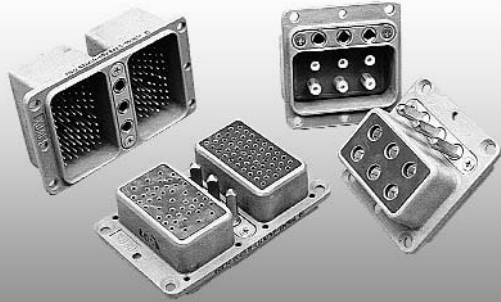


# Type of connectors RPKM1—RPKM4



## Application

Application they are used in radio electronic and radio engineering equipment as connectors of the general type

## Standarts

OST V 11 0121-91  
AVO.364.040 Specification

## Design description

- cut in type
- combination type: radio frequency (RCH) and low frequency (NCH) contacts
- climatic version V
- coding element
- contacts plating: gold, silver
- mounting method: soldering
- dust-spray proof at the housings joints

## Characteristics

### Mechanical

vibration:

frequency range, Hz - 5...2500  
acceleration,  $m/s^2$  - 150 (15g)

single impact:

acceleration,  $m/s^2$  - 5000 (500g)

multiple impacts:

acceleration,  $m/s^2$  - 750 (75g)

linear loads:

acceleration,  $m/s^2$  - 1500 (150g)

### Reliability requirements

minimum operating time, h  
10000

with mate -unmate  
500 operations

minimum storage life  
20 years

### Electric

maximum operation direct current voltage,  
ref. contact location diagrams

operating current across contact  
ref. contact location diagrams

electric contact resistance, not more than,  
mOhm

Ø 1,0 - 5  
Ø 1,5 - 2,5  
RCH - 10

insulation resistance in normal climatic  
conditions, not less than

low frequency connectors-  
5000 MOhm  
radio frequency connectors-  
1000 MOhm

### Climatic

ambient air temperature,  
from minus 60 - to plus 100°C

temperature change,  
from minus 60 - to plus 120°C  
(taking in the account the temperature of  
contacts overheat)

decrease of atmospheric pressure operating,  
Pa (mm.Hg)  
 $1,3 \times 10^{-4}$  ( $1 \times 10^{-6}$ )

| Designation   |     |        |    |   |      |    |
|---|-----|--------|----|---|------|----|
|   | RPM | -67/32 | SH | 1 | -0/1 | -V |
| Type  |     |        |    |   |      |    |
| 1-single row connector with silver plated contact   |     |        |    |   |      |    |
| 2-single row connector with gold plated contact   |     |        |    |   |      |    |
| 3-double row connector with silver plated contact   |     |        |    |   |      |    |
| 4-double row connector with gold plated contact   |     |        |    |   |      |    |
| Number of contacts (ref. note 1)  |     |        |    |   |      |    |
| Type of contact:<br>SH - plug (male connector)<br>G - socket (female connector)   |     |        |    |   |      |    |
| Design version:<br>Plug:<br>1 - without backshell<br>Socket:<br>1 - without backshell, housing has the holes for fixing backshell<br>3 - without backshell, housing does not have the holes for fixing backshell<br>4 - with backshell ( is not manufactured) |     |        |    |   |      |    |
| Additional numeric designation of the radio frequency contact (ref. note 2)   |     |        |    |   |      |    |
| Universal climatic version  |     |        |    |   |      |    |

### Notes

1. Number of contacts connectors RPM1, RPM2 is designated by integral number. Number of contacts of connectors RPM3, RPM4 (double row connectors) is designated by fractional number, the numerator of which shows the number of contacts in the upper contact location diagram (where there is inscription "Top" on the housing), while denominator shows the number of contacts in the lower contacts location diagram. If one of the contacts location diagram in the double row connectors is missing the letter "S" is used instead of it (RPM3-S/67SH1-V).
2. The number of the radio frequency contacts is indicated for the contacts location diagrams, in which the radio frequency contacts are envisaged. If one of the contacts location diagrams of the double row connector does not include the radio frequency contacts the "0" is used (RPM3-67/32SH1-0/1-V).  
If one of the contacts location diagrams of the double row connector is missing instead of it in numerical designation of the radio frequency contacts the letter "S" is used (RPM3-S/32G1-S/1-V).

### Designation while placing the order:

Plug RPM4-67/32SH1-0/1-V AVO.364.040 Specification  
Socket RPM3-32/32G1-1/1-V AVO.364.040 Specification

Table 1

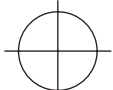


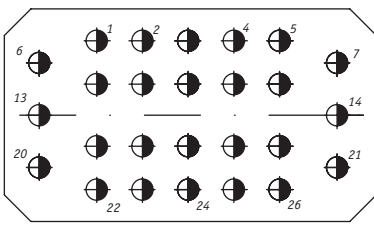
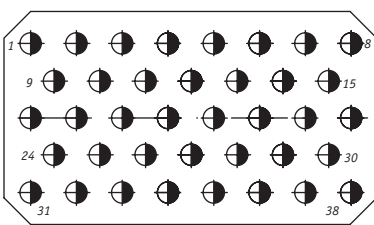
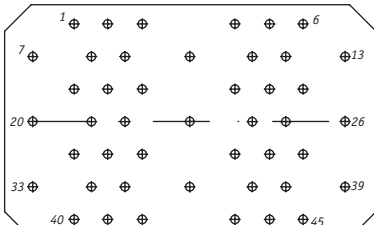
| Conventional designation of the contacts |   |  |   |
|--|---|--|---|
| Contact diameter, mm,                    | 1,0   | 1,5  | RCH -Contact  |
| Conventional designation of the contact  |  |  |  |

Table 2

| Number of RCH contact | Marking of connection cable  | Outlet nut diameter, mm |
|-----------------------|--|-------------------------|
| 1                     | PK50-1-11, PK75-1-11<br>PK50-1-21, PK75-1-21   | 2,6                     |
| 2                     | PK50-2-12, PK75-2-11<br>PK50-2-14, PK75-2-12<br>PK50-2-21, PK75-2-21<br>PK50-2-22, PK75-2-22 | 4,0                     |
| 3                     | PK50-2-11, PK50-2-13   | 4,3                     |

Table 3

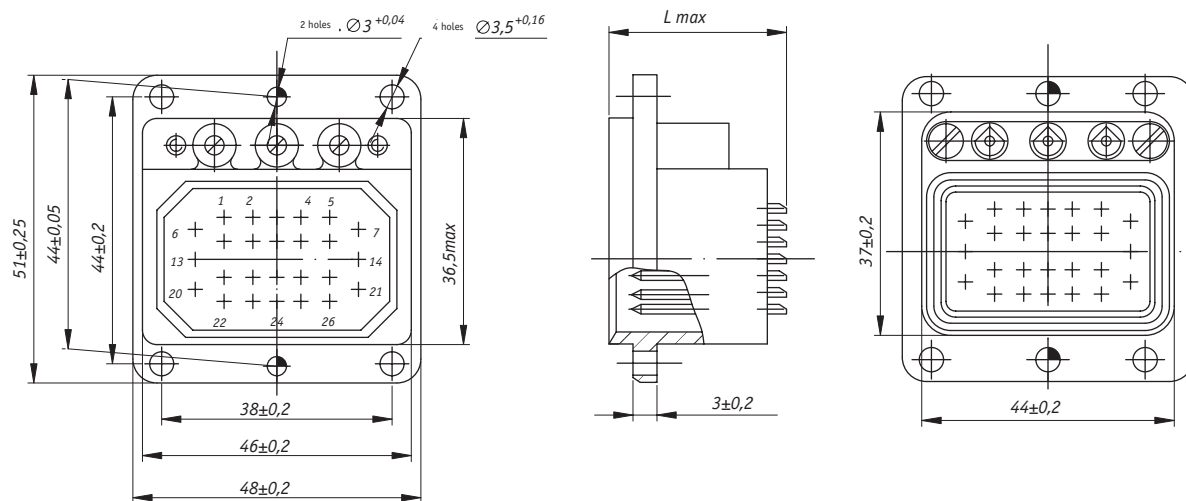
### Contacts location diagrams

| Contact location diagram  | Diagram number | Contact diameter | Number of contacts | Operating current across the contact, A |            | Number of the contact under maximum voltage                                       | Maximum operating voltage, not more than, V |
|---|----------------|------------------|--------------------|---|------------|---|---|
|   |                |                  |                    | single row                              | double row |   |   |
|  | 1              | 1,5              | 26                 | 3,7                                     | 3,0        | 1-5<br>8-12<br>15-19<br>22-26   | 350   |
|   |                |                  |                    |   |            | 6, 7<br>13, 14<br>20, 21  | 800   |
|  | 2              | 1,5              | 38                 | 3,3                                     | 2,6        | 1-38  | 350   |
|  | 3              | 1,0              | 45                 | 1,6                                     | 1,3        | 1-6, 8, 9, 11<br>12, 14-19<br>21, 22, 24<br>25, 27-32<br>34, 35, 37<br>38, 40, 45 | 400   |
|   |                |                  |                    |   |            | 7, 10, 13<br>20, 23, 26<br>33, 36, 39   | 1000  |

Continuation of table 3

|  |   |     |    |     |     |  |      |
|--|---|-----|----|-----|-----|--|------|
|  | 4 | 1,0 | 57 | 1,6 | 1,3 | 57   | 400  |
|  | 5 | 1,0 | 64 | 1,2 | 1,0 | 1-10<br>58-67  | 100  |
|  |   | 1,5 | 3  | 7,0 | 6,0 | 11-57  | 350  |
|  | 6 | 1,0 | 30 | 2,0 | 1,6 | 1-4, 6-7,<br>9-12, 14-17,<br>19-22, 24,<br>25, 27-30 | 400  |
|  |   | RCH | 2  | -   | -   | 5, 8,<br>13, 18,<br>23, 26                           | 1000 |
|  | 7 | RCH | 6  | -   | -   | V1, V2   | 100  |
|  |   | RCH | 6  | -   | -   | V1- V6   | 100  |

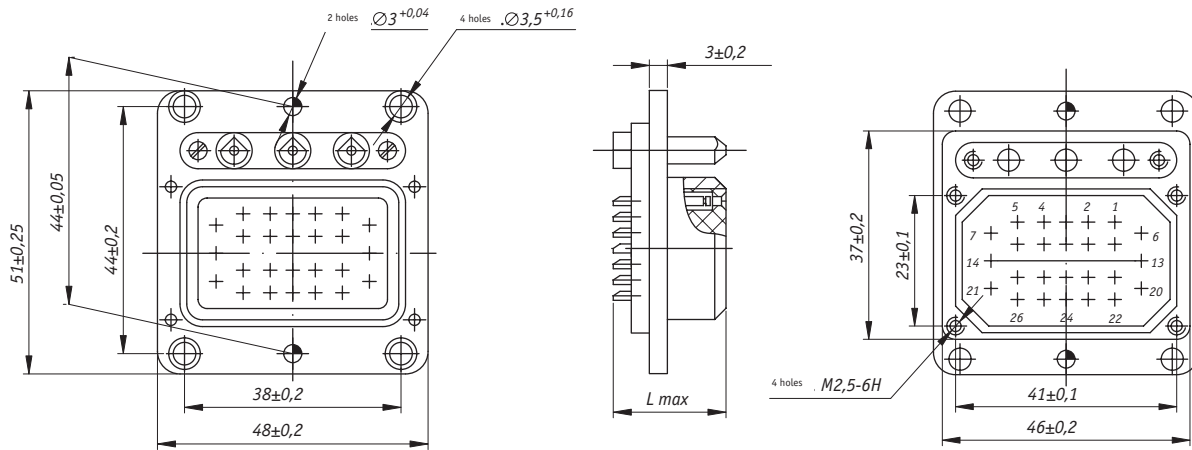
Design and dimensions of the connectors are shown in the drawings 1-4



$L_{max} = 28 \text{ mm}$  - for contacts location diagrams 1, 2, 3, 4, 5

$L_{max} = 38 \text{ mm}$  - for contacts location diagrams 6, 7

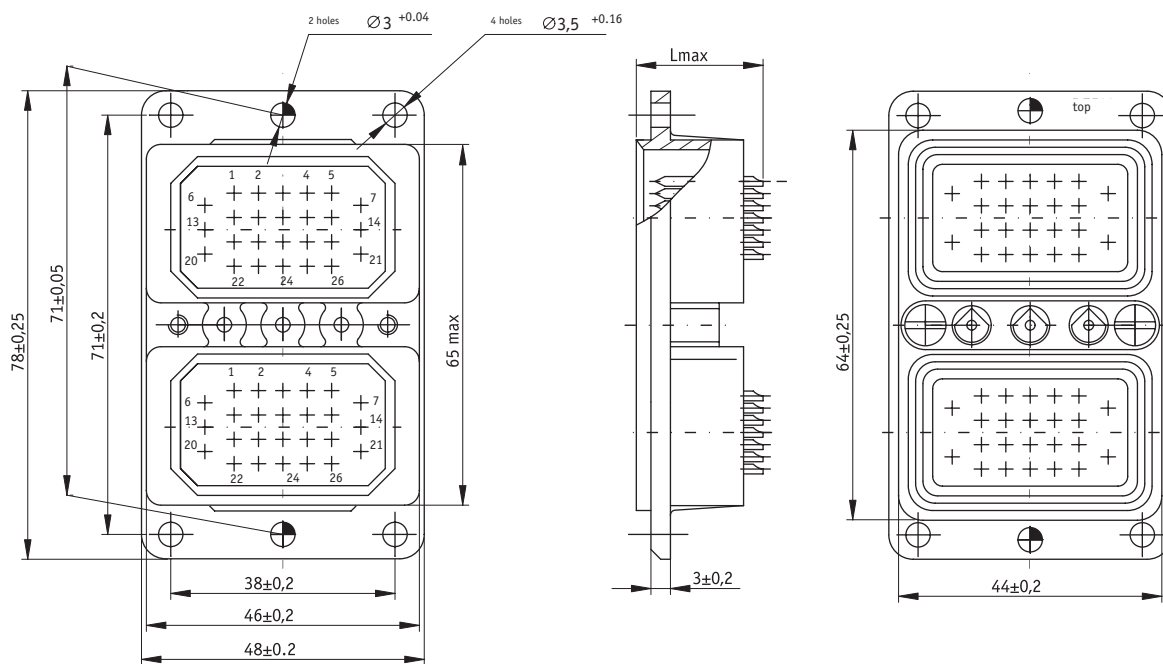
Figure 1 - Plug of the single row connector



Lmax = 25 mm - for contacts location diagrams 1, 2, 3, 4, 5  
 Lmax = 35mm - for contacts location diagrams 6, 7

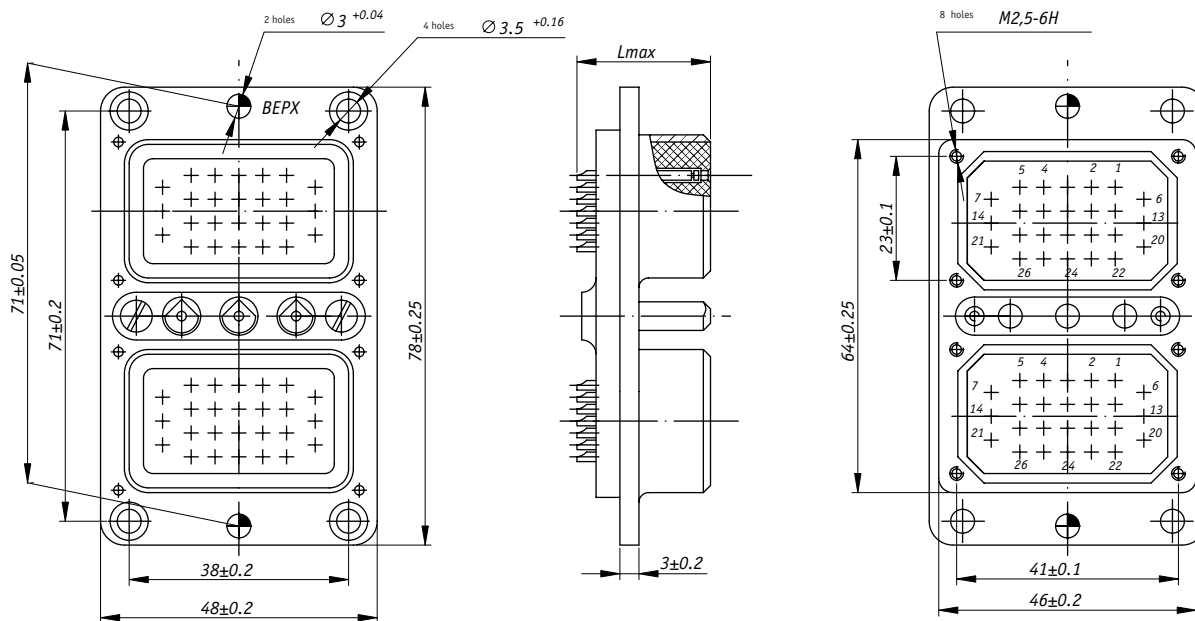
**Note**

For design version 3 the socket is manufactured without 4 holes M 2.5  
 Figure 2 - Socket of the single row connector



Lmax = 28 mm - for contacts location diagrams 1, 2, 3, 4, 5  
 Lmax = 38 mm - for contacts location diagrams 6, 7

Figure 3 - Plug of the double row connector



$L_{max} = 25 \text{ mm}$  - for contacts location diagrams 1, 2, 3, 4, 5  
 $L_{max} = 35 \text{ mm}$  - for contacts location diagrams 6, 7

**Note**

For design version 3 the socket is manufactured without 4 holes M 2.5  
 Figure 4 - Double row connector socket

## Operating instructions

Minimum operating time may be increased to 100000 h if the maximum connector temperature is decreased to 68°C.

During mounting and operation of connectors one should be guided by OST V 11 0121 and AVO.364.040 Technical Manual.

The wiring tails of the contacts make it possible to connect the wires with 0,35 mm<sup>2</sup> cross section for contacts with diameter 1 mm and cross section 1 mm<sup>2</sup> for contacts with diameter 1,5 mm.

**Note**

The table 2 gives the brands of the connection cable and the nut outlet diameter for three radio frequency contacts with numerical designation.