

► Sensors



Sensors - Information

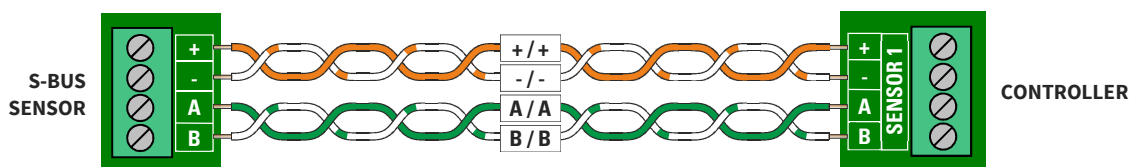
Spagnol Sensors are divided in two categories based on the electrical signal used:

S-BUS The communication between sensor and controller takes place digitally. A single sensor can therefore transmit several measurements (eg: EC / pH / water temperature) See below for the selection of the type of cable to be used with this type of sensors.



Contact The signal is transmitted to the controller in the traditional way. .

Each Spagnol controller-equipped product has a certain base number of both **S-BUS** and **contact** inputs that can be increased with the addition of expansion boards.

S-BUS SENSORS:



different kinds of cables can be used to connect an S-BUS sensor:

Cable kind		
1	Standard 4 wires unshielded cable	 ATTENTION Maximum wire section: 1 mm ² (17 AWG)
2	UTP cable CAT5	Use ONLY conduit-suitable or direct-buried versions.
3	STP cable CAT5	
		 ATTENTION DO NOT USE COMMON OFFICE UTP CABLES; they are not suitable for harsh environment or outdoor application.

The kind of cable to use depends on the cable length and on the presence of other power cables in the same pipeline of sensor cable.

S-BUS CABLE SELECTION TABLE:

Cable length	In the same pipeline with power cable	Cable kind to use
less than 100m	-	1, 2 or 3.
from 100m to 500m	No	2
	Yes	3

CONTACT SENSORS:



The number of wires needed is specified on sensor's page.



ATTENTION

Maximum wire section: 1 mm² (17 AWG)

CLIMATIC SENSORS:

	Code		Signal type	
			S-BUS	Contact
	303001001	<p>Electronic temperature and humidity sensor in environmental protection.</p> <ul style="list-style-type: none"> • Supplied with interface box. • Cable length: 4 m. • Temperature range: -20°C ÷ +50°C (-4°F ÷ 122°F) • Humidity range: 10% ÷ 98% • Ingress protection: IP53 (NEMA 3) • Cable ingress: PG11 	✓	
	303001002	<p>Electronic temperature and humidity sensor in ventilated box.</p> <ul style="list-style-type: none"> • Temperature range: -20°C ÷ +50°C (-4°F ÷ 122°F) • Humidity range: 10% ÷ 98% • Ingress protection: IP53 (NEMA 3) • Cable ingress: PG13.5 	✓	
	303001003	<p>Dry bulb / wet bulb temperature and humidity sensor in ventilated box.</p> <ul style="list-style-type: none"> • Temperature range: -20°C ÷ +50°C (-4°F ÷ 122°F) • Humidity range: 10% ÷ 98% • Ingress protection: IP53 (NEMA 3) • Cable ingress: PG13.5 	✓	
	303001004	<p>CO2 sensor in ventilated box. NDIR measuring principle.</p> <ul style="list-style-type: none"> • CO2 measuring range: 0ppm ÷ 2000ppm • Ingress protection: IP53 (NEMA 3) • Cable ingress: PG13.5 	✓	