

Product Description of ZS-7 Grain bin temperature cable

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ZS-7

Heavy armored replaceable
core temperature measuring

- Waterproof, fumigation proof
- Tensile strength >7 T
- Replaceable inner core
- External sheath with strong resistance to



grain bin temperature cable (waterproof, explosion proof) friction and pressure

Application environment

Mainly used to measure the temperature above 0.5°C accuracy in the environment of -50 to 85 degrees.

- It is suitable for (1) temperature measurement of grain vertical silo (2) temperature measurement of coal bunker (3) temperature measurement of frozen shaft (4) temperature measurement of permafrost (5) temperature measurement of oil tank (6) Temperature measurement of coal piles
- Need large tensile strength, anti-wear, high-temperature resistance, or multi-point temperature measurement occasions.
- The following environments are not recommended : (1) scenes with great impact (2) scenes with high tensile strength (3) strong electromagnetic interference (4) occasions where the temperature of 80 degrees Celsius is maintained or exceeded for a long time (5) >45°C high temperature, And need waterproof occasions (such occasions, can use non-waterproof inner core).

Basic parameter description

- Outer sheath material: non-renewable high-molecular weight polyethylene, mixed with self-developed modified additives. High temperature resistance, wear resistance, high hardness, high smoothness.
- Tensile parameters : ≥ 7 T or ≥ 12 T (customized version)
- Waterproof and fumigation: can sink into less than 100 meters of water tanks, wells. Effectively prevent moisture from entering and damaging grain bin temperature cables.
- Use environment: recommended in -50°C -120°C, temperature environment. Can be used in coal bunker below 60 meters corn warehouse, wheat warehouse and other grain warehouses. Can be used in less than 30 meters deep water, less than 100 meters deep water storage tank, underground wells.
- temperature range : -55°C -128°C
- temperature measurement accuracy : ≤ 0.5 °C
- grain bin temperature cable core: integral silica gel into, sealed. Effectively prevent moisture entry, prevent condensation. The inner core can be drawn out.
- Temperature chip : 18b20
- Mode of communication: 1-wire
- Core color: black for GND(ground wire), other colors for signal lines.
- Working voltage: V 0-5.5



Structural characteristics

- Product tensile : 30 high-carbon steel wire composed of outer sheath. And



through special treatment, make each steel wire force uniform. Different from the direct drawing wire of ordinary full-pack temperature measuring grain bin temperature cable, the single or multiple forces are too large, resulting in local fracture.

2. Waterproof treatment: the product adopts temperature measuring inner core + inner core tube + tensile steel wire + outer sheath. The inner core is treated with integral pouring waterproof silica gel. Can effectively prevent internal core condensation, seepage, internal corrosion. The technology has been used in hot springs, water storage tanks, tidal power generation, oil tanks, frozen shafts.

3. Product core advantages: the whole core can be pulled out, easy to replace, the whole core waterproof, core material resistance to $\geq 125^{\circ}\text{C}$ high temperature. The inner core of the product can replace other kinds of temperature measuring grain bin temperature cables.

4. Outer sheath material: the outer sheath material of ordinary temperature measuring grain bin temperature cable in the market is PVC or high voltage polyethylene. The wear resistance is very low. ZS-7 heavy-duty interchangeable core temperature measuring grain bin temperature cable, the outer skin uses non-renewable high molecular weight polyethylene, mixed with self-developed modified additives. Is to high strength, high wear-resistant polymer materials for protection. Can be used in high wear index coal bunker, grain bunker. High temperature resistance is superior to ordinary temperature measuring grain bin temperature cable.

Products are widely used: the product has anti-wear, anti-strength pull, waterproof, high-temperature resistance, can replace the inner core and other advantages. This product is plastic outer sheath.

Product structure

1. Signal grain bin temperature cable and temperature measuring element

By default, the temperature measuring element uses 18b20, if you need to customize the thermal resistance and thermocouple temperature measurement, please explain in advance. The signal grain bin temperature cable uses 0.3²/2 inner core double wire system by default, or 0.3²/3 inner core three wire system.

2. Extensible sheath

The sheath can be pumped and sealed for the whole silica gel, which can prevent moisture from entering the inner core, prevent corrosion and prevent condensation. Can be pumped replacement, convenient maintenance.

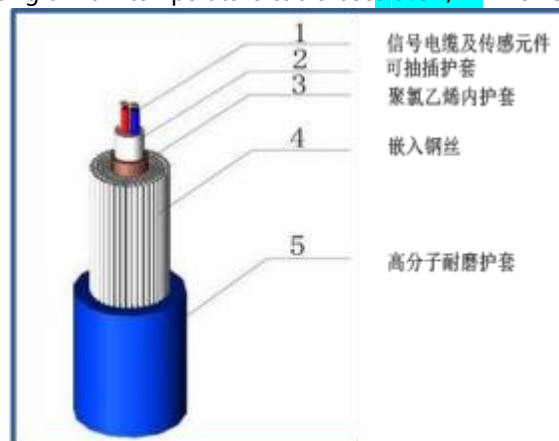
3. Inner sheath

Inner sheath default use of high-temperature, wear-resistant materials, if other materials please customize in advance. 4. embedded steel wire

Steel wire default use 30 single high-carbon steel composition, if 20-40 T version can be customized in advance.

5. polymer wear resistant sheath

External sheath default use of "non-renewable high-molecular-weight polyethylene, mixed with self-developed modified additives", wear-resistant, high-temperature resistance. Customizable crosslinked polyethylene material (high voltage line, high temperature resistance). Or customizable ordinary temperature measuring grain bin temperature cable skin.



Comparison of Domestic Similar Products

	ZS-7 of megabytes	Common double wire silo grain bin temperature cable	Common silo/coal bunker full pack steel wire grain bin temperature cable	Common waterproof grain bin temperature cable
Is 7T tensile achieved	Yes	No	The theory can be achieved, but the force is uneven.	No
Is 12T tensile achieved	Yes	No	No	No
Is there waterproof treatment	The inner core is filled with silica gel. The outer skin uses polymer materials.	No	No	Waterproof treatment for sealing the bottom head, or U layout, can not solve the problem of condensation short circuit.
Whether the skin is anti-wear, high temperature resistance.	Yes	No	No	No



Comparison of similar products abroad

	ZS-7 of megabytes	OPI Canada	FineTek Taiwan	Liros Sweden
Is 7T tensile achieved	Yes	Yes	Yes	Yes
Is 12T tensile achieved	Customizable	No	No	No
Is the inner core replaceable	Yes	Yes	No	No
Is there waterproof treatment	Yes	No	No	No

Product Picture



1. Signal grain bin temperature cable and sensor
2. Sheath that can be pulled and inserted
3. PVC inner sheath
4. Embedded steel wire
5. Polymer wear resistant sheath

