# SHX10 Glass-Sealed Watertight Connectors for Oil & Gas and Marine Equipment

Glass-sealed receptacles · 10 MPa mated · 116 insert arrangements



| | |
|---|---|
| **Pressure rating** | 10 MPa mated; 5 MPa receptacle |
| **Contacts** | 2 to 128 (116 layouts) |
| **Current rating** | 5–46 A (sizes 22D to 8) |
| **Temperature** | –40 to +120 °C |
| **Shell** | Stainless steel, glass-sealed receptacle |

## Key features

- Glass-sealed receptacles: gas-tight and watertight
- 10 MPa hydrostatic pressure mated; 5 MPa on the receptacle alone
- Triple-start threaded coupling with anti-decoupling; five key positions (N, W, X, Y, Z) prevent mismating
- 38999-type insert arrangements; contacts up to size 8 (46 A)
- Square-flange or round-flange receptacles; vulcanized and potted backshells; protective caps
- Custom contact counts, cable types and lengths on request

## Specifications

### Pressure

| Parameter | Value | Condition |
|---|---|---|
| **Hydrostatic pressure, mated** | 10 MPa | |
| **Hydrostatic pressure, receptacle** | 5 MPa | |
| **Gas tightness, glass-sealed receptacle** | Tested to your requirements | |

### Electrical

| Parameter | Value | Condition |
|---|---|---|
| **Dielectric withstanding voltage** | 1000 V | |
| **Insulation resistance** | ≥ 1000 MΩ / ≥ 500 MΩ | Room temperature / after environmental tests |

### Mechanical and environmental

| Parameter | Value | Condition |
|---|---|---|
| **Coupling** | Triple-start thread with anti-decoupling | |
| **Durability** | 500 mating cycles | |
| **Vibration** | 10–500 Hz, 100 m/s² | |
| **Shock** | 100 g, half-sine, 6 ms | |

| Mechanical and environmental | | |
|---|---|---|
| **Parameter** | **Value** | **Condition** |
| **Operating temperature** | –40 to +120 °C | |
| **Salt spray** | 500 h | |
| **Mold resistance** | Grade 2, 28 days | GJB 150 |

## Versions

| Series code | Version | Notes |
|---|---|---|
| **SHX10K…T** | Plug | Socket contacts |
| **SHX10K…ZF** | Square-flange glass-sealed receptacle | Pin contacts |
| **SHX10K…ZY** | Round-flange glass-sealed receptacle | |
| **SHX10…QL / QG** | Straight vulcanized / potted backshell | |
| **SHX10K…FG** | Protective caps for plug (T) or receptacle (Z) | |

## Contact sizes and current ratings

| Contact size | Engaging diameter | Contact resistance | Current rating |
|---|---|---|---|
| **22D** | 0.76 mm | ≤ 28 mΩ | 5 A |
| **20** | 1.04 mm | ≤ 12 mΩ | 7.5 A |
| **16** | 1.59 mm | ≤ 8.5 mΩ | 13 A |
| **12** | 2.41 mm | ≤ 5 mΩ | 23 A |
| **10** | 3.20 mm | — | 33 A |
| **8** | 3.61 mm | ≤ 1.5 mΩ | 46 A |

## How to order

### SHX10K [shell] [arrangement] [contact] [key] [type] [mounting]

Example: **SHX10K1535PNZF** — Stainless steel, shell 15, arrangement 15-35, pin contacts, key N, square-flange receptacle

| Code segment | Options |
|---|---|
| **Shell** | **09 – 25** 9, 11, 13, 15, 17, 19, 21, 23, 25 |
| **Arrangement** | **e.g. 35** See the insert arrangement table below |
| **Contact** | **P** Pin (receptacles only) |
| **Contact** | **S** Socket (plugs only) |
| **Key** | **N W X Y Z** Key positions |
| **Type** | **T** Plug |
| **Type** | **Z** Receptacle |
| **Mounting (receptacles)** | **F** Square flange |
| **Mounting (receptacles)** | **Y** Round flange |

## Insert arrangements

| Arrangement | Contacts | Contact sizes | Service rating |
|---|---|---|---|
| **9-03** | 3 | 3 × size 20 | I |
| **9-35** | 6 | 6 × size 22D | M |
| **9-44** | 4 | 4 × size 22 | M |
| **9-98** | 3 | 3 × size 20 | I |
| **11-02** | 2 | 2 × size 16 | I |
| **11-04** | 4 | 4 × size 20 | I |
| **11-05** | 5 | 5 × size 20 | I |
| **11-08a** | 8 | 4 × size 20, 4 × size 22D | M |
| **11-35** | 13 | 13 × size 22D | M |
| **11-98** | 6 | 6 × size 20 | I |
| **11-99** | 7 | 7 × size 20 | I |
| **13-03** | 3 | 3 × size 16 | II |
| **13-04** | 4 | 4 × size 16 | I |
| **13-06** | 6 | 2 × size 12, 4 × size 20 | M |
| **13-06A** | 6 | 2 × size 16, 4 × size 20 | M |
| **13-08** | 8 | 8 × size 20 | I |
| **13-08A** | 8 | 4 × size 16, 4 × size 20 | M |
| **13-12A** | 12 | 12 × size 20 | N |
| **13-16** | 16 | 3 × size 16, 13 × size 22D | N |
| **13-35** | 22 | 22 × size 22D | M |
| **13-98** | 10 | 10 × size 20 | I |
| **15-03** | 3 | 2 × size 12, 1 × size 16 | I |
| **15-04A** | 4 | 4 × size 12 | M |
| **15-05** | 5 | 5 × size 16 | II |
| **15-06A** | 6 | 6 × size 16 | M |
| **15-13** | 13 | 4 × size 16, 2 × size 20, 7 × size 22D | M |
| **15-14** | 14 | 6 × size 16, 8 × size 22D | N |
| **15-16** | 15 | 1 × size 16, 14 × size 20 | I |
| **15-18** | 18 | 18 × size 20 | I |
| **15-19** | 19 | 19 × size 20 | I |
| **15-23** | 23 | 3 × size 16, 2 × size 20, 18 × size 22D | M |
| **15-32** | 32 | 9 × size 20, 23 × size 22D | M |
| **15-35** | 37 | 37 × size 22D | M |
| **15-97** | 12 | 4 × size 16, 8 × size 20 | I |
| **17-02** | 39 | 1 × size 8, 38 × size 22D | M |
| **17-06** | 6 | 6 × size 12 | I |

| Arrangement | Contacts | Contact sizes | Service rating |
|---|---|---|---|
| **17-06C** | 6 | 4 × size 12, 2 × size 22 | I |
| **17-08** | 8 | 8 × size 16 | II |
| **17-14** | 14 | 2 × size 12, 4 × size 16, 8 × size 20 | M |
| **17-19** | 19 | 4 × size 16, 11 × size 20, 4 × size 22D | M |
| **17-26** | 26 | 26 × size 20 | I |
| **17-28A** | 28 | 3 × size 12, 25 × size 22D | M |
| **17-30** | 6 | 3 × size 10, 3 × size 20 | N |
| **17-35** | 55 | 55 × size 22D | M |
| **17-42** | 42 | 42 × size 22 | M |
| **17-99** | 23 | 2 × size 16, 21 × size 20 | I |
| **19-11** | 11 | 11 × size 16 | II |
| **19-13** | 13 | 8 × size 12, 5 × size 20 | I |
| **19-17** | 17 | 2 × size 12, 15 × size 20 | M |
| **19-18** | 18 | 4 × size 8, 14 × size 22D | M |
| **19-20** | 20 | 8 × size 16, 4 × size 20, 8 × size 22D | M |
| **19-22** | 22 | 7 × size 12, 15 × size 22D | M |
| **19-28** | 28 | 2 × size 16, 26 × size 20 | I |
| **19-30** | 30 | 1 × size 16, 29 × size 20 | I |
| **19-32** | 32 | 32 × size 20 | I |
| **19-35** | 66 | 66 × size 22D | M |
| **19-45** | 67 | 67 × size 22D | M |
| **19-53** | 53 | 53 × size 22 | M |
| **19-96** | 9 | 9 × size 12 | I |
| **21-11** | 11 | 11 × size 12 | I |
| **21-13** | 13 | 2 × size 10, 7 × size 12, 4 × size 20 | M |
| **21-16** | 16 | 16 × size 16 | II |
| **21-24** | 24 | 24 × size 20 | I |
| **21-25** | 25 | 25 × size 20 | I |
| **21-27** | 27 | 27 × size 20 | I |
| **21-28** | 28 | 3 × size 10, 25 × size 22D | I |
| **21-35** | 79 | 79 × size 22D | M |
| **21-39** | 39 | 2 × size 16, 37 × size 20 | I |
| **21-39A** | 39 | 2 × size 8, 4 × size 16, 33 × size 22D | M |
| **21-41** | 41 | 41 × size 20 | I |
| **21-61** | 61 | 6 × size 16, 55 × size 22D | M |
| **21-75** | 4 | 4 × size 8 | N |
| **21-75A** | 4 | 4 × size 12 | I |

| Arrangement | Contacts | Contact sizes | Service rating |
|---|---|---|---|
| **23-02** | 85 | 85 × size 22 | M |
| **23-06H** | 6 | 6 × size 10 | II |
| **23-14** | 14 | 14 × size 12 | I |
| **23-21** | 21 | 21 × size 16 | II |
| **23-26** | 26 | 8 × size 12, 18 × size 20 | M |
| **23-32** | 32 | 32 × size 20 | I |
| **23-34** | 34 | 34 × size 20 | I |
| **23-34A** | 34 | 4 × size 12, 16 × size 16, 14 × size 22D | M |
| **23-35** | 100 | 100 × size 22D | M |
| **23-36** | 36 | 36 × size 20 | I |
| **23-44a** | 44 | 2 × size 10, 4 × size 12, 38 × size 22D | M |
| **23-53** | 53 | 53 × size 20 | I |
| **23-55** | 55 | 55 × size 20 | I |
| **23-70** | 70 | 10 × size 20, 60 × size 22D | M |
| **23-72** | 72 | 2 × size 8, 70 × size 22D | M |
| **23-86** | 86 | 16 × size 20, 70 × size 22D | M |
| **23-97** | 16 | 16 × size 16 | I |
| **23-99** | 11 | 11 × size 16 | II |
| **25-02** | 100 | 100 × size 22 | M |
| **25-04** | 56 | 8 × size 16, 48 × size 20 | I |
| **25-07** | 99 | 2 × size 8, 97 × size 22D | M |
| **25-08** | 8 | 8 × size 8 | N |
| **25-10** | 10 | 6 × size 10, 4 × size 12 | N |
| **25-11** | 11 | 9 × size 10, 2 × size 20 | N |
| **25-19** | 19 | 19 × size 12 | I |
| **25-24** | 24 | 12 × size 12, 12 × size 16 | I |
| **25-29** | 29 | 29 × size 16 | I |
| **25-31** | 31 | 2 × size 8, 5 × size 10, 12 × size 16, 12 × size 20 | M |
| **25-32** | 32 | 6 × size 10, 10 × size 16, 16 × size 20 | M |
| **25-35** | 128 | 128 × size 22D | M |
| **25-35A** | 35 | 11 × size 12, 24 × size 20 | M |
| **25-36** | 36 | 2 × size 8, 4 × size 10, 8 × size 16, 22 × size 20 | N |
| **25-39** | 39 | 2 × size 12, 17 × size 16, 20 × size 20 | M |
| **25-43** | 43 | 20 × size 16, 23 × size 20 | I |
| **25-45** | 45 | 8 × size 12, 37 × size 20 | M |
| **25-46** | 46 | 2 × size 8, 4 × size 16, 40 × size 20 | I |
| **25-61** | 61 | 61 × size 20 | I |

| Arrangement | Contacts | Contact sizes | Service rating |
|---|---|---|---|
| **25-64a** | 64 | 8 × size 16, 40 × size 20, 16 × size 22D | M |
| **25-69** | 69 | 10 × size 16, 15 × size 20, 44 × size 22D | M |
| **25-92** | 92 | 4 × size 20, 88 × size 22D | M |
| **25-93** | 118 | 8 × size 16, 110 × size 22D | M |
| **25-94** | 94 | 4 × size 12, 8 × size 16, 82 × size 22D | M |
| **25-118G** | 118 | 8 × size 16, 110 × size 22D | N |

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