, V			Connector unmating force, N (kgf), maximum	
							at single terminal	total current load at connector	working voltage	test voltage			
										in normal climatic conditions	at pressure of 399.96 Pa (3 mm of Hg)	B1	A1
1	2	3	4	5	6		8	9	10	11	12	13	14
14		○	1,0	4	1	a, y	8	27	560	1850	350	54 (5,5)	29,4 (3)
18		○	1,0	7	1	4	7	40	560	1850	350	88,3 (9)	58,9 (6)
22		○	2,0	2	3	3(2) 1(4)	18	80	560	1850	350	74,5 (7,5)	74,6 (7,5)
		○	3,0	2			32						
22		○	1,0	10	1	4(7)	7	58	560	1850	350	117,7 (12)	10,3 (10,5)
24		○	1,0	19	1	10	5	80	560	1850	350	2256 (23)	196,2 (20)

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Appendix 2

List of reference documents

Designation	Sheet
GOST 1435-74	71
GOST 3276-74	9
GOST 19265-73	71
GOST B 2039.404-81	2; 14
OST B 11 0121-85	2; 10; 12; 13; 16; 17; 19; 25; 26; 27; 29
* ГЕО. 364, 126 ТО	27
* В10. 045. 210	29

* Documents are sent on individual (separate) requests of Consumers.

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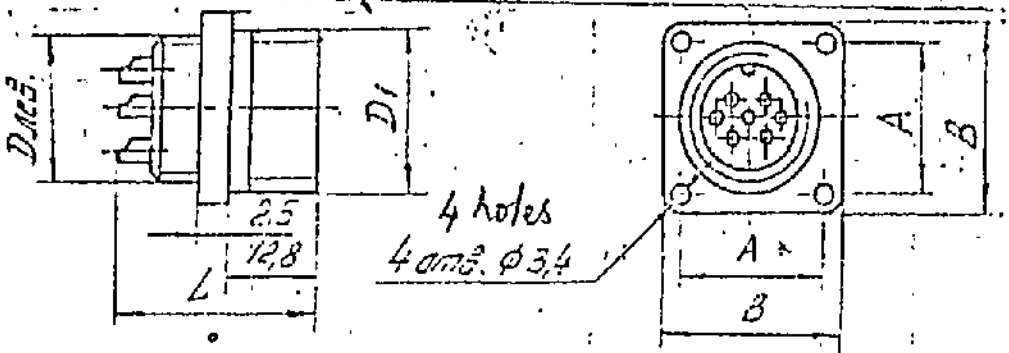
Appendix 3

General view, overall, mounting dimensions

Plugs and sockets in device (in the unit).



Variant I

Вариант I

Рис. 1 Fig. 1

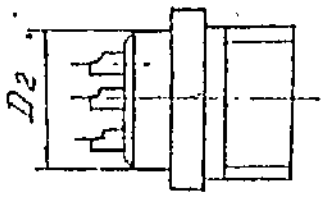


Table 1

Design modification	Dimensions, mm						Branch pipe acc. as per Tables 3, 4	Weight, g, maximum
	A	B	D	D1	D2	Lmax		
2РМ14Б4Ш1 А1, Б1	17	26	М14×1	М16×1	14	25	1,12	9,0
2РМТ14Б4Ш1 А1, Б1								
2РМ18Б7Ш1 А1, Б1	20	27	М18×1	М20×1	18	25	2,13	12,5
2РМТ18Б7Ш1 А1, Б1								
2РМА18Б4Ш5 А1, Б1								
2РМАТ12Б4Ш5 А1, Б1								
2РМ22Б4Ш3 А1, Б1	23	30	М22×1	М24×1	22	27	3,14	17,5
2РМТ22Б4Ш3 А1, Б1								
2РМ22Б10Ш1 А1, Б1						25		15,5
2РМТ22Б10Ш1 А1, Б1								
2РМ24Б19Ш1 А1, Б1	26	33	М24×1	М27×1,5	24	25	4,15	19,0
2РМТ24Б19Ш1 А1, Б1								
2РМА24Б10Ш5 А1, Б1								20,0
2РМАТ24Б10Ш5 А1, Б1								

Continuation of Table 1 (52)

Structural modification	Dimensions, mm						No. of branch pipe as per Tables 3, 4	Weight, g, maximum
	A	B	D	D1	D2	Lmax.		
2PM27B7W2 A1, B1	29	36	M27x1	M30x1,5	27	25	5,16	22,0
2PMT27B7W2 A1, B1								
2PMA27B7W5 A1, B1								22,5
2PMAT27B7W5 A1, B1								
2PM27B24W1 A1, B1								24,0
2PMT27B24W1 A1, B1								
2PMA27B19W5 A1, B1								26,0
2PMAT27B19W5 A1, B1								
2PM30B32W1 A1, B1	31	38	M30x1	M33x1,5	30	25	6,17	28,5
2PMT30B32W1 A1, B1								
2PMA30B8W7 A1, B1						27		29,5
2PMAT30B8W7 A1, B1								
2PMA30B24W5 A1, B1						25		30,5
2PMAT30B24W5 A1 B1								
2PM33B20W4 A1, B1	32	40	M33x1	M36x1,5	33	27	7,18	30,5
2PMT33B20W4 A1, B1								
2PMA33B7W9 A1, B1						25		38,5
2PMAT33B7W9 A1 B1								
2PM33B20W1 A1, B1								28,5
2PMT33B20W1 A1, B1								
2PMA33B32W5 A1, B1								39,0
2PMAT33B32W5 A1B1								
2PM36B22W1 A1 B1	35	43	M36x1	M39x1,5	36	25	8,19	31,5
2PMT36B22W1 A1 B1								
2PMA36B20W6 A1 B1						27		38,5
2PMAT36B20W6A1 B1								
2PM36B20W2 A1, B1						25		32,0
2PMT36B20W2 A1, B1								
2PMA36B20W5 A1 B1								34,5
2PMAT36B20W5 A1 B1								
2PM39B45W2 A1 B1	37	46	M39x1	M42x1,5	39	25	9,20	39,0
2PMT39B45W2 A1 B1								
2PMA39B22W5 A1 B1								40,0
2PMAT39B22W5 A1 B1								

Structural modification	Dimensions, mm (53)						No. of branch pipe as per Tables 3,4	Weight, g, maximum
	A	B	D	D1	D2	L max		
2PM42650W2 A1, B1	40	49	M42x1	M45x1,5	42	25	10,21	45,5
2PMT42650W2 A1, B1								
2PM42630W2 A1, B1								43,5
2PMT42630W2 A1, B1								
2PMД42645W5 A1, B1								51,5
2PMДТ42645W5 A1, B1								
2PMД45650W8 A1, B1	43	52	M45x1	M48x1,5	45	27	11,22	64,0
2PMДТ45650W8 A1, B1								
2PM1464Г1 A1, B1	17	24	M14x1	M16x1	14	25	1,12	11,0
2PMT1464Г1 A1, B1								
2PM1867Г1 A1, B1	20	27	M18x1	M20x1	18	25	2,13	16,0
2PMT1867Г1 A1, B1								
2PMД1864Г5 A1, B1								15,5
2PMДТ1864Г5 A1, B1								
2PM2264Г3 A1, B1	23	30	M22x1	M24x1	22	27	3,14	22,0
2PMT2264Г3 A1, B1								
2PM22610Г1 A1, B1						25		21,0
2PMT22610Г1 A1, B1								
2PM24619Г1 A1, B1	26	33	M24x1	M27x1,5	24	25	4,15	30,0
2PMT24619Г1 A1, B1								
2PMД24610Г5 A1, B1								25,5
2PMДТ24610Г5 A1, B1								
2PM2767Г2 A1, B1	29	36	M27x1	M30x1,5	27	25	5,16	31,0
2PMT2767Г2 A1, B1								
2PMД2767Г5 A1, B1								29,5
2PMДТ2767Г5 A1, B1								
2PM27624Г1 A1, B1								33,5
2PMT27624Г1 A1, B1								
2PMД27619Г5 A1, B1								36,5
2PMДТ27619Г5 A1, B1								
2PM30632Г1 A1, B1	31	38	M30x1	M33x1,5	30	25	6,17	41,0
2PMT30632Г1 A1, B1								
2PMД3068Г7 A1, B1	31	38	M30x1	M33x1,5	30	27	6,17	48,0
2PMДТ3068Г7 A1, B1								
2PMД30624Г5 A1, B1						25		41,0
2PMДТ30624Г5 A1, B1								

Continuation of Table 1

Structural modification	Dimentions, mm						No. of branch pipe as per Tables	Weight, g maximum
	A	B	D	D_1	D_2	Lmax.		
2РМ33620Г4 А1,В1	32	40	М33х1	М36х1,5	33	27	3,4	44,5
2РМТ33620Г4 А1,В1								
2РМД33671Г9 А1 В1						25	7,18	42,5
2РМДТ33671Г9 А1 В1								
2РМ33620Г1 А1 В1								43,0
2РМТ33620Г1 А1,В1								
2РМД33632Г5 А1,В1								50,5
2РМДТ33632Г5 А1,В1								
2РМ36622Г1 А1,В1	35	43	М36х1	М39х1,5	36	25	8,19	54,5
2РМТ36622Г1 А1,В1								
2РМД36620Г6 А1,В1						27		
2РМДТ36620Г6 А1В1								
2РМ36620Г2 А1,В1						25		49,5
2РМТ36620Г2 А1,В1								
2РМД36620Г5 А1,В1								51,5
2РМДТ36620Г5 А1,В1								
2РМ39645Г2 А1,В1	37	46	М39х1	М42х1,5	39	25	9,20	63,5
2РМТ39645Г2 А1,В1								
2РМД39622Г5 А1,В1								60,0
2РМДТ39622Г5 А1,В1								
2РМ42630Г2 А1,В1	40	49	М42х1	М45х1,5	42	25	10,21	73
2РМТ42630Г2 А1,В1								
2РМ 42650Г2 А1,В1								
2РМТ42650Г2 А1В1								
2РМД42645Г5 А1,В1								76
2РМДТ42645Г5 А1,В1								
2РМД45650Г8 А1,В1	43	52	М45х1	М45х1,5	45	27	11,22	92
2РМДТ45650Г8 А1,В1								

1. Limit deviation of thread as per 8 h, of dimentions: A ± 0.1 mm, D_2 as per C5; B ± 0.2

2. Letter Б is marked at the end of conventional designation of variant I (without left thread) of connectors 2РМ, 2РМД, letter В after letter Б for connectors 2РМТ, 2РМДТ (version for all climates).

For example: 2РМ 30Б8Г7А1Б, 2РМД 30Б8Г7В1Б

2РМТ 30Б8Г7А1БВ, 2РМДТ 30Б8Г7В1БВ

Cable plugs and pockets

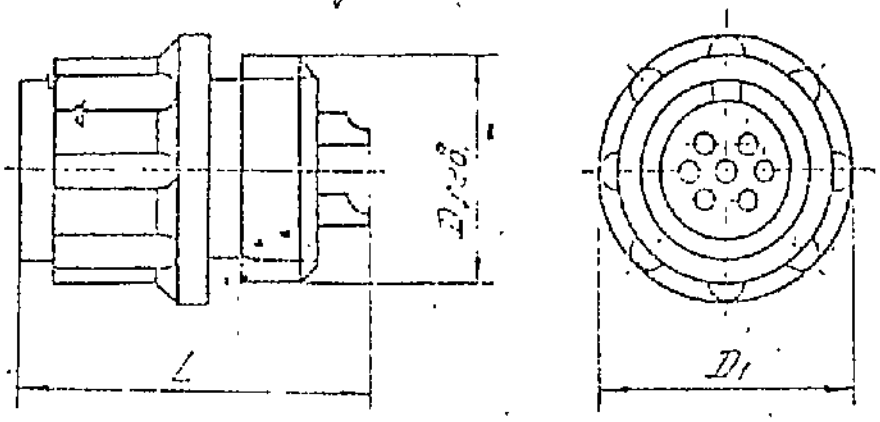


Рис 2 Fig. 2

Table 2

Structural modification	Dimensions, mm			No. of branch pipe as per Tables 3 ÷ 6	Weight, g, maximum
	D	D1	L max		
2PM14K4W1 A1, B1	M14×1	22	25	1, 12, 23, 33	11,0
2PMT14K4W1 A1, B1					
2PM18K7W1 A1, B1	M18×1	25	25	2, 13, 24, 34	13,5
2PMT18K7W1 A1, B1					
2PMA18K4W5 A1, B1					22,5
2PMAT18K4W5 A1, B1					
2PM22K4W3 A1, B1	M22×1	29	27	3, 14, 25, 35	19,5
2PMT22K4W3 A1, B1					
2PM22K10W1 A1, B1			25		17,5
2PMT22K10W1 A1, B1					
2PM24K19W1 A1, B1	M24×1	32	25	4, 15, 25, 36	22,5
2PMT24K19W1 A1 B1					
2PMA24K10W5 A1, B1					23,0
2PMT24K10W5 A1, B1					

Continuation of Table 2

Structural modification	Dimensions, mm			No. of branch pipe as per Tables 3-6	Weight, g, maximum
	D	D1	Lmax		
2PM27K7W2 A1, B1	M27x1	35	25	5, 16, 27 37	25,0
2PMT27K7W2 A1, B1					
2PMA27K7W5 A1, B1					
2PMAT27K7W5 A1, B1					26,5
2PM27K24W1 A1, B1					
2PMT27K24W1 A1, B1					
2PMA27K19W5 A1, B1					29,0
2PMAT27K19W5 A1, B1					
2PM30K32W1 A1, B1	M30x1	39	25	6, 17, 28, 38	32,5
2PMT30K32W1 A1, B1					
2PMA30K8W7 A1, B1			27		33,0
2PMAT30K8W7 A1, B1					
2PMA30K24W5 A1, B1			25		35,5
2PMAT30K24W5 A1, B1					
2PM33K20W4 A1, B1	M33x1	42	27	7, 18, 29, 39	37
2PMT33K20W4 A1, B1					
2PM33K20W1 A1, B1			25		41,5
2PMT33K20W1 A1, B1					
2PMA33K7W9 A1, B1					42,5
2PMAT33K7W9 A1, B1					
2PMA33K39W5 A1, B1					44,5
2PMAT33K32W5 A1, B1					
2PM36K22W1 A1, B1	M36x1	45	25	8, 19, 30 40	38,5
2PMT36K22W1 A1, B1					
2PMA36K20W6 A1, B1					48,5
2PMAT36K20W6 A1, B1					
2PM36K20W2 A1, B1					38,5
2PMT36K20W2 A1, B1					
2PMA36K20W5 A1, B1					50,0
2PMAT36K20W5 A1, B1					

Continuation of Table 2

Structural modification	Dimensions, mm			No. of branch pipe as per Tables 3-6	Weight, g, maximum
	D	D_1	L max		
2РМ39К45Ш2 А1, В1	М39х1	48	25	9, 20, 31, 41	47,0
2РМТ39К45Ш2 А1, В1					
2РМД39К22Ш5 А1, В1					56,5
2РМАТ39К22Ш5 А1, В1					
2РМ42К50Ш2 А1, В1	М42х1	51	25	10, 21, 32, 42	52,0
2РМТ42К50Ш2 А1, В1					
2РМ42К30Ш2 А1, В1					50,0
2РМТ42К30Ш2 А1, В1					
2РМД42К45Ш5 А1, В1					58,0
2РМАТ42К45Ш5 А1, В1					
2РМД45К50Ш8 А1, В1	М45х1	54	27	11, 22	70,0
2РМАТ45К50Ш8 А1, В1					
2РМ14К4Г1 А1, В1	М14х1	22	25	1, 12, 23, 33	12,5
2РМТ14К4Г1 А1, В1					
2РМ14К4Г1 А1Л, В1Л					
2РМ18К7Г1 А1, В1	М18х1	25	25	2, 13, 24, 34	16,5
2РМТ18К7Г1 А1, В1					
2РМ18К7Г1 А1Л, В1Л					
2РМД18К4Г5 А1, В1					
2РМАТ18К4Г5 А1, В1					
2РМД18К4Г5 А1Л, В1Л					
2РМ22К4Г3 А1, В1	М22х1	29	27	3, 14, 25, 35	25
2РМТ22К4Г3 А1, В1					
2РМ22К4Г3 А1Л, В1Л					
2РМ22К10Г1 А1, В1			25		22,5
2РМТ22К10Г1 А1, В1					
2РМ22К10Г1 А1Л, В1Л					
2РМ24К19Г1 А1, В1	М24х1	32	25	4, 15, 26, 36	30,5
2РМТ24К19Г1 А1, В1					
2РМ24К19Г1 А1Л, В1Л					
2РМД24К10Г5 А1, В1					29,5
2РМАТ24К10Г5 А1, В1					
2РМД24К10Г5 А1Л, В1Л					

Continuation of Table 2

Structural modification	Dimensions, mm			No. of branch pipe as per Tables 3-6	Weight, g, maximum
	D	D_1	Lmax		
2РМ27К7Г2 А1, В1	27×1	35	25	5, 16, 27, 37	33,0
2РМТ27К7Г2 А1, В1					
2РМ27К7Г2 А1Л, В1Л					
2РМД27К7Г5 А1, В1					
2РМДТ27К7Г5 А1, В1					
2РМД27К7Г5 А1Л, В1Л					
2РМ27К24Г1 А1, В1					36,0
2РМТ27К24Г1 А1, В1					
2РМ27К24Г1 А1Л, В1Л					
2РМД27К19Г5 А1, В1					37,0
2РМДТ27К19Г5 А1, В1					
2РМД27К19Г5 А1Л, В1Л					
2РМ30К32Г1 А1, В1	М30×1	39	25	6, 17, 28, 38	46,0
2РМТ30К32Г1 А1, В1					
2РМ30К32Г1 А1Л, В1Л					
2РМД30К8Г7 А1, В1			27		43,0
2РМДТ30К8Г7 А1, В1					
2РМД30К8Г7 А1Л, В1Л					
2РМД30К24Г5 А1, В1			25		46,5
2РМДТ30К24Г5 А1, В1					
2РМД30К24Г5 А1Л, В1Л					
2РМ33К20Г4 А1, В1	М33×1	42	27	7, 18, 29, 39	50,0
2РМТ33К20Г4 А1, В1					
2РМ33К20Г4 А1Л, В1Л					
2РМД33К7Г9 А1, В1					42,5
2РМДТ33К7Г9 А1, В1					
2РМД33К7Г9 А1Л, В1Л					
2РМ33К20Г1 А1, В1			25		48,5
2РМТ33К20Г1 А1, В1					
2РМ33К20Г1 А1Л, В1Л					
2РМД33К32Г5 А1, В1					56,5
2РМДТ33К32Г5 А1, В1					
2РМД33К32Г5 А1Л, В1Л					

Continuation of Table 2

Structural modification	Dimensions, mm			No. of branch pipe as per Tables 3–6	Weight, g, maximum
	D	D_1	L_{max}		
2РМ36К22Г1 А1, В1	М36×1	45	25	8, 19, 30, 40	56,0
2РМТ36К22Г1 А1, В1					
2РМ36К22Г1 А1Л, В1Л					
2РМД36К20Г6 А1, В1			27		57,0
2РМДТ36К20Г6 А1, В1					
2РМД36К20Г6 А1Л, В1Л					
2РМ36К20Г2 А1, В1			25		56,5
2РМТ36К20Г2 А1, В1					
2РМ36К20Г2 А1Л, В1Л					
2РМД36К20Г5 А1, В1					58,5
2РМДТ36К20Г5 А1, В1					
2РМД36К20Г5 А1Л, В1Л					
2РМ39К45Г2 А1, В1	М39×1	48	25	9, 20, 31, 41	70,0
2РМТ39К45Г2 А1, В1					
2РМ39К45Г2 А1Л, В1Л					
2РМД39К22Г5 А1, В1					62,5
2РМДТ39К22Г5 А1, В1					
2РМД39К22Г5 А1Л, В1Л					
2РМ42К50Г2 А1, В1	М42×1	51	25	10, 21, 32, 42	78,5
2РМТ42К50Г2 А1, В1					
2РМ42К50Г2 А1Л, В1Л					
2РМ42К30Г2 А1, В1					74,5
2РМТ42К30Г2 А1, В1					
2РМ42К30Г2 А1Л, В1Л					
2РМД42К45Г5 А1, В1					84,0
2РМДТ42К45Г5 А1, В1					
2РМД42К45Г5 А1Л, В1Л					
2РМД45К50Г8 А1, В1	М45×1	54	27	11, 22	97,0
2РМДТ45К50Г8 А1, В1					
2РМД45К50Г8 А1Л, В1Л					

1. Limit deviations of thread D_{1eb} – 8_h (D_{1eff} – 8_h)

2. Letter B is marked at the end of conventional designation (structural modification) of connectors 2РМТ and 2РМДТ

for example: 2РМТ36К22Г1А1В, 2РМТ36К22Г1В1В ...

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Nomenclature (list) of connectors not manufactured by the manufacturing plant

Table 3

Design modification		Type of branch pipe				Wiring tail turned through 180°	
		ПЭ	ПН	УЭ	УН	О	УНО
2РМ14К4Ш1	А1					+	
	В1					+	+
2РМ14К4Г1	А1					+	
	В1					+	+
2РМ14К4Г1	А1лев			+	+		
2РМ18К7Ш1	А1					+	+
	В1					+	+
2РМ18К7Г1	А1					+	
	В1					+	
2РМ18К7Г1	А1лев			+	+		
	В1лев			+	+	+	+
2РМД18К4Ш5	А1					+	+
	В1					+	+
2РМД18К4Г5	А1					+	
	В1					+	+
2РМД18К4Г5	А1лев			+	+		
	В1лев			+	+		

Continuation of Table 3

Design modification		Type of branch pipe				Wiring tail turned through 180°	
		ПЭ	ПН	УЭ	УН	О	УНО
2РМ22К4Ш3	А1					+	
	В1					+	+
2РМ22К10Ш1	А1					+	
	В1					+	+
2РМ22К4Г1	А1					+	
	В1						
2РМ22К10Г1	А1					+	
	В1					+	+
2РМ22К4Г3	А1лев			+	+		
	В1лев			+	+		
2РМ22К10Г1	А1лев			+	+		
	В1лев			+	+		
2РМ24К19Ш1	А1					+	+
	В1					+	+
2РМ24К19Г1	А1					+	
	В1					+	
2РМ24К19Г1	А1лев			+	+		
	В1лев			+	+		

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Continuation of Table 3

Design modification	Type of branchpipe				Wiring tail turned through 180°	
	ПЭ	ПН	УЭ	УН	О	УНО
2РМД24К10Ш5 А1					+	+
В1					+	+
2РМД24К10Г5 А1					+	+
В1					+	+
2РМД24К10Г5 А1лев			+			+
В1лев				+		
2РМ27К7Ш2 А1					+	+
В1					+	+
2РМ27К7Г2 А1					+	+
В1			+		+	+
2РМ27К24Ш1 А1					+	+
В1					+	+
2РМ27К24Г1 А1					+	
В1					+	+
2РМ27К7Г2 А1лев			+	+		
В1лев						
2РМ27К24Г1 А1лев			+	+		
В1лев						

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Design modification	Type of branch pipe				Wiring tail turned through 180°	
	ПЭ	ПН	УЭ	УН	О	УНВ
2РМД27К7Ш5 А1					+	+
В1					+	+
2РМД27К7Г5 А1					+	+
В1					+	+
2РМД27К19Ш5 А1					+	+
В1					+	+
2РМД27К19Г5 А1					+	+
В1					+	+
2РМД27К7Г5 А1лев			+	+		
В1лев			+	+		
2РМД27К19Г5 А1лев			+	+		
В1лев						
2РМ30К32Ш1 А1					+	
В1					+	+
2РМ30К32Г1 А1					+	
В1					+	

Инв. № подл. | Подп. и дата | Взам. инв. №

12533

ГЕО.364.126 ТУ

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Design modification	Type of branch pipe				wiring tail turned through 180°	
	ПЭ	ПН	УЭ	УН		
2РМ30К32Г1 А1лев			+	+		
В1лев						
2РМД30К8Ш7 А1					+	+
В1					+	+
2РМД30К8Г7 А1					+	+
В1					+	+
2РМД30К24Ш5 А1					+	+
В1					+	+
2РМД30К24Г5 А1					+	+
В1					+	+
2РМА30К8Г7 А1лев			+	+		
В1лев			+	+		
2РМД30К24Г5 А1лев			+	+		
В1лев			+	+		
2РМ33К20Ш1 А1					+	+
В1					+	+

Design modification		Type of branch pipe				Wiring tail turned through 180°	
		ПЗ	ПН	ЗЗ	ЗН	О	ЗО
2РМ33К20Г1	А1					+	+
	В1					+	+
2РМ33К20Ш4	А1					+	+
	В1					+	+
2РМ33К20Г4	А1					+	
	В1					+	
2РМ33К20Г1	А1 лев			+			
	В1 лев			+	+		
2РМ33К20Г4	А1 лев	+		+	+		
	В1 лев			+	+		
2РМА33К7Ш9	А1					+	+
	В1					+	+
2РМА33К7Г9	А1					+	
	В1					+	+

Design modification	Type of branch pipe				Wiring tail Turned through 180	
	ПЭ	ПН	УЭ	УН	О	УНО
2РМД33К32Ш5 А1					+	
В1					+	+
2РМ33К32Г5 А1					+	
В1					+	+
2РМД33К7Г9 А1 лев						
В1 лев				+		
2РМД33К32Г5 А1 лев			+	+		
В1 лев						
2РМ36К20Ш2 А1			+		+	+
В1					+	+
2РМ36К20Г2 А1					+	+
В1					+	+
2РМ36К22Ш1 А1			+		+	+
В1					+	+
2РМ36К22Г1 А1				+	+	+
В1					+	+

Continuation of Table 3

Design modification	Type of branch pipe				Wiring fail turned through 180°	
	ПЭ	ПН	УЭ	УН	О	УНО
2РМ36К20Г2 А1лев	+		+	+		
В1 лев			+	+		
2РМ38К22Г1 А1лев	+		+	+		
В1 лев			+	+		
2РМД36К20Ш5 А1					+	+
В1					+	+
2РМД36К20Г5 А1					+	
В1					+	+
2РМД36К20Ш6 А1					+	+
В1					+	+
2РМД36К20Г6 А1					+	+
В1					+	+
2РМД36К20Г5 А1лев			+	+		
В1лев			+	+		

Continuation of Table 3

Design modification	Type of branch pipe				Wiring tail turned through 180°	
	ПЭ	ПН	УЭ	УН	О	УНО
2РМД36К20Г6 А1лев			+			
В1лев			+	+		
2РМТ36Б22Г1 В1	+	+				
2РМТ36К22Ш1 В1	+		+			
2РМ39К45Г2 А1лев			+	+		
В1лев			+			
2РМД39К22Ш5 А1					+	+
В1					+	+
2РМД39К22Г5 А1					+	+
В1					+	+
2РМД39К22Г5 А1лев			+	+		
В1лев	+		+	+		
2РМ42К30Ш2 А1					+	+
В1					+	
2РМ42К30Г2 А1					+	
В1					+	+

Continuation of Table 3

Design modification	Type of branch pipe				Wiring tail is straightened through 180°	
	ПЭ	ПН	УЭ	УН	О	УНО
2РМТ42К50Ш2 А1					+	
В1					+	+
2РМ42К30Г2 А1 лев			+	+		
В1 лев			+			
2РМ42К50Г2 А1 лев			+	+		
В1 лев			+			
2РМД42К45Ш5 А1					+	+
В1					+	+
2РМ42К50Г2 В1					+	
2РМ39К45Ш2 А1					+	+
В1					+	+
2РМ39К45Г2 А1 лев			+	+		
В1 лев			+		+	+
2РМА39К22Ш5 А1					+	+
В1					+	+

Design modification	Type of branch pipe				Wiring tail is straightened to 180°	
	ПЭ	ПН	УЭ	УН	О	УНО
2РМД39К22Г5 А1					+	+
В1					+	+
2РМА39К22Г5 А1лев			+	+		
В1лев	+		+	+		
2РМ42К30Ш2 А1					+	+
В1					+	
2РМ42К30Г2 А1					+	
В1					+	+
2РМ42К30Г2 А1лев			+	+		
В1лев			+			
2РМ42К50Ш2 А1					+	
В1					+	+
2РМ42К50Г2 В1					+	+
2РМ42К50Г2 А1лев			+	+		
В1лев			+			
2РМД42К45Г5 А1						+
В1					+	+

Continuation of Table 3

Design modification	Type of branch pipe				Wiring tails are straightened to 180°	
	ПЭ	ПН	УЭ	УН	О	УНО
2РМД42К45Г5 А1лев			+		+	
В1 лев			+			
2РМД45К50Ш8 А1			+	+	+	+
В1			+	+		
2РМД45К50Г8 А1			+	+	+	+
В1			+	+	+	+

Remarks: 1. Connectors, marked with sign "+", are not manufactured.

2. The specified (given) connectors may be supplied if substantiated requirement arises.

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Straight branch pipes with shielded nuts (17)

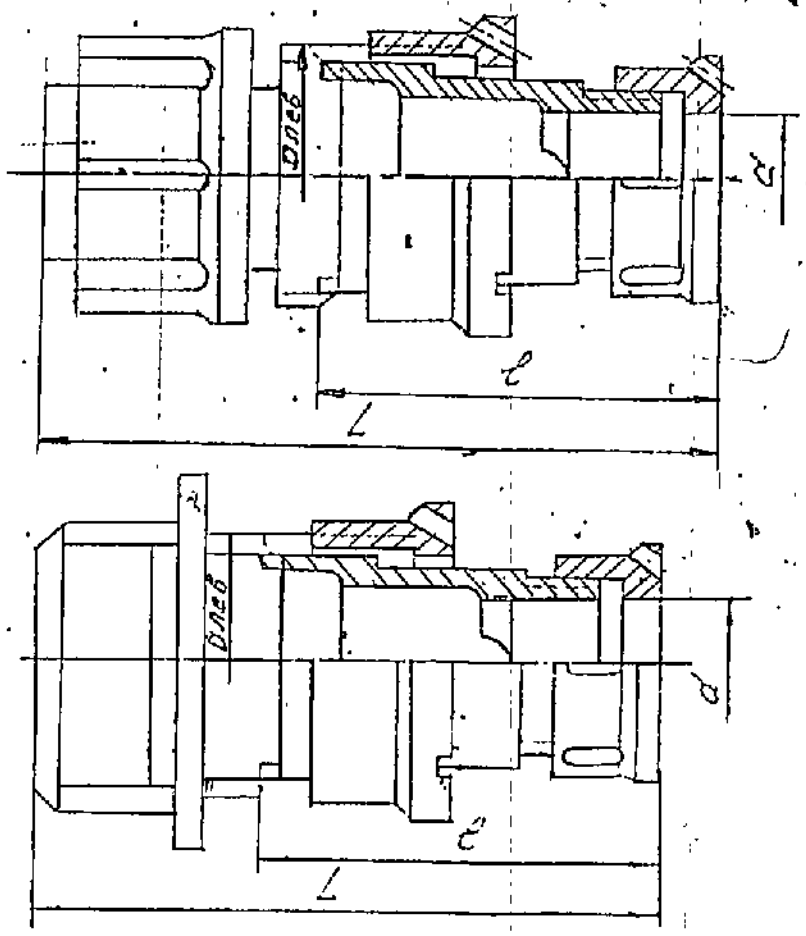

Fig. Рис 3

Table 4

Branch pipe no.	Dimensions, mm				Weight of branch pipe, g, maximum
	D	d	l_{max}	L_{max}	
1	M14x1	6,5	28,7	48	8,0
2	M18x1	10,5			10,5
3	M22x1	14			13,5
4	M24x1	16	34,7	54	16,0
5	M27x1	18			19,0
6	M30x1	19			25,5

Continuation of Table 4

Branch pipe no.	Dimensions, mm				Weight of branch pipe, g, maximum
	D	d	l_{max}	L_{max}	
7	M33x1	23	39,7	59	26,0
8	M36x1				28,5
9	M39x1	24			33,5
10	M42x1	29			37,0
11	M45x1				37,0

Limit deviations of thread D_{1eb} - 7H5H

Straight branch pipes with unshielded nuts (ПН)

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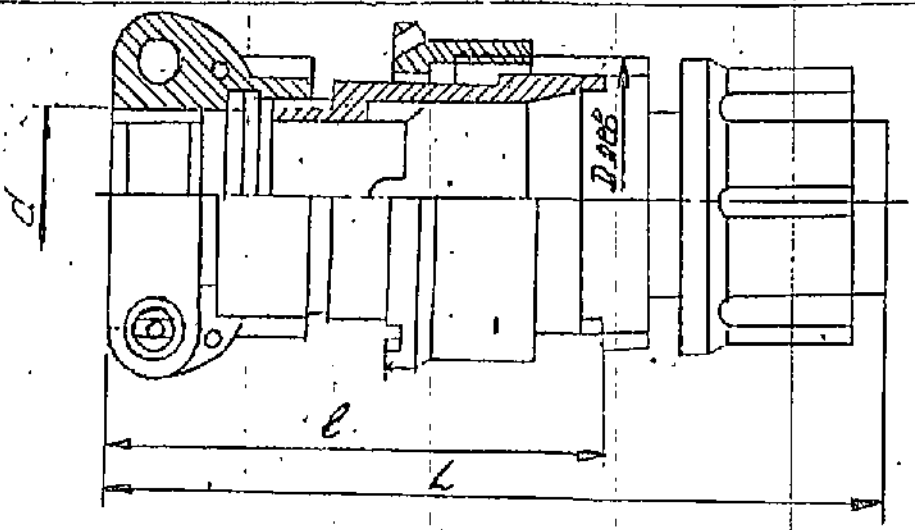

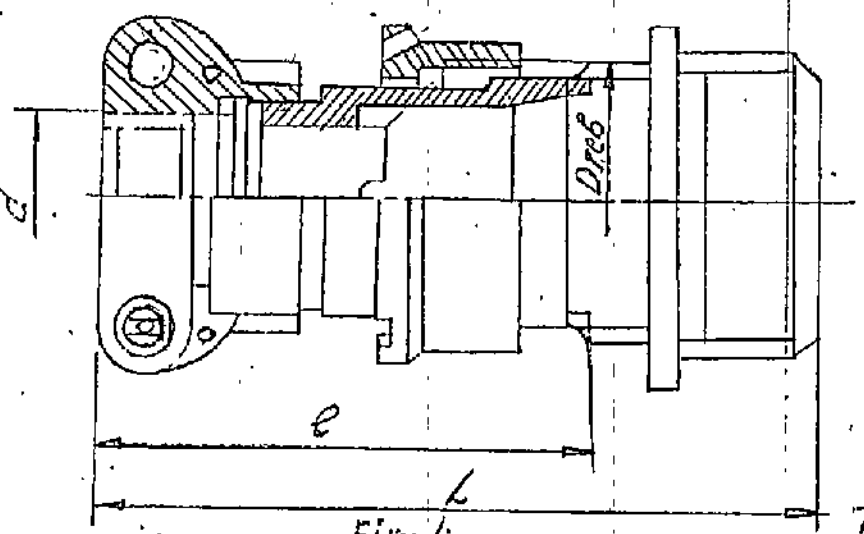

Fig. 4

Table 5

Branch pipe No.	Dimensions, mm				Weight of branch pipe, g, maximum
	D	d	l max.	L max	
12	M14x1	6,5	34	53,5	12,5
13	M18x1	10,5			17,0
14	M22x1	14,5	36,5	55,5	25,0
15	M24x1	16,6	43	62,5	27,0
16	M27x1	18,5			30,5
17	M30x1	20,5			34,5

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Continuation of Table 5

Branch pipe No.	Dimensions, mm				Weight of Branch pipe, g, maximum
	D	d	l_{max}	L max	
18	M33x1	22,5	48	67,5	40,5
19	M36x1				44,5
20	M39x1	24,5			51,0
21	M42x1	30,5			54,0
22	M45x1				54,5

Limit deviations of thread Dпер. - 7H5H.

Angular branch pipes with shielded nuts (уэ)

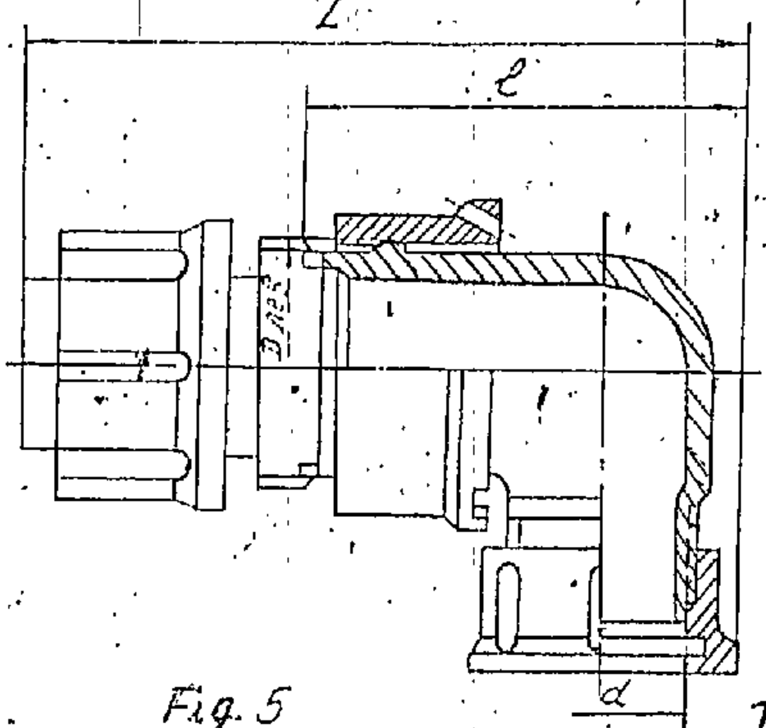

Fig. 5

Table 6

Branch pipe No.	Dimensions, mm				Weight of branch pipe, g, maximum
	D	d	l_{max}	$L_{max.}$	
23	M14x1	6,5	31	48,5	9,5
24	M18x1	10,5	34	51	13,0
25	M22x1	14	41	55,6	18,5
26	M24x1	16	43	57,6	21,0
27	M27x1	18	46	59,6	26,0
28	M39x1	19	48	61,6	27,0
29	M33x1	23	53	64,6	35,5
30	M36x1		50	64,6	36,0
31	M39x1	24	53	67,6	37,0
32	M42x1	29	58	74,6	53,5

Limit deviations of thread Dрез. - 7H5H.

Angular branch pipes with unshielded nuts (УН)

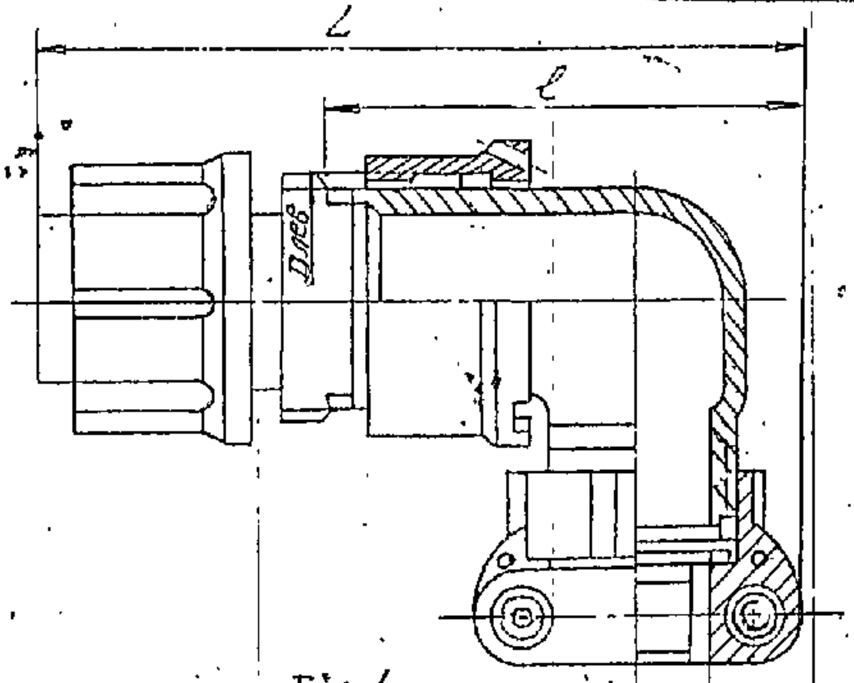

Fig. 6

Table 7

Branch pipe No.	Dimensions, mm				Weight of branch pipe, g, maximum
	D	d	l max	L max.	
33	M14x1	6,5	35	51,5	14,0
34	M18x1	10,5	38	58	19,5
35	M22x1	14,5	42,5	62	32,0
36	M24x1	16,6	44,5	64	32,5
37	M27x1	18,5	46,5	69	36,5
38	M30x1	20,5	48,5	71	37,5
39	M33x1	22,5	54,5	71	48,0
40	M36x1	22,5	51,5	71	51,5
41	M39x1	24,5	54,5	74	55,0
42	M42x1	30,5	61,5	81	73,0

Limit deviations of threads Dреб. - 7H5H.

Appendix 5
Приложение 5

Graph of insulation resistance (ohm) against level of influencing factor $И_2$.

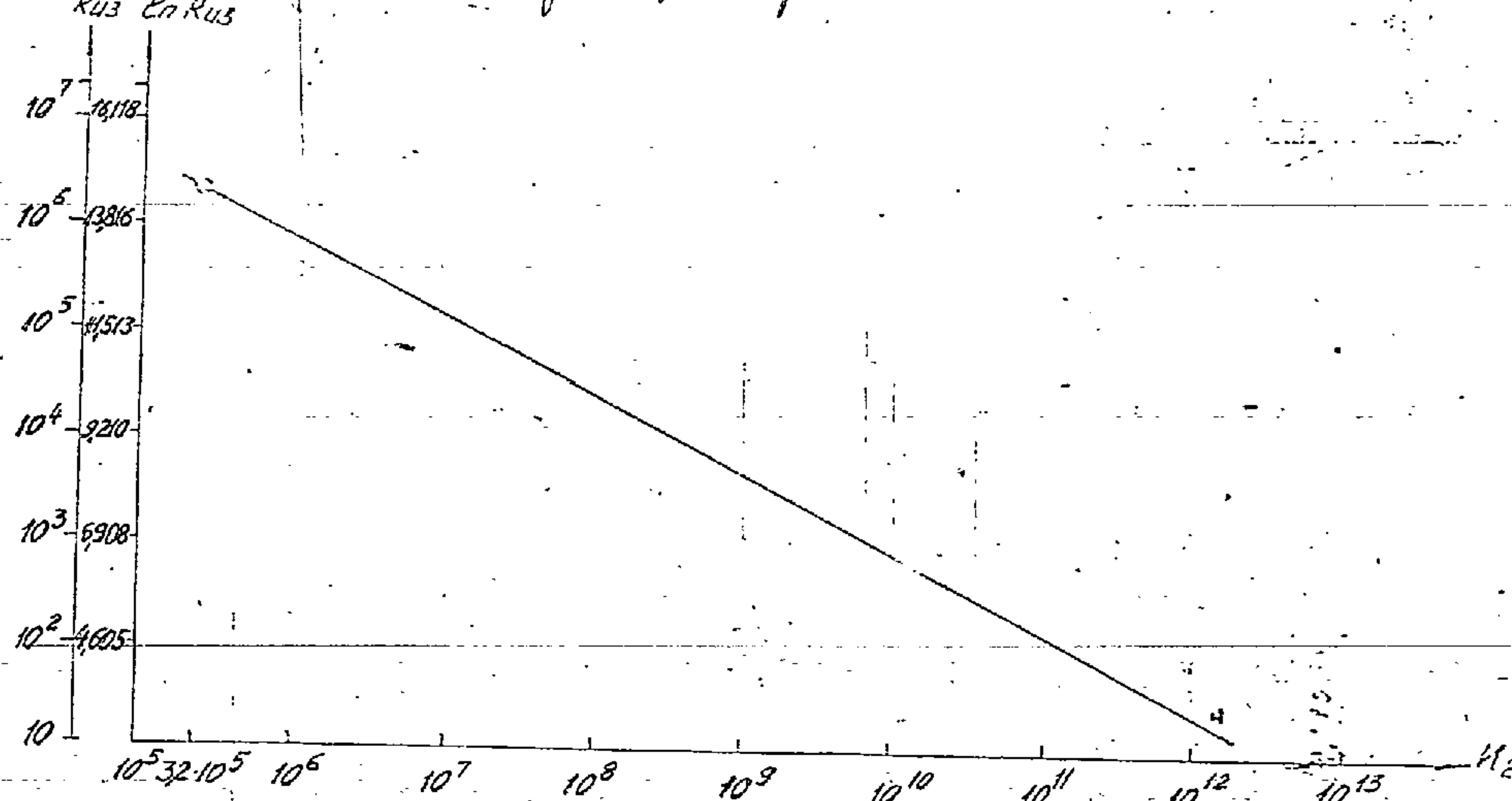

Рис. 1
Fig. 1

Appendix 6.

Calculation of current loads on terminals of ~~contacts~~ connectors

Current loads on terminals are determined in the following sequence:

1. Permissible current loads specified in the diagrams for terminals of all diameters expressed in terms of current load on terminal of minimum diameter in the given diagram.

$$I_{m1} = I_{m1} \cdot K1 \; ; \; I_{m2} = I_{m1} \cdot K2 \; ; \ldots$$

$$I_{mn} = I_{m1} \cdot Kn \; , \text{ where}$$

I_{m1} ; I_{m2} ... I_{mn} — maximum values of current loads on terminals with diameter of 1; 1,5; 2; 3.... mm respectively.

$K1$; $K2$ ..... Kn — coefficients expressing the relationship (ratio) between current load on terminal of any diameter and current load on terminal of minimum diameter in the diagram of ~~diameter~~ connector. These

coefficients & determine the number of terminals (in terms of current) of minimum diameter, present in one terminal of any diameter =

$$K = \frac{J_{max}}{J_{min}}$$

2. The number of terminals of minimum diameter ~~How many~~ which (as per current) can contain (or hold) terminals of other diameters is determined.

$K_1 d_1$; $K_2 d_2$; .... $K_n \cdot \alpha_i$, where

d_1 ; d_2 ..... d_i — number of terminals with diameter 1 ; 1.5 ; 2 ... n mm respectively.

3. Let each ~~one~~ terminal of every diameter be loaded with a maximum current load specified in the diagram, and remaining total current load is distributed at other terminals.

4. Average current load on (at) terminals of minimum diameter is determined by

$$J_{cp} = \frac{\sum J_{max}}{K_1 d_1 + K_2 d_2 \ldots K_n d_i}$$

where $\leq I_{ocm}$ — remaining total current load on (at) connector.

5. Current load on terminals placed in border along the perimeter is increased by 20%. During this, total current load specified in the program should be increased by not more than 20%.

6. Depending on the required mode of operation in respect of current, values of current loads on terminals present in the border row along the perimeter, obtained above are multiplied by the coefficients given in Table 7. During this, total current the connector is not changed.

EXAMPLE OF CALCULATION

Initial data. Diagram 30/8.

(Connector, selected for example)

$J_{1\,max} = 13\,A$; $J_{2\,max} = 18\,A$; $J_{3\,max} = 36\,A$;

$J_{cym.} = 120\,A$.

1. $J_{m1} = J_{m1} \cdot K_1$; $J_{m2} = J_{m1} \cdot K_2$; $J_{m3} = J_{m3} = J_{m1} \cdot K_3$;

$K_1 = 1$;

$$K_2 = \frac{J_{m2}}{J_{m1}} = 1.4 \qquad K_3 = \frac{J_{m3}}{J_{m1}} = 2.8$$

2. Total maximum current load on 1 terminal of every diameter is determined as follows

$J_{m1} = 13\,A$; $J_{m2} = 18\,A$; $J_{m3} = 36\,A$

$\sum J_{cym.\,max.} = J_{m1} + J_{m2} + J_{m3} = 13 + 18 + 36 = 67\,A$

3. Remaining total load on all terminals is determined as follows

$$\sum J_{ocm.} = 120 - 67 = 53\,A.$$

4. Average current load on 1 terminal of minimum diameter and subsequently on terminals of other diameters is determined as follows:

$$J_{cp.min} = \frac{\sum J_{ocm.}}{K_1\alpha_1 + K_2\alpha_2 + K_3\alpha_3} = \frac{53}{12.4} = 4.3 \text{ A}$$

where

$\alpha_1 = 4$; $\alpha_2 = 2$; $\alpha_3 = 2$

$J_{cp.1} = 4.3A$; $J_{cp.2} = K_2 \cdot J_{cp.1} = 4.3 \times 1.4 = 6.02 A$;

$J_{cp.3} = K_3 \cdot J_{cp.1} = 4 \cdot 3 \cdot 2.8 = 12.04 A$

checking

$67 + 4.3 + 6.02 \times 2 + 12.04 \times 2 = 67 + 17.2 + 12.04 + 24.08 \approx 120$

$120 = 120$.

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Working Voltage of direct current or amplitude value of voltage of alternate current in the temperature range of minus 60 to 100 °C.

While using the connectors at reduced atmospheric pressure, voltage should be multiplied by coefficient 0.9 for temperature 150 °C and by 0.8 for temperature 200 °C.

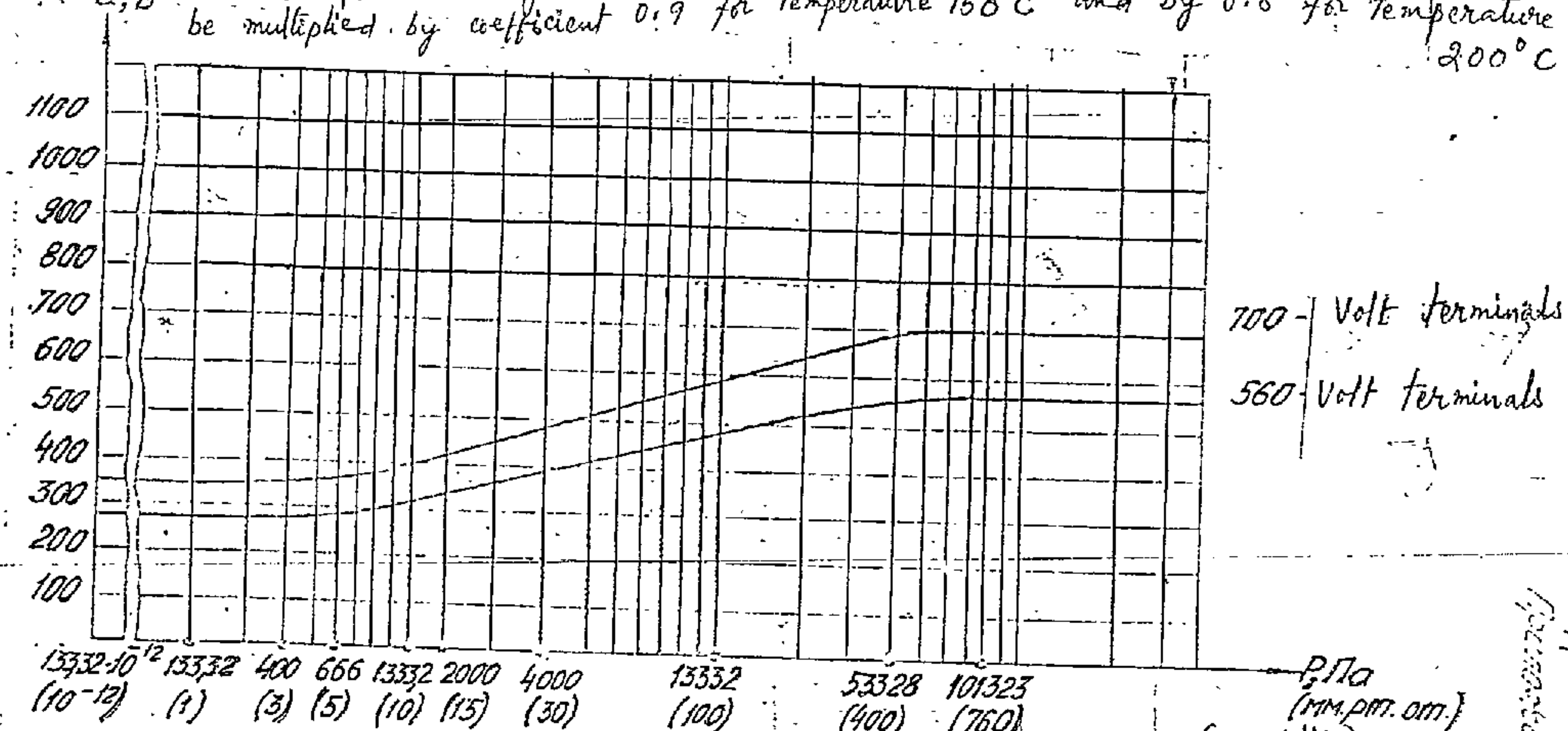

Fig. 1

Relation between working voltage and atmospheric pressure

Appendix 7

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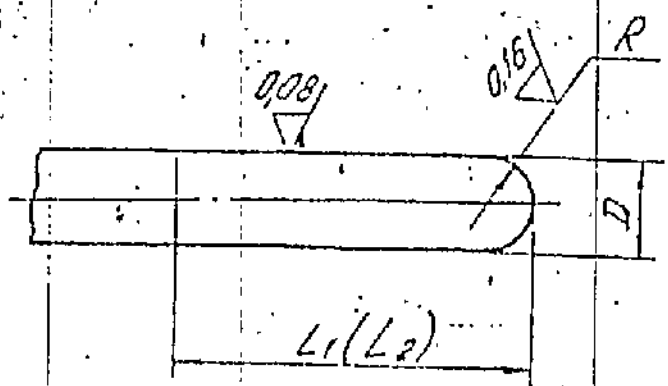
Appendix 8
Приложение 8

Checking pin-gauge



Ensure smooth shifting of sphere in the cylinder.

Socket diameter, mm	Dimensions, mm				
	L_1	L_2	D		R
			Nominal	Limit deviation	
1,0	5±0,3	7,7±0,3	0,97	-0,004	0,5
1,5	6±0,3	8,7±0,3	1,47	-0,004	0,75
2,0	6±0,3	8,7±0,3	1,97	-0,004	1,0
3,0	6,5±0,3	9,2±0,3	2,97	-0,004	1,5

L_1 – for checking solitary sockets

L_2 – for checking plug and sockets in

Material: Steel P18, P12, P9 GOST 19265-73
Steel У8А, У12 GOST 1435-74
53 ... 57 HRC$_э$.

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LIST OF APPENDICES

Appendix 1. Lay-out diagrams of terminals and Electric parameters.

Appendix 2. List of reference documents.

Appendix 3. General view, overall, mounting dimentions.

Appendix 4. C.

Appendix 5. Graph of insulation resistance vs. degree (level) of acting (influencing) factor U_2.

Appendix 6. Calculation of current loads on terminals of connectors.

Appendix 7. Relationship between working voltage and atmospheric pressure.

Appendix 8. Inspection pin-gauge.