

LIMIT SWITCH EX. PROOF

BZX85 SERIES EXPLOSION-PROOF TRAVEL SWITCHES

1. Safety Tips

1.1 Symbol Description



Attention!

This mark indicates important information; it would cause risk or affect the usage performance of products if disobeyed.



Tips

This mark symbols important tips or suggestion.

1.2 This part sums up the most important safety tips which are the supplements of relative national standards and operation rules.

1.3 This product is used in explosive hazardous areas; all the persons who install, operate and maintain it should be familiar with and to strictly comply with relative applicable safety regulations, national standards and related specifications.



1.4 Users should obey the following items:

1.4.1 Norms of national security and accident prevention.

1.4.2 National standards of installation (Such as: GB/T 3836.15-2017 Explosive atmospheres - Part 15: Electrical installations design, selection and erection, MOD)

1.4.3 Generally accepted and followed technical specifications.

1.4.4 Safety guide and information included in this instruction.

1.4.5 The electrical parameters or operation conditions specified on nameplate and technical parameters.

1.4.6 Please protect this product so as to avoid mechanical damage.

1.4.7 Any damage to the shell of the product may render the explosion-proof

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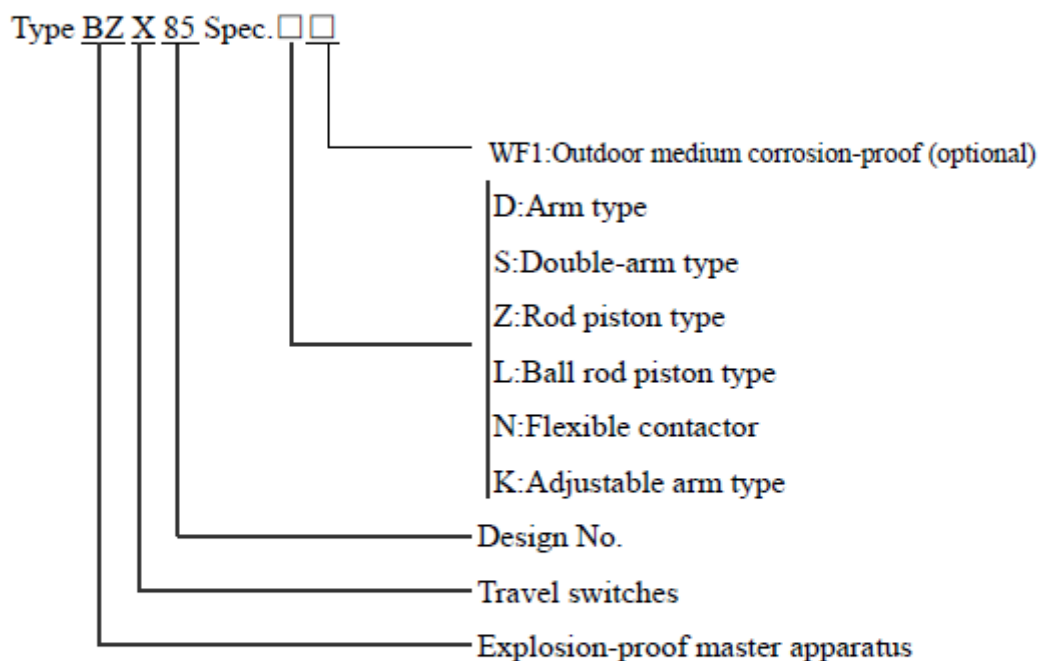
performance ineffective.



For other safety matters not covered by this part of safety tips, you can contact our technical service hotline: 400-189-9776

2. General

2.1 Catalogue Number Logic



2.2 Application

BZX85 series explosion-proof travel switches (hereinafter referred to as travel switches) can be used in Zone 1 and Zone 2 hazardous areas where IIA, IIB, and IIC explosive gas mixture presents with T1 to T6 classification; it can also be used in Zone 21 and Zone 22 where IIIA, IIIB and IIIC combustible dust presents, or both areas. In circuit of AC50Hz, voltage 380V (DC220V), it can be used for changing the machine signal to electrical signal to control mechanical actions or program.

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2.3 Compliance

GB/T 3836.1-2021 Explosive atmosphere Part 1: Equipment general requirements

GB/T 3836.2-2021 Explosive atmosphere Part 2: Equipment protected by flame proof "d" enclosure

GB/T 3836.3-2021 Explosive atmosphere Part3: Equipment protection by increased safety "e" enclosure

GB/T 3836.31-2021 Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure "t"

2.4 Working conditions

a) Altitude: $\leq 2000\text{m}$.

b) Ambient temperature: $-50^{\circ}\text{C} \sim +55^{\circ}\text{C}$.

c) Relative humidity: $\leq 90\%$ ($+25^{\circ}\text{C}$).

d) Vibration and shake free.

e) Areas without gas or vapour which affects the performance of insulation.

f) Explosive gas mixture (IIA, IIB, IIC, Zone 1, Zone 2), combustible dust areas (IIIA, IIIB, IIIC, Zone 21, Zone 22), or both.

g) Pollution grade: 3.

h) Mounting sorts: II, III.

3. Main Technical Parameters (refer to Table 1)

Table 1

Rated voltage (V)	Rated current (A)	Contactor number (pair)	Ex-mark Ingress Protection	Inlet thread (G")	Cable O.D. (Φ , mm)	Weight (kg)
AC380	0.79	1N/ON+1N/ OFF	Ex db eb II C T6 Gb	1/2	6.5~10	0.39
AC220	1.5		Ex tb IIIC T80°C Db			
DC220	0.1		IP66			

4. Main Structures

ZL102 die-casting aluminium enclosure; powder coated. There is LX19 travel switch in enclosure of group II C explosion-proof travel switch core in the

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enclosure of group II C. The operating arm moves and drives the ON/OFF of contactor, realizing the change of electrical signal, or realizing the ON/OFF of circuit. Both cable wiring and steel pipe wiring are suitable; earthing screws are equipped both inside and outside the enclosure.

5. Outline and Installation Dimensions (refer to Attached Drawings)

6. Installation

6.1 Install the product according to GB/T 3836.15 standard and site working condition;

6.2 Please check if the parameters listed on the nameplate are conformed to the actual conditions of use before installation;

6.3 Before installation, carefully check the enclosure and head of the travel switch, and installation is not allowed in the presence of damage, deformation, looseness, etc. Disassembly and damage to the head of the switch are prohibited, and disassembly of the explosion-proof switch inside is strictly forbidden, as it may result in the malfunction of the travel switch;

6.4 The travel switch must be installed by professionals

6.5 Pay attention to the position of the travel switch and ensure it is securely fixed to prevent accidental movements;

6.6 When installing, the internal and external screws should be earthing reliably, When the wire diameter of the phase wire is less than 16mm^2 , the wire diameter of the internal and external grounding wires is equal to the wire diameter of the phase wire, and the external grounding is at least 4mm^2 . When the wire diameter of the phase wire is greater than 16mm^2 and less than 35mm^2 , the wire diameter of the internal and external grounding conductors is 16mm^2 . When the wire diameter of the phase wire is greater than 35mm^2 , the wire diameter of the inner and outer grounding conductors is $\frac{1}{2}\text{mm}^2$ of the wire diameter of the

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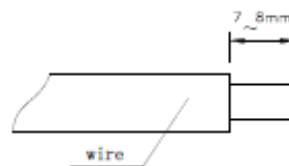
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phase wire;

6.7 The wiring should be operated by professionals or electricians according to national standards and regulations. The electric clearance is not less than 6mm, and the creepage distance is no less than 12.5mm after wiring;

6.8 When installing, please select the appropriate wire according to the wire size corresponding to the built-in terminal, strip the wire head, and the wire stripping length is 7~8mm, as shown in the figure below: the wire connected to TC terminal is mechanically connected with the OT terminal lug. Tighten according to the tightening torque on the component table, protect the exposed part with heat-shrinkable tube, and the wire stripping head should be of appropriate length and neatness;



7. Usage and Maintenance

7.1 Regular check and maintenance shall be taken according to GB/T 3836.16 and on-site working conditions;

7.2 After installation, check whether the insulation resistance between pole and enclosure is normal before energizing.

7.3 When installing, overhauling and maintaining the travel switches, the power supply must be disconnected before opening the cover, and the front-end power supply must be cut off first. "No opening with power on!"

7.4 When installing and maintaining the travel switches, ensure that the sealing ring at the inlet of the device is tightly pressed, so as to avoid water entering the travel switches or affecting the explosion-proof performance. Please check the sealing ring regularly. If it is found to be aging, contact our company to order it

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and replace it in time;

7.5 Check regularly whether bolts of the travel switches are loose. If they are loose, ask professionals to repair them;

7.6 Check whether the cable is securely connected regularly, so as not to affect the performance;

7.7 If the travel switches is found to be faulty, it shall be repaired by professional personnel;

7.8 When replacing the parts, ensure the parts follows its' instructions;

7.9 Shall not be used in areas affected by charge generation process, mechanical friction, separation process, electron emission and pneumatic transmission dust;

7.10 According to the provisions of the National Product Three Guarantees Law, the product warranty period shall be one year, unless otherwise agreed in the contract;

7.11 The content of restricted substances contained in the product shall be below the limit requirements stipulated in GB/T 26572;

7.12 If the products exceed the service life or cannot work properly after maintenance, they should not be discarded at will. Please turn them over to the enterprises qualified to deal with waste electrical and electronic products;

7.13 When selecting special fasteners, please select fasteners with yield stress of 450MPa.

8. Special Working Conditions

8.1 Ambient temperature: $-50^{\circ}\text{C} \sim +55^{\circ}\text{C}$

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9. Common Malfunction and Solution (refer to Table 2)

Table 2

Malfunction	Analysis	Solution
Cannot be on-off normally	The location of switch is wrong	Please mount it on proper location

10. Storage (refer to Table 3)

Table 3

Ambient temperature	-50°C ~ +55°C
Relative humidity	(When ambient temperature is 25°C) ≤90%

11. Ordering Information

When ordering, please specify the name, model, Ex-mark, and quantity, etc.

☞ Only replacement parts and accessories of Warom Company can be used, if other company's replacement parts and accessories are used, the quality commitment of Warom Company will fail;

The technical parameters are subject to change without prior notice;

No uncovering under normal conditions, (uncovering will affect explosion-proof performances).|

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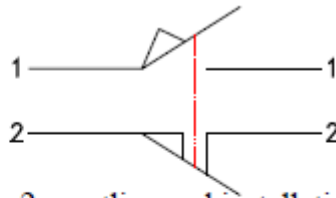
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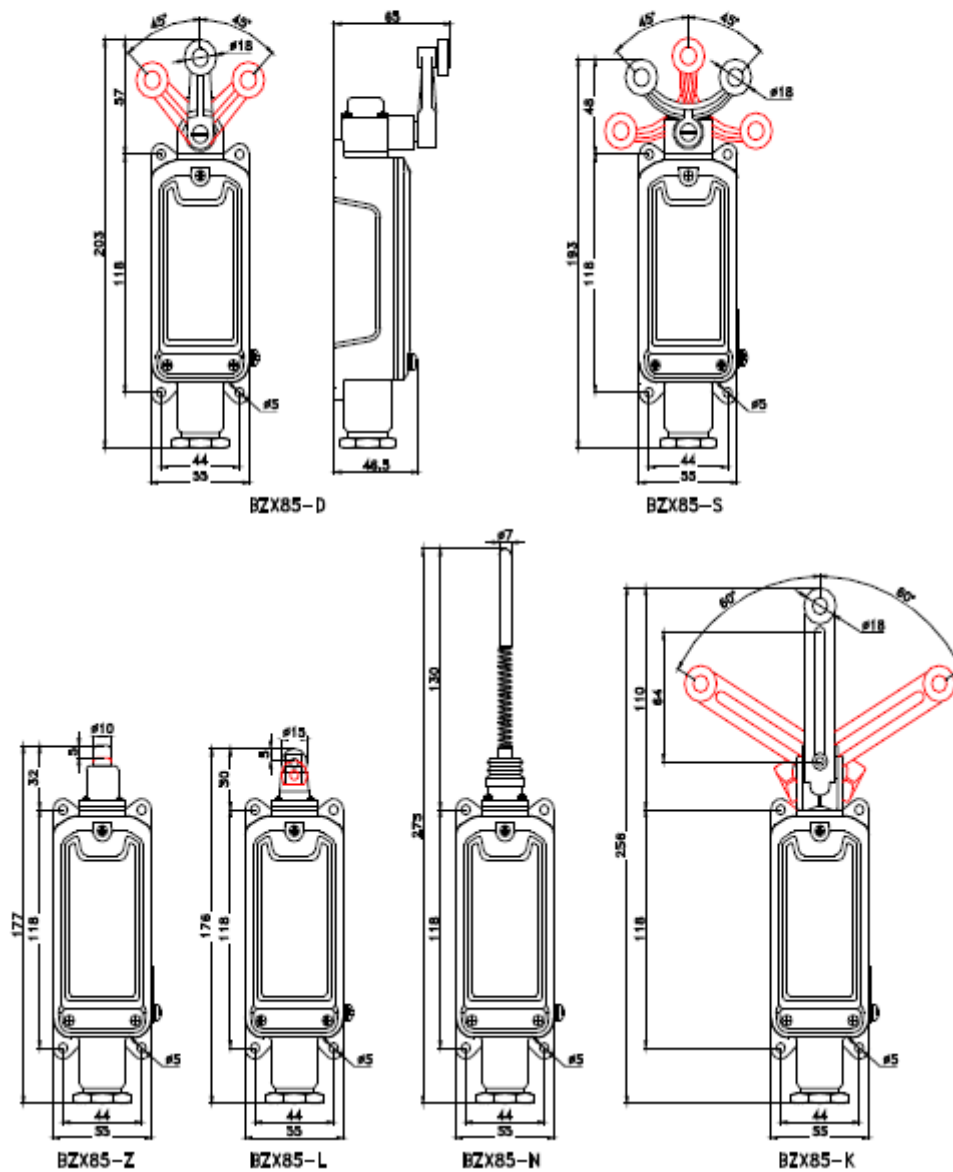
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Attached drawing 1: Electrical schematic diagram:



Attached drawing 2: outline and installation dimension



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