Connection as three-wire

The following information is addressed exclusively to technicians trained in electronic safety systems.
The Gx71xS-series inductive safety sensors fulfil the requirements of
PL d to ISO13849-1:2015 and SILcl 2 to IEC 62061:2013.

It is possible to connect these sensors to a safety controller using only three wires without compromising their safety characteristics. If connected in such a manner, potential faults such as short-circuits between any two connections must be prevented.

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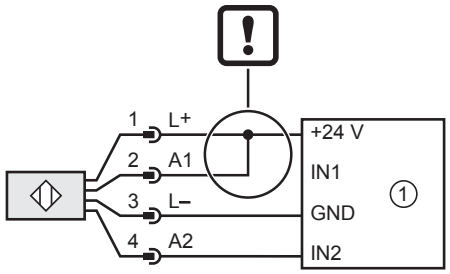
Such faults can be prevented with fixed and protected cabling. This can be achieved for example using cabling protected by cable ducting or armoured conduit. The requirements of IEC 60204-1 should also be adhered to.
Three-wire connection of protected cable should correspond to the following diagram:



1: Safety controller

▶ Connect A1 to the sensor's positive supply.

The protected cabling should prevent any potential short between A2 and the voltage supply as this cannot be detected by the safety controller.

⚠ WARNUNG

Possible lack of safety function when operated as three-wire device.

▶ the only output that can be used as the OSSD is A2.

▶ electrical connections must be permanently fixed and protected against damage.

Otherwise the safety function of the sensor is not guaranteed.

ifm cannot be held liable for any faults resulting from incorrect installation!

All other provisions of the relevant operating instructions remain valid to their fullest extent and must be followed.

All requirements of EN ISO 13849; EN 62061 must be applied to the whole safety function in order to ensure full compliance of the functional safety of any safety function.