

### AS-i cabling / flat cable / round cable / distribution dose and box

The two cable categories described below can be used. It must be noted again that apart from the cable cross section, which has to be sufficient (1.5 mm<sup>2</sup>), different cables can be used arbitrarily in the same system.

#### Flat cable

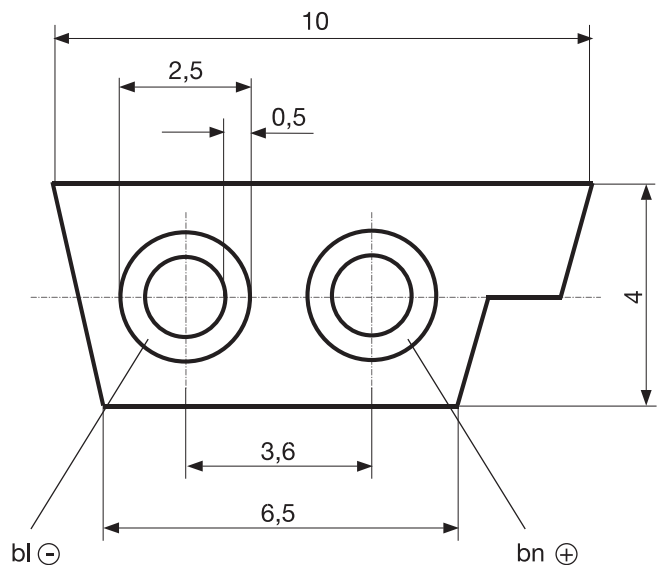
The flat cable makes possible the use of a rapid, safe and cost-effective connection technology, which was developed for the AS interface. It is available with many AS interface system manufacturers (Siemens, ifm, TROX GmbH etc.). Because of its special form, it can be inserted only with the correct polarity into the appropriate openings. It is available in the EPR rubber (ethyl propylene) compound according to DIN VDE 0207 Part 21. This cable is self-healing. This means that a module attached with the penetration technology (two turn pins penetrate into each other) cannot be loosened one without the other, if, e.g., their position was not selected correctly. It can be used further in the areas where the IP 67 is necessary. The slots remain visible, although they close again gas-tight.

Flat cable:

- Yellow cable for the communication and supply of the slaves

AS-i flat cable (rubber) for use in penetration technology for FK detection and lower parts.

#### Flat cable



#### Technical data

Order code	TNC-A4000
Minimum order quantity [m]	25
Materials	EPDM (Ethyl-propylen-diene-rubber) rubber mixture to DIN VDE 0207 part 21
Coating colour	traffic yellow
Protection class	IP67 in conjunction with FC lower parts
Conductor section [mm <sup>2</sup> ]	2 x 1.5
Wires colours	brown (AS-i+), blue (AS-i-)
Operating temperature [°C]	-30...+90
Characteristics	polarity safe through a special form
Application	AS-i cable

**Round cable**

In principle, each round cable can be used. As the only condition, it is to be noted that with smaller cross section of a line (approximately between 0,75 and 1.5 mm<sup>2</sup>), the voltage drop on the line may not be too large. A shielding is not necessary because of high data security, as well as with the flat cable.

**Connection technology****Flat cable-lower parts**

The flat cables are inserted in the flat cable lower parts of the slave. The special seals are formed in such a way that they only fit if they are correctly polarized. On the inside, they are inserted into a conductor container, which provides also the correct polarity. If an upper section is fitted in position and bolted, the conductor container is pressed downwards. Two contacting swords or thorns penetrate per each wire, by connecting the contact to the flat cable.

The upper sections are contacted through pins.

It must be noted that in unused cable outlets, which must replace the flat cable seal with a gasket, the module locks completely.

If this is omitted, the IP 67 is no longer provided.

These seals are contained in the lockers of the lower parts.

There are two different types of flat cable (FK)- lower parts:

- **The FK-lower part, TNC-A5010 part code (including the addressing socket) or the TNC-A5000 part code (without the addressing socket)**, to connect two cables. They can be used, e.g., as boxes. Here, only the yellow AS interface cable may be inserted. The conductor containers are yellow.
- **The FK-E-lower part, TNC-A5011 part code (including the addressing socket) or the TNC-A5003 part code (without the addressing socket)** is used for the external supply through the black flat cable. The container for the AS interface cable is yellow, the other is black.

**Round cable-lower parts**

The module lower part with PG fittings, the, **TNC-A5001 part code + accessories**, is used with the round cable. Here, it is prepared with c-clamps in the penetration technology position. A special seal allows to introduce the flat cable. This allows the implementation of a conversion from flat cables to round cables.

**Boxes**

To manufacture the boxes, it is possible to use traditional distribution doses with an appropriate clamping technique.

However, if the AS-i flat cable is used, it is recommended to use the appropriate flat cable boxes, because they allow to use the advantages of the simple and permutation-safe wiring.

A normal FK-lower part, the, **TNC-A5000 order code**, can be used as a box. For this, it is locked with a special cover, the **TNC-A3000 order code**. **The order code for the set is TNC-Z0044.**

**The maximum current load capacity must be taken into account !!!**

**It amounts to 2 A in standard FK-lower parts (TNC-A5000 +TNC-A3000) and in TNC-70200 8 A.**

**For further information, please contact our technical advisor.**