



**RỒNG VÀNG  
TECHNOLOGY**



# **Circular Electrical Connector**

# **PR Series**

**substitutes of Russian 2RTT**

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## Description

Connectors of PR type are intended for use in DC and AC (frequency up to 3 MHz) electrical circuits with voltage up to 850 V (as peak)

The connectors are produced in two versions: Plugs and Receptacles

The connectors are manufactured:

- Receptacles with backshells (straight shielding, straight non-shielding, elbow shielding, elbow non-shielding) or without backshells
- Plugs with backshells (straight shielding, straight non-shielding, elbow shielding, elbow non-shielding)

Plugs are delivered with rubber tube or without them

The connectors have threaded coupling.

Contacts:

- Ø 1,5 mm; Ø 2,5 mm; Ø 3,5 mm – non removable
- Ø 5,5 mm; Ø 9,0 mm – removable

Contact plating: silver

The connectors are manufactured in all climatic conditions in accordance with the technical conditions GEO.364.120TU



## Technical features

| Description           | Values                         |
|-----------------------|--------------------------------|
| Shell material        | anodized aluminum              |
| Contact material      | copper alloy/silver            |
| Operating temperature | up -60°C to +150°C             |
| Vibration             | acceleration 10 g (10-1000 HZ) |
| Impact                | acceleration 500 g (once)      |
| Durability            | 500 cycles                     |
| Technical conditions  | GEO.364.120TU                  |

## Electrical

**Operating voltage:** ≤ 700 V

**Withstanding voltage:** ≤ 1500 VAC

**Max current rating per contact**

|       |       |       |       |       |
|-------|-------|-------|-------|-------|
| Ø 1.5 | Ø 2.5 | Ø 3.5 | Ø 5.5 | Ø 9   |
| 10 A  | 25 A  | 50 A  | 100 A | 200 A |

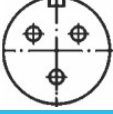
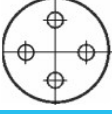
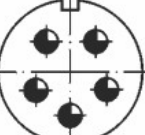
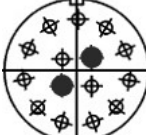
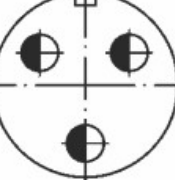
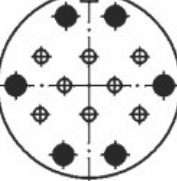
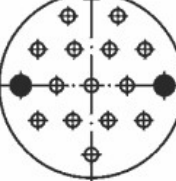
**Contact resistance**

|          |        |          |          |           |
|----------|--------|----------|----------|-----------|
| Ø 1.5    | Ø 2.5  | Ø 3.5    | Ø 5.5    | Ø 9       |
| ≤ 2,5 mΩ | ≤ 1 mΩ | ≤ 0,5 mΩ | ≤ 0,3 mΩ | ≤ 0,15 mΩ |

## Ordering information

| Basic series                                       | PR | -20 | J | 6 | A | Q |
|----------------------------------------------------|----|-----|---|---|---|---|
| Shell size: 12, 16, 20, 28, 32, 36, 40, 48, 55, 60 |    |     |   |   |   |   |
| Contact Type:                                      |    |     |   |   |   |   |
| J: Pin                                             |    |     |   |   |   |   |
| K: Socket                                          |    |     |   |   |   |   |
| Contact group                                      |    |     |   |   |   |   |
| Connector Type:                                    |    |     |   |   |   |   |
| Omit: Plug                                         |    |     |   |   |   |   |
| A: Receptacle                                      |    |     |   |   |   |   |
| Backshell Type:                                    |    |     |   |   |   |   |
| Omit: without backshell for Receptacle only        |    |     |   |   |   |   |
| P: straight EMI/RFI Backshell                      |    |     |   |   |   |   |
| Q: straight non-shielding Backshell                |    |     |   |   |   |   |
| R: elbow EMI/RFI Backshell                         |    |     |   |   |   |   |
| S: elbow non-shielding Backshell                   |    |     |   |   |   |   |
| B: mandatory suffix for plugs only                 |    |     |   |   |   |   |

## Contact layouts

| Shell Size | Number of Contacts – Contact Group                                                  |                                                                                   |                                                                                     |                                                                                   | Contact Diameter, mm<br>Symbol                                                        |                                                                                     |                                                                                       |                                                                                     |                                                                                      |  |
|------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|
| 12         | 1-1                                                                                 | 16                                                                                | 1-2                                                                                 | 2-3                                                                               | Ø 1.5                                                                                 | Ø 2.5                                                                               | Ø 3.5                                                                                 | Ø 5.5                                                                               | Ø 9.0                                                                                |  |
|            |    |                                                                                   |    |  |     |  |    |  |   |  |
| 20         | 2-4                                                                                 | 3-5                                                                               | 3-38                                                                                | 4-6                                                                               | 4-39                                                                                  | 5-40                                                                                | 5-7                                                                                   |                                                                                     |                                                                                      |  |
|            |    |  |    |  |     |  |    |                                                                                     |                                                                                      |  |
| 28         | 1-8                                                                                 |                                                                                   | 2-9                                                                                 |                                                                                   | 4-10                                                                                  |                                                                                     | 7-11                                                                                  |                                                                                     | 7-41                                                                                 |  |
|            |   |                                                                                   |   |                                                                                   |     |                                                                                     |   |                                                                                     |  |  |
| 32         | 1-12                                                                                |                                                                                   | 4-13                                                                                |                                                                                   | 8-14                                                                                  |                                                                                     |                                                                                       |                                                                                     |                                                                                      |  |
|            |  |                                                                                   |  |                                                                                   |  |                                                                                     |                                                                                       |                                                                                     |                                                                                      |  |
|            | 8-42                                                                                |                                                                                   | 10-15                                                                               |                                                                                   | 12-16                                                                                 |                                                                                     |                                                                                       |                                                                                     |                                                                                      |  |
|            |  |                                                                                   |  |                                                                                   |  |                                                                                     |                                                                                       |                                                                                     |                                                                                      |  |
| 36         | 4-17                                                                                |                                                                                   | 5-18                                                                                |                                                                                   | 7-19                                                                                  |                                                                                     | 15-20                                                                                 |                                                                                     |                                                                                      |  |
|            |  |                                                                                   |  |                                                                                   |   |                                                                                     |  |                                                                                     |                                                                                      |  |
| 40         | 3-21                                                                                |                                                                                   | 14-22                                                                               |                                                                                   | 16-23                                                                                 |                                                                                     |                                                                                       |                                                                                     |                                                                                      |  |
|            |  |                                                                                   |  |                                                                                   |  |                                                                                     |                                                                                       |                                                                                     |                                                                                      |  |

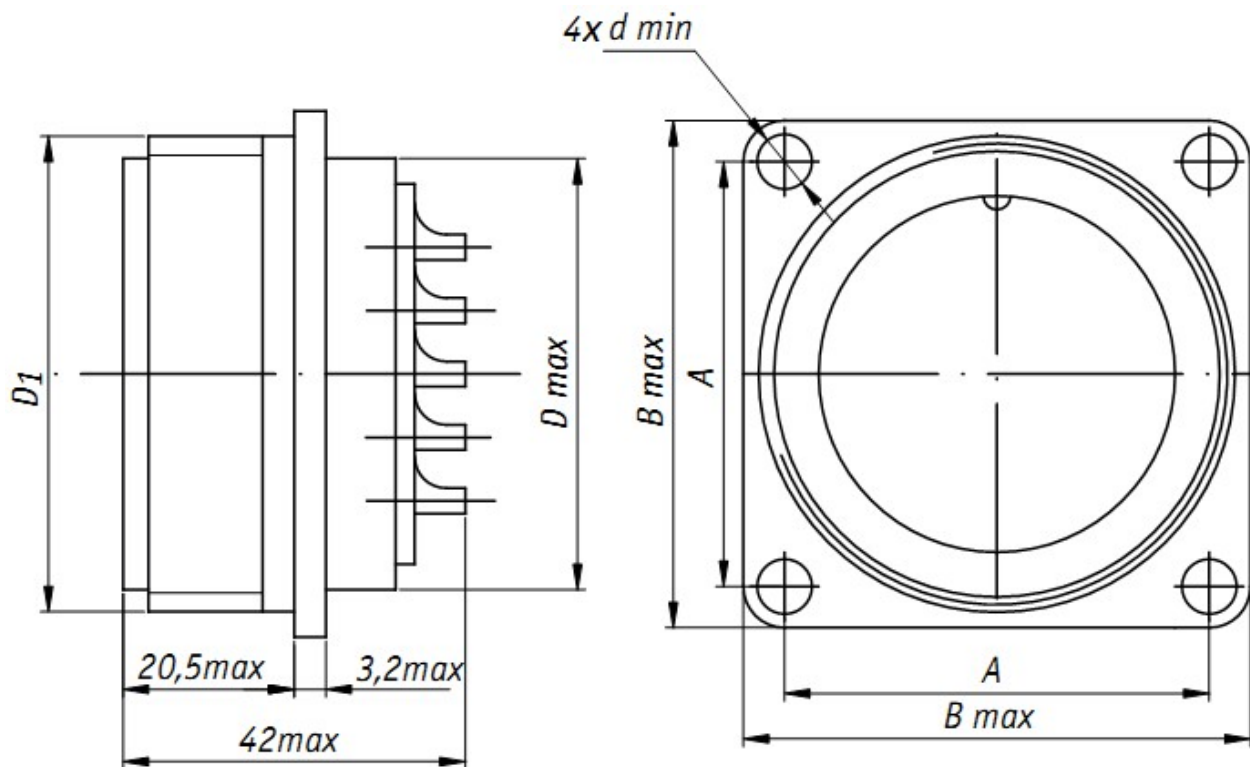


## Contact layouts

| Shell Size | Number of Contacts – Contact Group |       | Contact Diameter, mm<br>Symbol                               |       |  |  |  |
|------------|------------------------------------|-------|--------------------------------------------------------------|-------|--|--|--|
| 48         | 2–24                               | 7–25  |                                                              |       |  |  |  |
|            |                                    |       | <div>Ø 1.5   Ø 2.5   Ø 3.5   Ø 5.5   Ø 9.0</div> <div></div> |       |  |  |  |
|            | 9–27                               | 9–26  | 20–28                                                        | 26–29 |  |  |  |
|            |                                    |       |                                                              |       |  |  |  |
| 55         | 6–30                               | 23–31 | 30–32                                                        |       |  |  |  |
|            |                                    |       |                                                              |       |  |  |  |
|            | 31–33                              | 35–34 |                                                              |       |  |  |  |
|            |                                    |       |                                                              |       |  |  |  |
| 60         | 31–35                              | 45–36 | 47–37                                                        |       |  |  |  |
|            |                                    |       |                                                              |       |  |  |  |
|            |                                    |       |                                                              |       |  |  |  |
|            |                                    |       |                                                              |       |  |  |  |

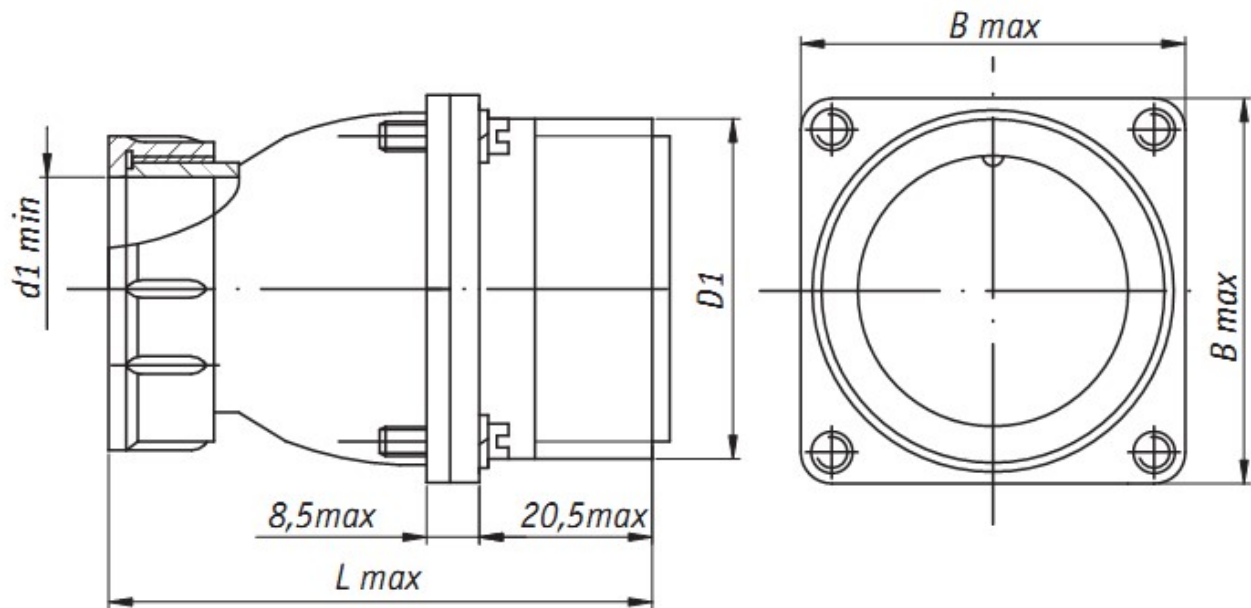
## Dimensions

Receptacles without backshells



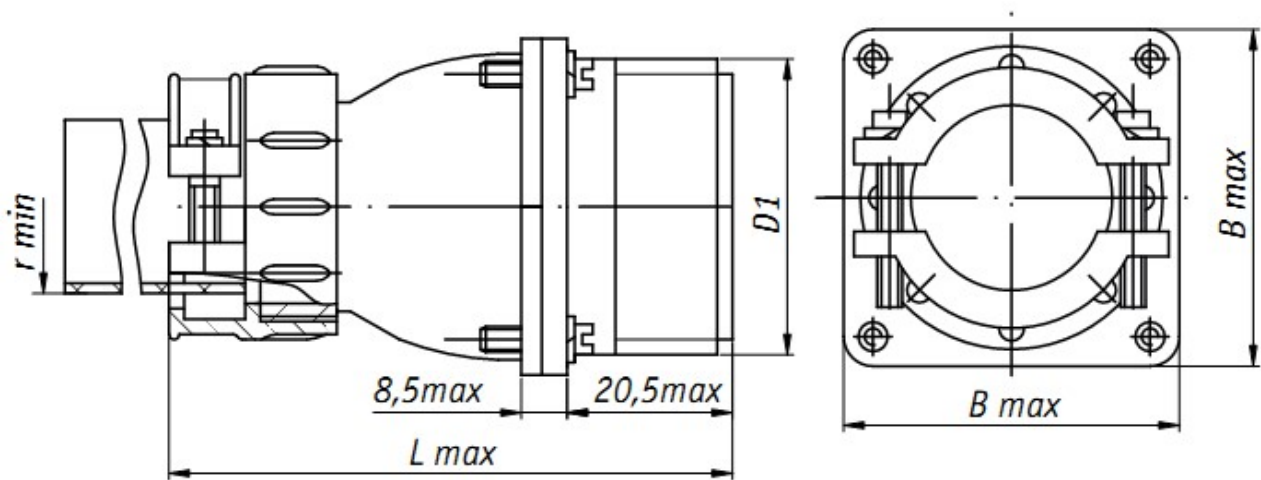
| Shell size | A  | B  | D  | D1      | d   |
|------------|----|----|----|---------|-----|
| 12         | 16 | 22 | 12 | M16x1,5 | 3,2 |
| 16         | 19 | 25 | 16 | M20x1,5 | 3,2 |
| 20         | 22 | 30 | 20 | M24x1,5 | 3,2 |
| 28         | 30 | 38 | 28 | M33x1,5 | 3,5 |
| 32         | 32 | 40 | 32 | M36x1,5 | 3,5 |
| 36         | 34 | 42 | 36 | M39x1,5 | 3,5 |
| 40         | 40 | 48 | 40 | M45x1,5 | 3,5 |
| 48         | 48 | 58 | 48 | M52x1,5 | 4,5 |
| 55         | 52 | 64 | 55 | M60x1,5 | 4,5 |
| 60         | 54 | 68 | 60 | M64x1,5 | 4,5 |

## Receptacles with straight EMI/RFI Backshells, P type



| Shell size | B  | D1      | d1 | L  |
|------------|----|---------|----|----|
| 12         | 22 | M16x1,5 | 7  | 57 |
| 16         | 25 | M20x1,5 | 11 | 57 |
| 20         | 30 | M24x1,5 | 17 | 61 |
| 28         | 38 | M33x1,5 | 24 | 65 |
| 32         | 40 | M36x1,5 | 24 | 69 |
| 36         | 42 | M39x1,5 | 28 | 71 |
| 40         | 48 | M45x1,5 | 30 | 71 |
| 48         | 58 | M52x1,5 | 36 | 73 |
| 55         | 64 | M60x1,5 | 45 | 73 |
| 60         | 68 | M64x1,5 | 48 | 71 |

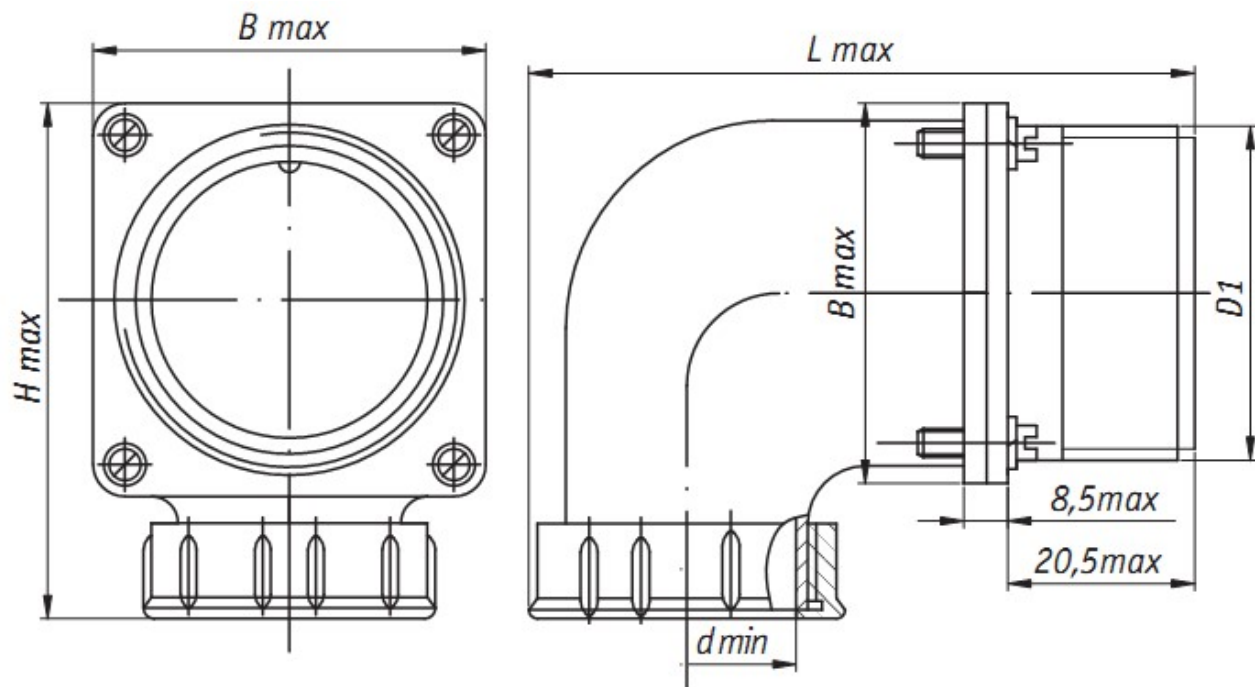
## Receptacles with straight non-shielding Backshells, Q type



| Shell size | B  | D1      | r  | L  |
|------------|----|---------|----|----|
| 12         | 22 | M16x1,5 | 4  | 72 |
| 16         | 25 | M20x1,5 | 6  | 72 |
| 20         | 30 | M24x1,5 | 12 | 75 |
| 28         | 38 | M33x1,5 | 18 | 82 |
| 32         | 40 | M36x1,5 | 18 | 86 |
| 36         | 42 | M39x1,5 | 21 | 89 |
| 40         | 48 | M45x1,5 | 23 | 89 |
| 48         | 58 | M52x1,5 | 30 | 91 |
| 55         | 64 | M60x1,5 | 38 | 91 |
| 60         | 68 | M64x1,5 | 45 | 89 |

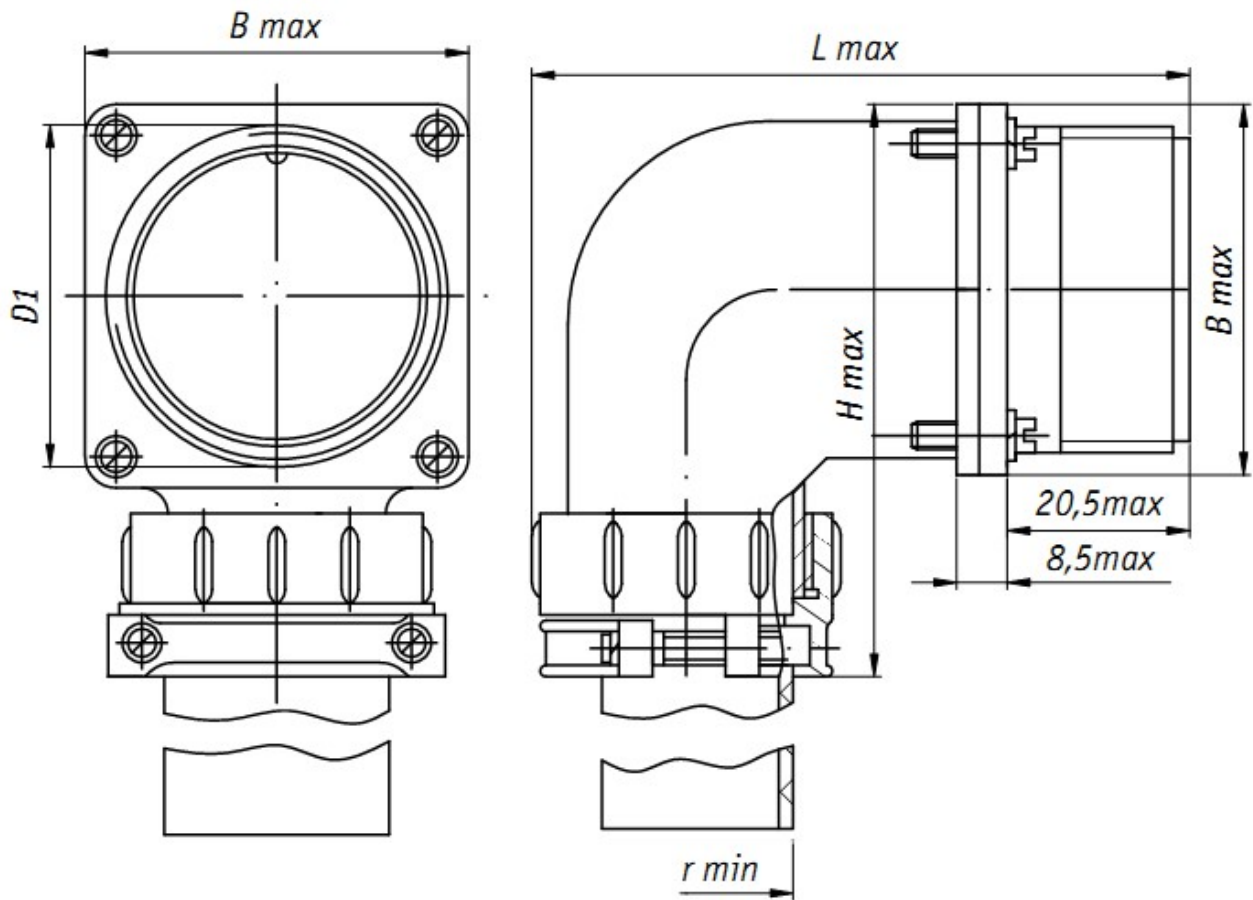


## Receptacles with elbow EMI/RFI Backshells, R type



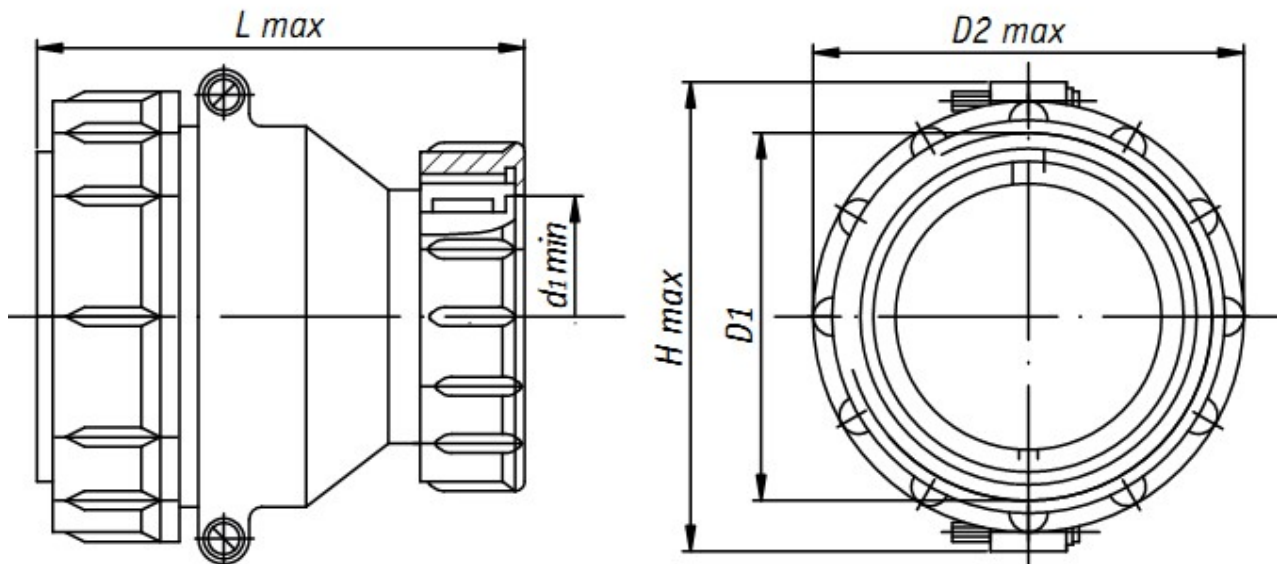
| Shell size | B  | H  | D1      | d  | L   |
|------------|----|----|---------|----|-----|
| 12         | 22 | 41 | M16x1,5 | 7  | 60  |
| 16         | 25 | 44 | M20x1,5 | 11 | 64  |
| 20         | 30 | 48 | M24x1,5 | 17 | 72  |
| 28         | 38 | 59 | M33x1,5 | 24 | 82  |
| 32         | 40 | 61 | M36x1,5 | 24 | 82  |
| 36         | 42 | 63 | M39x1,5 | 28 | 85  |
| 40         | 48 | 69 | M45x1,5 | 30 | 90  |
| 48         | 58 | 79 | M52x1,5 | 36 | 98  |
| 55         | 64 | 85 | M60x1,5 | 45 | 106 |
| 60         | 68 | 89 | M64x1,5 | 48 | 110 |

## Receptacles with elbow non-shielding Backshells, S type



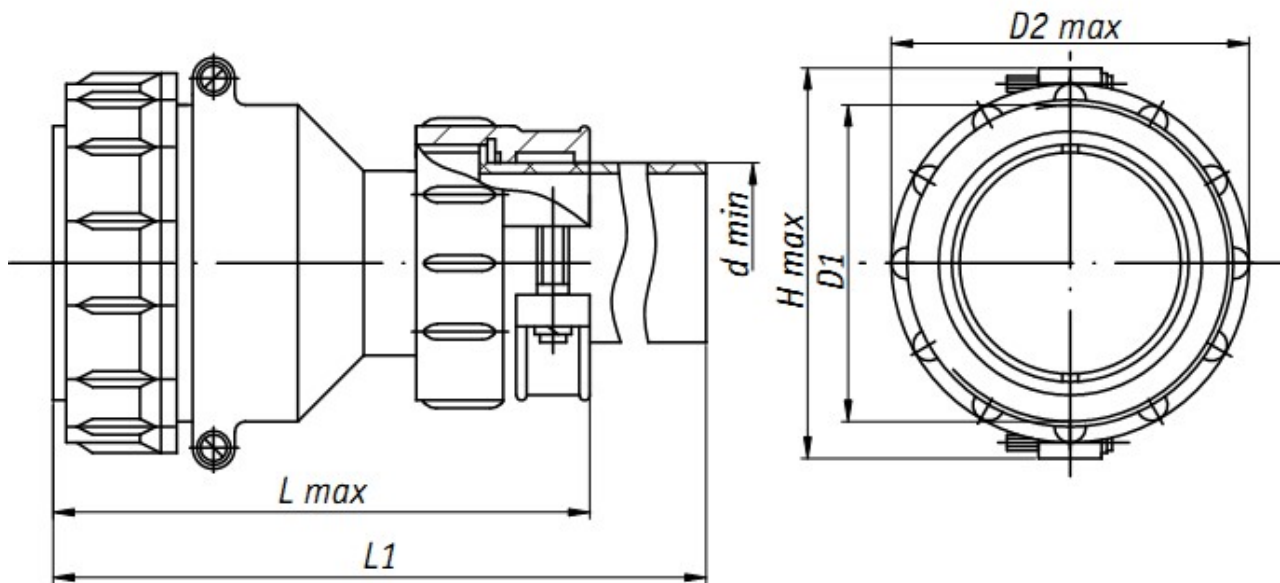
| Shell size | B  | H   | D1      | r  | L   |
|------------|----|-----|---------|----|-----|
| 12         | 22 | 56  | M16x1,5 | 4  | 59  |
| 16         | 25 | 57  | M20x1,5 | 6  | 63  |
| 20         | 30 | 62  | M24x1,5 | 12 | 71  |
| 28         | 38 | 76  | M33x1,5 | 18 | 83  |
| 32         | 40 | 78  | M36x1,5 | 18 | 83  |
| 36         | 42 | 80  | M39x1,5 | 21 | 84  |
| 40         | 48 | 86  | M45x1,5 | 23 | 90  |
| 48         | 58 | 96  | M52x1,5 | 30 | 99  |
| 55         | 64 | 102 | M60x1,5 | 38 | 106 |
| 60         | 68 | 106 | M64x1,5 | 45 | 106 |

## Plugs with straight EMI/RFI Backshells, P type



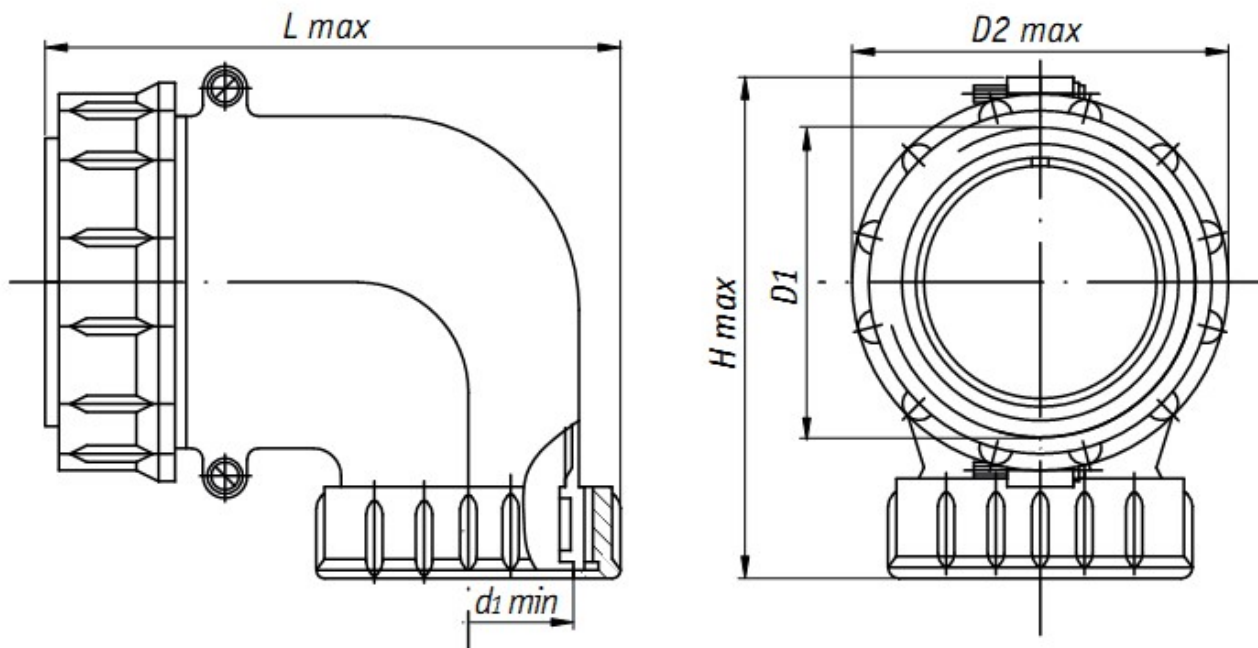
| Shell size | H  | D1      | D2   | d1   | L  |
|------------|----|---------|------|------|----|
| 12         | 27 | M16x1,5 | 21,5 | 4,0  | 56 |
| 16         | 31 | M20x1,5 | 25,5 | 7,5  | 56 |
| 20         | 39 | M24x1,5 | 29,5 | 12,5 | 60 |
| 28         | 51 | M33x1,5 | 38,5 | 17,0 | 62 |
| 32         | 55 | M36x1,5 | 41,5 | 19,0 | 64 |
| 36         | 58 | M39x1,5 | 45,5 | 21,0 | 68 |
| 40         | 63 | M45x1,5 | 52,5 | 25,0 | 70 |
| 48         | 71 | M52x1,5 | 59,5 | 29,0 | 72 |
| 55         | 77 | M60x1,5 | 67,5 | 40,0 | 72 |
| 60         | 83 | M64x1,5 | 72,5 | 42,5 | 70 |

## Plugs with straight non-shielding Backshells, Q type



| Shell size | H  | D1      | D2   | r  | L  |
|------------|----|---------|------|----|----|
| 12         | 27 | M16x1,5 | 21,5 | 4  | 71 |
| 16         | 31 | M20x1,5 | 25,5 | 6  | 71 |
| 20         | 39 | M24x1,5 | 29,5 | 12 | 74 |
| 28         | 51 | M33x1,5 | 38,5 | 18 | 79 |
| 32         | 55 | M36x1,5 | 41,5 | 18 | 84 |
| 36         | 58 | M39x1,5 | 45,5 | 21 | 86 |
| 40         | 63 | M45x1,5 | 52,5 | 23 | 87 |
| 48         | 71 | M52x1,5 | 59,5 | 30 | 89 |
| 55         | 77 | M60x1,5 | 67,5 | 38 | 89 |
| 60         | 83 | M64x1,5 | 72,5 | 45 | 87 |

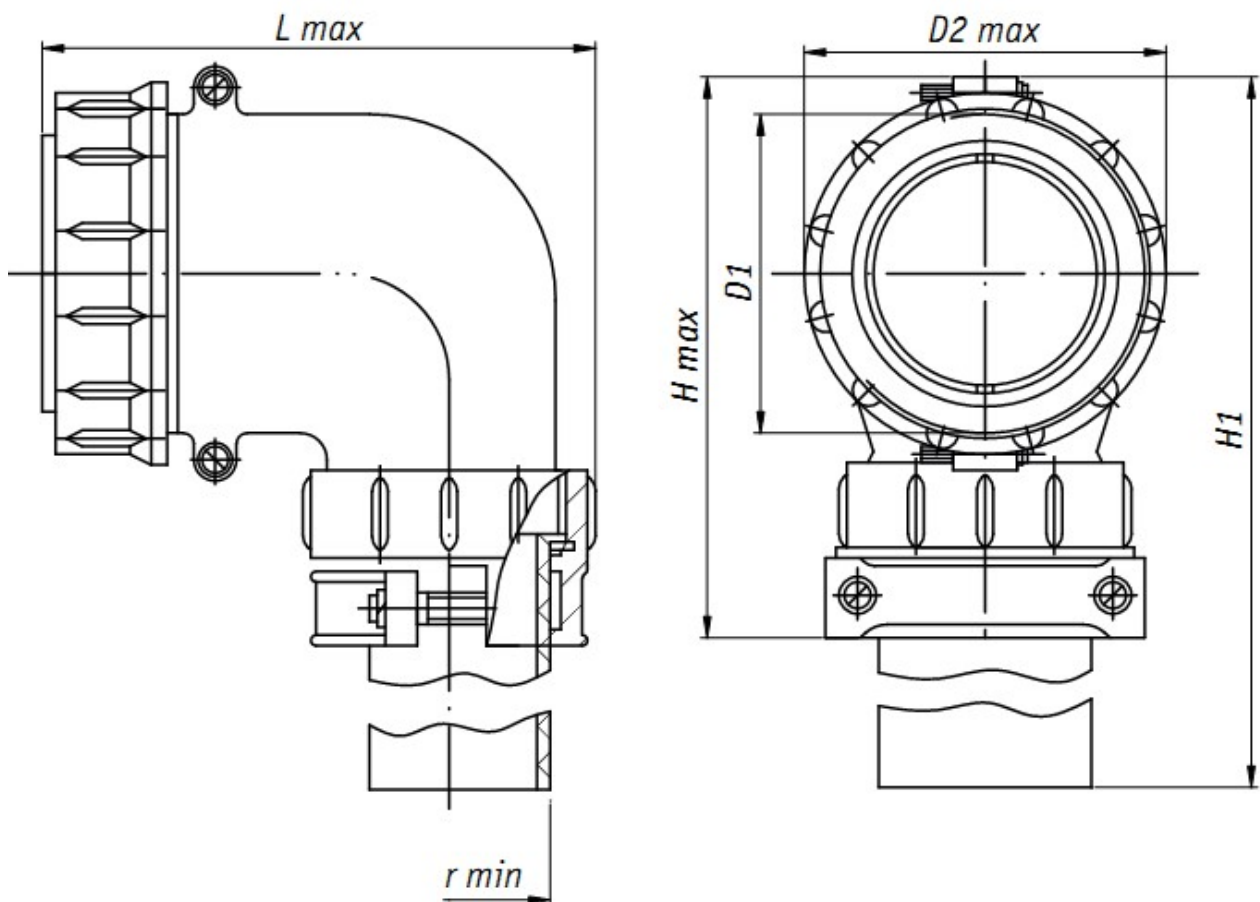
## Plugs with elbow EMI/RFI Backshells, R type



| Shell size | H   | D1      | D2   | d1   | L   |
|------------|-----|---------|------|------|-----|
| 12         | 44  | M16x1,5 | 21,5 | 4,0  | 56  |
| 16         | 48  | M20x1,5 | 25,5 | 7,5  | 62  |
| 20         | 57  | M24x1,5 | 29,5 | 12,0 | 70  |
| 28         | 69  | M33x1,5 | 38,5 | 18,0 | 78  |
| 32         | 72  | M36x1,5 | 41,5 | 18,0 | 78  |
| 36         | 74  | M39x1,5 | 45,5 | 20,0 | 81  |
| 40         | 80  | M45x1,5 | 52,5 | 22,5 | 86  |
| 48         | 87  | M52x1,5 | 59,5 | 27,0 | 98  |
| 55         | 95  | M60x1,5 | 67,5 | 38,0 | 103 |
| 60         | 101 | M64x1,5 | 72,5 | 41,0 | 110 |



## Plugs with elbow non-shielding Backshells, S type



| Shell size | H   | D1      | D2   | r  | L   |
|------------|-----|---------|------|----|-----|
| 12         | 59  | M16x1,5 | 21,5 | 4  | 56  |
| 16         | 61  | M20x1,5 | 25,5 | 6  | 63  |
| 20         | 71  | M24x1,5 | 29,5 | 12 | 70  |
| 28         | 86  | M33x1,5 | 38,5 | 18 | 80  |
| 32         | 90  | M36x1,5 | 41,5 | 18 | 80  |
| 36         | 90  | M39x1,5 | 45,5 | 21 | 81  |
| 40         | 96  | M45x1,5 | 52,5 | 23 | 87  |
| 48         | 105 | M52x1,5 | 59,5 | 30 | 98  |
| 55         | 112 | M60x1,5 | 67,5 | 38 | 104 |
| 60         | 118 | M64x1,5 | 72,5 | 45 | 113 |

**CÔNG TY TNHH RỒNG VÀNG TECHNOLOGY**

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