
Type 8
Installation Instructions - 2 wire electrical connections
Document 102034 Revision 1

Prepared: GW Date: 20/07/18) Approved: GW Date: 20/07/18 Implemented: 20/07/18

Revision History:

Original release (14/11/15)

Revision 1 (20/07/18)

Certifications

1. IECEx 12.0034X

Description of Apparatus

A 2-wire Type 8 node has W2 in its model name e.g. "TYPE 8 NODE MODEL B2 P2 W2".

The 2-wire IS Isolated Signal cable originates at a 2-wire LNC (currently Part No.s 900127,900148)

Pair#1 is used to supply power and data communications to the node.

Conditions of Safe Use

1. The Type 8 Node Model B1 modules are to be mounted in a suitable enclosure that protects the encapsulation from damage and offers a degree of protection not less than IP20.
2. The Type 8 Node Model B2 modules external connections to the integral cables are to be installed in a suitable enclosure terminated in a manner that provides a degree of protection of not less than IP55.
3. The Type 8 Node Model B2 may be fitted with an integral cable for external sense and capacitance connections. This cable may be extended provided the cable capacitance and inductance does not exceed 2 μ F and 10mH respectively.
4. The Type 8 Node Model B2 will be fitted with an integral cable for IS Pwr/Data. This cable may be extended provided the cable capacitance and inductance does not exceed 5nF and 20uH respectively.
5. The Type 8 Node Models B1 and B2 may be fitted with an integral cable for the connection of a remote LED. This cable may be extended provided the cable capacitance and inductance does not exceed 2 μ F and 10mH respectively.

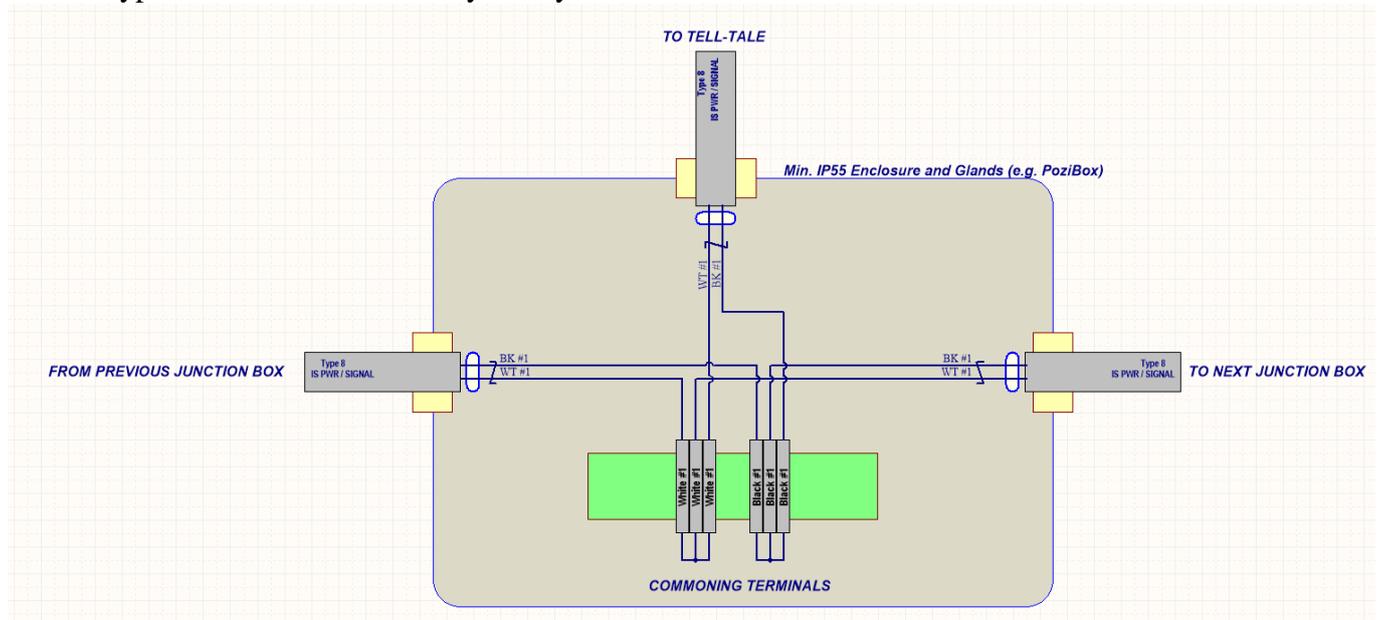
Prior to connection

At the location where the connection is to take place, cut and strip the insulation from the wire pairs. While the LDC is switched on measure the voltage across pair#1 with a mines approved intrinsically safe voltmeter. This should be at least 6V and less than 12.6V. It will pulse down close to 0V when data communication is taking place and steady at greater than 6V when not communicating. The scan period could be a significant (e.g. hours) so the Type 8's are unlikely to be seen communicating. If the voltage is always less than 6V then there are too many Type 8 nodes on the LNC so terminate the cable to at least IP55 leaving the individual wires unconnected and insulated with electrical tape.

If the steady state (between messages) voltage on the wire pair is within the range of 6V to 12.6V then it is OK to proceed to connecting the new Type 8 node.

Node Connection

The following excerpt from dwg. 102035 shows how a 2-wire Type 8 node is connected in daisy-chain fashion using junction boxes to provide Min. IP55 protection. The drawing shows a branch to a Tell-tale 2-wire Type 8 node but could be any 3-way branch in the cable:



The connections may also be done using the part no. 900132 or 900155 or 900174 3-Way 1-pair Sealed IS Cable Joiners shown below:



The installation procedure is detailed in document no. 101153R02 (3-Way IS Cable Joiner - Installation Procedure).docx.

Check Connection

After the new Type 8 node is connected measure the voltage on the wire pairs. If the steady-state voltages on the wire pair is within the range of 6V to 12.6V then it is OK to proceed to the next Type 8 connection.

If using the 3-Way 1-pair IS Cable Joiners you can measure the voltage by inserting the multimeter probes into the unused outgoing CoolSplice™ connectors (after popping up the sealing button).

If the voltage on the wire pair is close to zero then check for shorts – if no external shorts present then the Type 8 node is faulty and should be removed.

If the voltages are greater than zero but less than 6V then this Type 8 node is overloading the system and should be removed.