Experts for your systems

Data sheets line bushings

- Quality
- Reliability
- Delivery reliability
- Our knowledge for your application
LBP _ _ _ _ _ /____
Ex approved pluggable line bushings

- Wide temperature range
- Ready to use
- Many international approvals
- No re-certification required

Description
Line bushings are used to electrically connect equipment in potentially explosive atmospheres. The connection is always made between a flameproof enclosure (Ex-d) and an enclosure with a different type of protection in accordance with IEC/EN 60079-0. Alternatively, two flameproof enclosures are connected. Therefore the cables are protected from direct contact. Depending on the design, line bushings can be used for intrinsically safe, measurement, control or power circuits, or combinations of the above.

All line bushings are cast with high temperature and leakage current resistant resin to insulate them from the enclosure.

Applications
- Ex-d enclosures, housings or Pumps
- Sensors, measurement devices, motors, actuators, pneumatic and hydraulic devices, etc.
- Used on Sea-platforms, Drilling Rigs, rolling mills, gas tanks, climatic chambers, compactors, etc.

Marking
- II 2G Ex db IIC T4/T5/T6
- II 2D Ex db IIIC T135°/T100°C/T85°C
- I M2 Ex d I Mb

Certificates
- ATEX
- IECEx / mining
- EAC TC-RU (GOST)
- CSA UL
- FM

Technical Data
- Voltage: 440V, 690V, 1000V, 3000V (depending on model type)
- Conductor sizes: 0,08mm² to 185mm²
- Temperature range: -55°C…+115°C (depending on model type)
- Max. conductor quantity: 50 strands
- Bushing diameter: Ø10mm to Ø40mm
- Plug length: > 10mm
- Bushing material: Nickel-plated Brass (other materials on request)
- Standard cable material: RADOX 125 (other materials on request)

Special applications on request, please contact us to discuss your requirements.
Ex approved threaded line bushings

- Wide temperature range
- Ready to use
- Many international approvals
- No re-certification required

Beschreibung

Line bushings are used to electrically connect equipment in potentially explosive atmospheres. The connection is always made between a flameproof enclosure (Ex-d) and an enclosure with a different type of protection in accordance with IEC/EN 60079-0. Alternatively, two flameproof enclosures are connected. Therefore the cables are protected from direct contact. Depending on the design, line bushings can be used for intrinsically safe, measurement, control or power circuits, or combinations of the above.

All line bushings are cast with high temperature and leakage current resistant resin to insulate them from the enclosure.

Applications
- Ex-d enclosures and Pumps
- Sensors, measurement devices, motors, actuators, pneumatic and hydraulic devices, etc.
- Used on Sea-platforms, Drilling Rigs, rolling mills, gas tanks, climatic chambers, compactors, etc.

Technical Data
- Voltage: 440V, 690V, 1000V, 3000V (depending on model type)
- Conductor sizes: 0.08mm² to 185mm²
- Temperature range: -55°C...+115°C (depending on model type)
- Max. conductor quantity: 50 strands
- Thread size: M10 to M42
- Thread length: > 10mm
- Material of bushing: Nickel-plated Brass (other materials on request)
- Standard wire material: RADOX 125 (other materials on request)

Marking
- II 2G Ex db IIC T4/T5/T6
- II 2D Ex db IIIC T135°/T100°C/T85°C
- I M2 Ex d I Mb

Certificates
- ATEX
- IECEx / mining
- EAC TC-RU (GOST)
- CSA UL
- FM

Special applications on request, please contact us to discuss your requirements.
General Data

- Wide temperature range
- Easy installation
- Ready to use
- Many international approvals
- Easily inter-changeable
- No re-certification required

Description:

Line bushings are used to electrically connect equipment in potentially explosive atmospheres. The connection is always established either between a flameproof enclosure (Ex-d) and an enclosure of another type of protection in accordance with IEC/EN 60079-0. Alternatively, two flameproof enclosures are connected. Thus cables are protected from direct contact. The 2-path line bushing simplifies your installation application by means of the rotating adapter.

All line bushings are cast with high temperature and leakage current resistant resin to insulate them from the enclosure.

Applications

- Ex-d enclosures and Pumps
- Sensors, measurement devices, motors, actuators, pneumatic and hydraulic devices, etc.
- Used on Sea-platforms, Drilling Rigs, rolling mills, gas tanks, climatic chambers, compactors, etc.

Technical Data

- Voltage: 440V, 690V, 1000V, 3000V (depending on model type)
- Conductor sizes: 0,08mm² to 185mm²
- Temperature range: -55°C…+115°C (depending on model type)
- Max. conductor quantity: 50 strands
- Thread size (Adapter): M14 to M42
- Thread length: > 10mm
- Material of bushing: Nickel-plated Brass (other materials on request)
- Standard wire material: RADOX 125 (other materials on request)

Marking

- Ex 2G db IIIC T4/T5/T6
- Ex 2D db IIIC T135°/T100°C/T85°C
- M2 Ex d I Mb

Certificates

- ATEX
- IECEx / mining
- EAC TC-RU (GOST)
- CSA UL
- FM

Special applications on request, please contact us to discuss your requirements.
Ex approved line bushing

### General Data

#### Type code

<table>
<thead>
<tr>
<th>LB</th>
<th>__ __ __ __ __ / _____</th>
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</thead>
</table>

Marking line bushing

**Marking of type:**
- S = Screwable
- P = Pluggable
- U = Screwable with shock protection
- Z = Pluggable with shock protection

**Marking of type of thread / gap:**
- M = Metric
- N = NPT-thread
- W = Whitworth thread
- S = Special thread according to the minimum requirements of IEC 60079-1 table 3 or 4
- 1 = Without thread gap length ≥12.5mm <25mm
- 2 = Without thread gap length ≥ 25mm ≥40mm
- 3 = Without thread gap length ≥ 40mm
- P = Special type according to minimum requirements of IEC 60079-1 table 1 or 2
  - Average surface finish: Ra<6.3µm

**Size of thread / ferrule diameter (2digits) e.g.:**
- 10, 15, 16, 18, 22, 24, 30, 32, 33, 34, 36, 38, 40, 42.

**Marking rated insulation voltage:**
- 0 = without
- 1 = 440V ; 2 = 690 V; 3= 1000V
- 4 = 3000V; 5= 6 000V……

**Number of cores (2digits):**
- 01 = 1 core / strand
- 99 = 99 cores / strands

**Not relevant for explosion protection**
## General data

### Ex approved line bushing

Number of cores / strands with Radox 125

**Number of cores / strands for threaded sleeve**

<table>
<thead>
<tr>
<th>AWG</th>
<th>0.25</th>
<th>0.34</th>
<th>0.5</th>
<th>0.75</th>
<th>1</th>
<th>1.5</th>
<th>2.5</th>
<th>4</th>
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**Number of cores / strands for pluggable sleeve**

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**Number of cores / strands for 2-path line bushing**

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**Ex approved line bushing**

**strands / cable selection**

<table>
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<tr>
<th>Cable type</th>
<th>Description</th>
<th>Temperature range</th>
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<tbody>
<tr>
<td>Radox 125</td>
<td>single core</td>
<td>-55°C... +115°C</td>
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<tr>
<td>Radox 155</td>
<td>single core</td>
<td>-55°C... +100°C</td>
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<tr>
<td>Radox UL 3271 / 3266</td>
<td>single core</td>
<td>-55°C... +115°C</td>
</tr>
<tr>
<td>Betatherm 145</td>
<td>single core</td>
<td>-55°C... +115°C</td>
</tr>
<tr>
<td>Betatherm UL 3271 / 3266</td>
<td>single core</td>
<td>-55°C... +115°C</td>
</tr>
<tr>
<td>H05V-K / H07V-K</td>
<td>single core</td>
<td>-30°C... +80°C</td>
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<tr>
<td>H05G-K / H07G-K</td>
<td>single core</td>
<td>-40°C... +10°C</td>
</tr>
<tr>
<td>Balzertherm 110HX</td>
<td>single core</td>
<td>-40°C... +110°C</td>
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<tr>
<td>NSGAFÖU</td>
<td>single core</td>
<td>-40°C... +80°C</td>
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<tr>
<td>Metrofunk Kabelunion Typ 0,09mm²</td>
<td>single core</td>
<td>-40°C... +105°C</td>
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<tr>
<td>Helutherm A 145</td>
<td>single core</td>
<td>-55°C... +115°C</td>
</tr>
<tr>
<td>FBL Typ 14x0,08mm²</td>
<td>ribbon cable</td>
<td>-20°C... +105°C</td>
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<tr>
<td>Radox 125</td>
<td>multi core</td>
<td>-55°C... +115°C</td>
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<td>special cable 2xAWG28/7</td>
<td>multi core</td>
<td>-55°C... +105°C</td>
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<tr>
<td>H07RN-F</td>
<td>multi core</td>
<td>-30°C... +60°C</td>
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<td>CANBUS</td>
<td>multi core</td>
<td>-40°C... +70°C</td>
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<td>UNITRONIC BUS CAN</td>
<td>multi core</td>
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<td>ÖLFLEX CLASSIC 110 CY</td>
<td>multi core</td>
<td>-40°C... +80°C</td>
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<tr>
<td>ÖLFLEX FD90</td>
<td>multi core</td>
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<tr>
<td>F-CY-JZ / F-CY-OZ</td>
<td>multi core</td>
<td>-40°C... +80°C</td>
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<tr>
<td>JZ-500</td>
<td>multi core</td>
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<tr>
<td>JZ-500 HMH-C</td>
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<tr>
<td>JZ-500 PUR</td>
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<td>JZ-600-Y-CY</td>
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<tr>
<td>PAAR-TRONIC-CY</td>
<td>multi core</td>
<td>-30°C... +80°C</td>
</tr>
<tr>
<td>SUPER-PAAR-TRONIC</td>
<td>multi core</td>
<td>-40°C... +80°C</td>
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<tr>
<td>Datwyler patch cord</td>
<td>multi core</td>
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<td>HELUKAT 100 UTP, LAN Kabel, Cat. 5</td>
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<td>-20°C... +60°C</td>
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<td>HELUKAT 100S, Ethernet, Cat. 5e</td>
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<td>-40°C... +80°C</td>
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<td>HELUKAT 200IND, Ethernet, Cat. 5e</td>
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<td>HELUKAT 500IND, Ethernet, Cat. 6a</td>
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<tr>
<td>HELUKAT 600IND, Ethernet, Cat. 7e</td>
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<tr>
<td>RG174</td>
<td>coaxial cable</td>
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<tr>
<td>RG178</td>
<td>coaxial cable</td>
<td>-55°C... +115°C</td>
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<td>RG213</td>
<td>coaxial cable</td>
<td>-35°C... +80°C</td>
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<tr>
<td>RG316</td>
<td>coaxial cable</td>
<td>-55°C... +115°C</td>
</tr>
<tr>
<td>G50/CWJH (multimode)</td>
<td>fibre optic cable</td>
<td>-20°C... +70°C</td>
</tr>
<tr>
<td>G62,5/CWJH (multimode)</td>
<td>fibre optic cable</td>
<td>-20°C... +70°C</td>
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<tr>
<td>E9/CWJH E30 (singlemode)</td>
<td>fibre optic cable</td>
<td>-20°C... +70°C</td>
</tr>
<tr>
<td>Radox FO (multimode + singlemode)</td>
<td>fibre optic cable</td>
<td>-55°C... +85°C</td>
</tr>
</tbody>
</table>

Other strands / cables available on request. Please contact us to discuss your requirements.
LBU_ _ _ 000 /____
Ex approved blind plugs

**General Data**

- Wide temperature range
- Light weight item
- Ready to use, readily available
- Many international approvals
- All variations possible
- No re-certification required

**Description**

Blind plugs are used to seal off open entries of an enclosure, whether they be clearance holes or threaded. They are inserted in place of an approved cable gland to ensure the enclosure is fully sealed in potentially explosive atmospheres. All blind plugs are formed in threaded or pluggable formats. Special applications are possible (thread on both sides, NPT thread, etc.).

**Applications**

- Ex d enclosures, housings or Pumps
- Sensors, measurement devices, motors, actuators, pneumatic and hydraulic devices, etc.
- Used on Sea-platforms, Drilling Rigs, rolling mills, gas tanks, climatic chambers, compactors, etc.

**Technical Data**

- **Temperature range:** -55°C…+115°C
- **Thread / bushing size:** M10 to M42 Ø10mm to Ø40mm
- **Thread / plug length:** > 10mm
- **Bushing material:** Nickel-plated Brass

**Markings**

- II 2G Ex db IIC T4/T5/T6
- II 2D Ex db IIIC T135°/T100°C/T85°C
- I M2 Ex d I Mb

**Certificates**

- ATEX
- IECEx / mining
- EAC TC-RU (GOST)
- CSA UL
- FM

*Special applications on request, please contact us to discuss your requirements.*
**Ex approved blind plugs**

### General Data

<table>
<thead>
<tr>
<th>LBU_ _ _ 000 / _____</th>
<th>Identification blind plug</th>
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<tbody>
<tr>
<td><strong>Type code</strong></td>
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</table>

**Thread / gap type:**
- M = Metric
- N = NPT-thread
- W = Whitworth thread
- S = special thread according to the minimum requirements of IEC 60079-1 table 3 or 4

1 = without thread  
   - gap length ≥ 12.5mm < 25mm
2 = without thread  
   - gap length ≥ 25mm < 40mm
3 = without thread  
   - gap length ≥ 40mm

P = special type according to minimum requirements of IEC 60079-1 table 1 or 2  
   - Average surface finish  
     - Ra < 6.3µm

**Size of thread / core diameter (2digits)**
e.g.:  
- 10, 15, 16, 18, 22, 24, 30, 32, 33, 34, 36, 38, 40, 42.

**without explosion protection relevance**
**Ex approved line bushings**

**Online calculation**

**www.quintex.eu**

**General Data**

Ex approved line bushings

Online calculation

More information please find video tutorial on youtube:

Quintex GmbH, how to configure and order Ex d line bushings