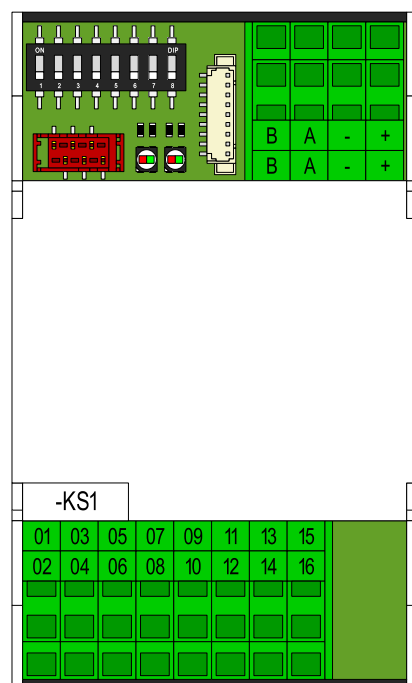


Image



Commercial data

Product code	20800450
Product description	Smartswitch 55-9225b[00]_0 Sensor box analogue inputs
Packing unit	1
Weight	0.099 [kg]
Custom tariff number	8537.10.91
Country of origin	NL (Netherlands)

Dimensions

Width	53.60 [mm]
Height	89.60 [mm]
Depth	62.20 [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_U1	Input analog 1 [TEMP]
02	GND	GND measurements [IN_U1]
03	IN_U2	Input analog 2 [RH]
04	GND	GND measurements [IN_U2]
05	IN_U3	Input analog 3 [CO2]
06	GND	GND measurements [IN_U3]
07	IN_U4	Input analog 4 [PAR]
08	GND	GND measurements [IN_U4]
09	IN_U5	Not available
10	IN_P1	Not available
11	IN_U6	Not available
12	GND	Not available
13	IN_U7	Not available
14	IN_P2	Not available
15	IN_U8	Not available
16	GND	Not available

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_U1	Analog input for the signal of an active temperature sensor. Range: 4...20 [mA] corresponds with -10...50 [°C].
02		

03	IN_U2	Analog input for the signal of an active relative humidity sensor. Range: 4...20 [mA] corresponds with 0...100 [%].
04		

05	IN_U3	Analog input for the signal of an active CO2 sensor. This input is auto-detect; at a measured signal > 4 [mA] automatically a CO2 measurement will be added to the sensor box. Range: 4...20 [mA] corresponds with 0...2000 [ppm].
06		

07	IN_U4	Analog input for the signal of an active PAR sensor. This input is auto-detect; at a measured signal > 4 [mA] automatically a PAR measurement will be added to the sensor box. Range: 4...20 [mA] corresponds with 0...3000 [µmol/m²/s].
08		



Project file:	20800450DSH010 Smartswitch 55-9225b[00]_0 Sensor box analogue inputs	Page initial date:	01/04/2023	Page:	1
Project number:		Project initial date:	01/04/2023	Page designed by:	MBL
URL:	http://www.Ridder.com	Project designed by:	MBL	Page revision date:	
Document number:	20800450DSH010	Project status:	[As Build]	Page revision:	

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.	2.5 [mm²]
Conductor cross section flexible min.	0.2 [mm²]
Conductor cross section flexible max.	2.5 [mm²]
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14

General

Mounting type	DIN rail mounting according to EN 60715
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Supply power

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]

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	
[05] - IN_U3	[4] - Output I 4...20 [mA]	Black
DC24V [+] (External PSU)	[1] - Power supply in [+]	Brown
[06] - 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 0-3000 [µmol/m²/s]	
[07] - IN_U4	Output 4...20 [mA]	White
DC24V [+] (External PSU)	Power supply in [+]	Red
[08] - GND and DC0V [-] (External PSU)	Power supply in [-]	Black
GND cabinet	Shield	Transparent

Remarks

1	Transmission length max.
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.	
General specification for RS485 BUS-cable:	
<ul style="list-style-type: none"> • Suitable for bus systems based on RS485, • Twisted pair (s), • Shielded, • Characteristic impedance 120 [Ohm]. 	
Recommended cable types:	
32002801 UNITRONIC BUS LD 1x2x0.22	
32002802 UNITRONIC BUS LD 2x2x0.22	
32002803 UNITRONIC BUS LD 3x2x0.22	

Schematic

