



CERTIFICATE FOR CHINA COMPULSORY PRODUCT CERTIFICATION

No.: 2021312313000398

Applicant	Quintex GmbH
Address	i_Park Tauberfranken 13, 97922 Lauda-Königshofen, Germany
Manufacturer	Quintex GmbH
Address	i_Park Tauberfranken 13, 97922 Lauda-Königshofen, Germany
Production Factory	Quintex GmbH
Production Address	i_Park Tauberfranken 13, 97922 Lauda-Königshofen, Germany
Product	Line Bushing
Model/Type	LB* * * * **/...
Ex marking	See Annex
Reference Standards	GB/T 3836.1-2021, GB/T 3836.2-2021, GB/T 3836.3-2021, GB/T 3836.31-2021

Certification mode Type Test + Initial Factory Inspection + Post-Certification Surveillance

The product(s) is verified and certified according to CNCA-C23-01: 2019 *China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product* and CNEC-C2301-2019 *Guideline of China Compulsory Certification Implementation Rule on Explosion Protected Electrical Product*.

See Annex for the detailed product information (7 pages)

Initial issue date: 2021-04-15

Issued date: 2023-04-09

Valid to: 2026-04-14

The validity of this certificate is maintained through the regular supervision of the issuing authority during the validity period.

Where any discrepancy arises between the English translation and the original Chinese version, the Chinese version shall prevail.

Director:



Nanyang Explosion Protected Electrical Apparatus Research Institute Co.,Ltd.



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CN 0001859



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Product information:

1. This certificate covers the following models:

- LB* * * * **/...

Type designation key:

LB	*	*	**	*	**	/...
(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Marking line bushing

(2) Marking of type

S=screwable, P=pluggable, U=screwable with shock protection

Z=pluggable with shock protection

(3) Marking of type of thread/gap length

M=metric

N=NPT

S=special thread according to the requirements of GB/T 3836.2 table 3 or 4

1=without thread(12.5mm≤gap length < 25mm)

2=without thread(25mm≤gap length < 40mm)

3=without thread(gap length≥40mm)

P=special type according to minimum requirements of GB/T 3836.2 table 1 or 2

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Average surface finish $\leq 6.3\mu\text{m}$.

(4) Size of thread/ferrule diameter (2 digits)

For example: 10, 15, 16, 18, 22, 24, 30, 32, 33, 34, 36, 38, 40, 42...

(5) Marking rated insulation voltage:

0=without, 1=440V, 2=690V, 3=1000V, 4=3000V, 5=6000V

(6) Number of cores (2 digits)

00=no cores

...

99=99 cores

(7) Not relevant for explosion protection

Electrical data

Rated voltage max 440V, 690V, 1000V, 3000V, 6600V depending on the type

Rated current The rated current has to comply with the following requirement: To prevent damage to the core, the respective core-specific limiting temperature T_G may not be exceeded under maximum current load, maximum enclosure warming and maximum ambient temperature. The core-specific limiting temperature T_G is marked on the line bushings and it is detailed in the shipping documents.

The determination of the maximum permissible ambient temperature as well as of the temperature class takes place under consideration of the following table, if need be on the basis of self-performed temperature measurements as well as of the core specific limiting temperature T_G .

If there has to be considered practically no warming due to current load in the case of

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control circuits, the core specific limiting temperature can be used as the maximum ambient temperature in the best case.

The following table gives a clue regarding the warming of the line bushing due to current load with the maximum possible number of cores. For the values stated in the table, a warming of $\Delta T = 40\text{ K}$ has to be taken as a basis.

Core cross section area mm ²	Rated current A	Core cross section area mm ²	Rated current A
0.08	1.0	10.0	50.0
0.25	3.0	16.0	67.0
0.35	5.5	25.0	90.0
0.5	7.5	35.0	110.0
0.75	10.0	50.0	140.0
1.0	12.0	70.0	170.0
1.5	15.0	95.0	205.0
2.5	21.0	120.0	240.0
4.0	28.0	150.0	270.0
6.0	36.0	185.0	310.0

Rated cross section area: 0.08 mm² to 185 mm² depending on the type

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Number of cores: 0 to 55

Type / size of thread: M8 × 0.7 to M72 × 1.5
types and sizes of threads not conform to ISO-Standards are marked

Diameter of ferrule: 8 to 80 mm, average surface finish Ra ≤ 6.3 μm

Length of thread: ≥10 mm

Length of ferrule: ≥20 mm

Length of ferrule gap: ≥12.5 mm, ≥25 mm, ≥40 mm

Service temperature : max. -55°C to +115°C

All cable types complying with GB/T 3836.15-2017 clause 9.3.2 can be used in the bushing. The following table lists special cables that can be also used together with the Line Bushing LB* * * * * / ...:

Cable type	Description	Cross section area
FBL TYP 14×0.08mm ²	single core	0.08mm ²
Special cable 2×AWG 28/7	multi-core	0.7mm ² (max temp.105°C)
H07RN-F	multi-core	0.25mm ² ~6.0mm ²
RG174U	Coaxial line	--
G50/CWJH D20	fiber optic cable	0.6mm ²
G50/CWJH D27	fiber optic cable	0.6mm ²
E9/CWJH E30	fiber optic cable	0.9mm ²
Flexkabel Kapton	Ribbon cable	--
Sabix A 280	Ribbon cable	0.5mm ² ~95mm ²

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Draka Flex-Flame RFOU	multi core	0.75mm ² ~95mm ²
Fibertech AS600/660UVST	fiber optic cable	--

The fiber optic cables have to be strain relieved by an appropriate method. When use the ribbon cable Kapton the line bushings type LB*-*-**-*... can only be used between two flameproof enclosures.

When a line bushing is built-in a flameproof enclosure with adjacent enclosure protected by type of protection increased safety, single, partly not insulated wires may be encapsulated in the line bushing. The not insulated part of each wire has to be completely enclosed by the casting compound.

Ingress Protection: IP66

Ex marking: Ex db IIC T4/T5/T6 Gb, Ex eb IIC T4/T5/T6 Gb,
Ex tb IIIC T135°C/T100°C/T85°C Db
Ex db I Mb

- Producers should organize production in accordance with the technical documents approved by the certification body.

2. Specific conditions of safety use:

- Line bushings with screw thread: The thread hole of the flameproof enclosure in which the line bushing is integrated has to comply with GB/T 3836.2-2021, Clause 5.3.
- Pluggable line bushings: The hole of the flameproof enclosure, in which the line bushing is integrated has to comply with GB/T 3836.2-2021, Clauses 5.2.1 and 5.2.2 regarding the length and width of the gap. The average surface finish has to be Ra ≤ 6.3 μm.
- Requirements valid for pluggable and screwable line bushings: The line bushing with shock protection (U and Z in the type designation key) may be used for direct connection of flameproof enclosures. In this case, the mounting has to be from the outside into the d-space, so that the impact proof is guaranteed. On the outside, only a hose line, which is safely enclosed, may be used.

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- Regardless of the type of mounting it has to be ensured, that the line bushing is secured against twisting or loosening.
- The cable specific minimum ambient temperature $T_{A, \min}$ is marked on the line bushings and it is detailed in the shipping documents.
- The specifically correct maximum ambient temperature $T_{A, \max}$ is determined as described in above table.
- For Ex-eb and Ex-tb applications the line bushings and plugs can be fitted with an O-ring or flange gasket. When correctly installed an IP protection of IP66 can be achieved. The operating temperature range of the seal is -55°C to $+70^{\circ}\text{C}$. For use with flange gasket it must be assured that the gasket does not flip off due to high torque.
- The wires of the line bushing must be connected in enclosures meeting a type of protection to GB/T 3836.1, section 1. The cores must be suitably connected in accordance with their rated cross sections and the type of protection selected.
- The line bushing type LB* * * * */... can also be used in mines susceptible to firedamp. For the heating of the Line bushing due to current load, it must be respected that temperatures exceeding 150°C on space with possible deposition of dust are not present.
- When the end termination of fiber optic cables is inside hazardous location, the optical power must be in compliance with type of protection " op is "according to GB/T 3836.22 or installed inside" op pr "enclosure.
- See instruction for other information.

3. Certificate related report(s):

- Type test report: CQST2103C108, CQST2103C108/01
- Factory inspection report: CN2021Q010016

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4. Certificate change information:

- 1st change on April 09, 2023: Updated the standards for certification.

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