

Junction Box for wiring GMP343 probes

The junction box is a simple to use tool that reduces the number of cables of several GMP343 probes to one cable. A maximum of five GMP343 probes within the measurement area can be connected to the junction box and wired with one cable to the control unit., e.g. a PC or a PLC.



Fig.1: Junction Box

The junction box provides an 8-joint connection bar. It contains of two PG9 cable bushings for incoming and outgoing cable.



Fig.2: 8-joint connection bar

The housing is made of polycarbonate and has an IP66 protection class. It can be operated at temperatures between -40° and 120°C.

Inside the junction box all probes are connected in parallel. To differentiate between the readings of each probe, it is necessary to assign each probe an individual address. Therefore the RS485 output is the appropriate alternative.

How to connect a GMP343 probe to the junction box?

1. The communication hardware has to be adjusted first into the RS485 mode using the **RSMODE** command (see GMP343 manual).
2. A transmitter address has to be assigned by using the **ADDR** command (see GMP343 manual).
3. When GMP343 probes are operated in a 2-wire RS485 mode, they can be connected to the junction box according to the following scheme.

- all Tx wires together; pin 1_White or pin 2_Brown; RS485: A(+)
- all Rx wires together; pin 3_Green or pin 7_Blue; RS485: B(-)
- all Supply GND wires together (pin 5_Grey) for powering the probes
- all Supply +10...36 V DC wires together (pin 6_Pink) for powering the probes

Table 1: Wire configuration

Pin	Wire	Serial signal (2- Wire RS485 interface)	Analog signal
1	White	RS485: A(+)	-
2	Brown	RS485: A(+)	-
3	Green	RS485: B(-)	-
4	Yellow	-	Signal +
5	Grey	Supply GND	Supply GND
6	Pink	+11...36 V DC	+11...36 V DC
7	Blue	RS485: B(-)	-
8	Shield	-	Signal GND