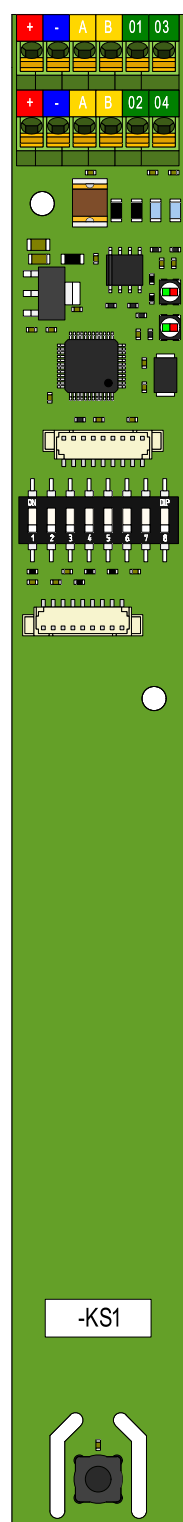


Image



Commercial data

Product code	20800420
Product description	Smartswitch 16-5100b[00] Sensor box
Packing unit	1
Weight	0.023[kg]
Custom tariff number	8537.10.91
Country of origin	NL (Netherlands)

Dimensions

Width	22.80 [mm]
Height	200.00 [mm]
Depth	14.00 [mm]

Standards and regulations

EMC	Conformance with EMC directive 2014/30/EU
RoHS	Conformance with RoHS directive 2011/65/EU
WEEE	Conformance with WEEE directive 2002/96/EC

Connection data

+	DC24V[+]	Power supply DC24V[+]
+	DC24V[+]	Power supply DC24V[+]
-	DC24V[-]	Power supply DC24V[-]
-	DC24V[-]	Power supply DC24V[-]
A	RS485[A]	Communication bus RS485[A]
A	RS485[A]	Communication bus RS485[A]
B	RS485[B]	Communication bus RS485[B]
B	RS485[B]	Communication bus RS485[B]
01	IN_A1	Input analog 1[MCO2]
02	IN_A2	Input analog 2[PAR]
03	GND	GND measurements [IN_A1], [IN_A2]
04	GND	GND measurements [IN_A1], [IN_A2]

Connection data, details

+	DC24V[+]	Terminal power supply DC24V of Smartswitch, polarity [PLUS]. The free [PLUS][+] terminal can be used to supply power to a continuous Smartswitch.
+		
-	DC24V[-]	Terminal power supply DC24V of Smartswitch, polarity [MIN]. The free [MIN][-] terminal can be used to supply power to a continuous Smartswitch.
-		
A	RS485[A]	Terminal RS485 communication bus, signal line [A].
A		
B	RS485[B]	Terminal RS485 communication bus, signal line [B].
B		

01	IN_A1	Analog input for the signal of a CO2 sensor. This input is auto-detect; at a measured signal > 4 [mA] automatically a CO2 measurement will be added to the sensor box.
03	GND	

02	IN_A2	Analog input for the signal of a PAR sensor. This input is auto-detect; at a measured signal > 4 [mA] automatically a PAR measurement will be added to the sensor box.
04	GND	

Ambient conditions

Degree of protection	IP20	
Ambient temperature (operation)	-10...50 [°C]	14...122 [°F]
Ambient temperature (storage/transport)	-20...50 [°C]	-4...122 [°F]
Permissible humidity (operation)	20...85 [%]	
Permissible humidity (storage/transport)	20...85 [%]	

Terminal data

Conductor cross section solid min.	0.2 [mm²]
Conductor cross section solid max.	1.5 [mm²]
Conductor cross section flexible min.	0.2 [mm²]
Conductor cross section flexible max.	1.5 [mm²]
Conductor cross section AWG min.	24
Conductor cross section AWG max.	15

Supply voltage

Power supply	DC24V
Current consumption typically	≤ 50 [mA], at DC24V, at 25 [°C]

Data interface

Interface 1	RS485
Connection method	Spring-cage connection
Transmission medium	2-wire Twisted-Pair + signal ground
Transmission length max.	1200 [m] 1
Transmission speed	115.2 [kBit/s]

Temperature input

Number of inputs	1
Measuring range input	4...20 [mA]
Measuring range CO2 concentration	-10...50 [°C]

Relative humidity input

Number of inputs	1
Measuring range input	4...20 [mA]
Measuring range CO2 concentration	0...100 [%]

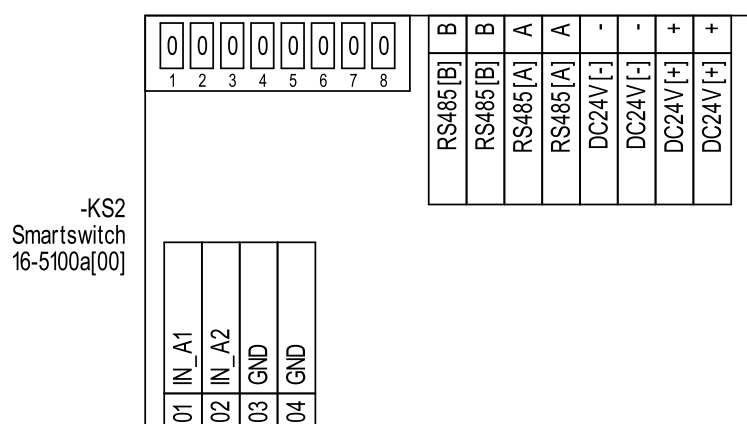
CO2 concentration input

Number of inputs	1
Measuring range input	4...20 [mA]
Measuring range CO2 concentration	0...2000 [ppm]

PAR input

Number of inputs	1
Measuring range input	4...20 [mA]
Measuring range PAR	0...3000 [µMol/m²/s]

Schematic



Notification

Location	LED status	Status Smartswitch control
PCB [1]	Green continuously	Smartswitch connection with touchscreen controller is active. Smartswitch control is inactive.
	Green blinking	Smartswitch connection with touchscreen controller is active. Smartswitch control is active. Smartswitch control alarm status is inactive.
	Red continuously	Smartswitch connection with touchscreen controller is inactive. Smartswitch control is inactive.
	Red blinking	Smartswitch connection with touchscreen controller is active. Smartswitch control is active. Smartswitch control alarm status is active.

Location	LED status	Status bus communication
PCB [2]	Green blinking	Smartswitch is receiving data over the bus [Rx].
	Red blinking	Smartswitch is transmitting data over the bus [Tx].

CO2 concentration sensor

Product code	21150602	
Product description	MCO2 series II 0-2000 PPM; 4...20mA	
[01] - IN_A1	[4] - Output I 4 ... 20 [mA]	Black
DC24V [+] (External PSU)	[1] - Power supply in [+]	Brown
[03] - GND and DC0V [-] (External PSU)	[3] - Power supply in [-]	Blue
-	[2] - Output RS485 or U	White
-	[5] - Output selection	Grey

PAR sensor

Product code	30503150	
Product description	Ridder PAR Sensor 0-3000µMol	
[02] - IN_A2	Output 4 ... 20 [mA]	White
DC24V [+] (External PSU)	Power supply in [+]	Red
[04] - GND and DC0V [-] (External PSU)	Power supply in [-]	Black
GND cabinet	Shield	Transparent

Remarks

1	Transmission length max.
<p>The transmission length max. (i.e. Maximum length of the RS485 BUS-cable in the installation) of 1200 [m], only applies when a suitable RS485 Bus-cable type is utilized in the installation.</p> <p>General specification for RS485 BUS-cable:</p> <ul style="list-style-type: none"> • Suitable for bus systems based on RS485, • Twisted pair(s), • Shielded, • Characteristic impedance 120 [Ohm]. <p>Recommended cable types:</p> <ul style="list-style-type: none"> 32002810 Buskabel UNITRONIC BUS LD 2x2x0.22 100 [m] 32002811 Buskabel UNITRONIC BUS LD 2x2x0.22 300 [m] 32002812 Buskabel UNITRONIC BUS LD 2x2x0.22 500 [m] 32002820 Buskabel UNITRONIC BUS LD 3x2x0.22 100 [m] 	