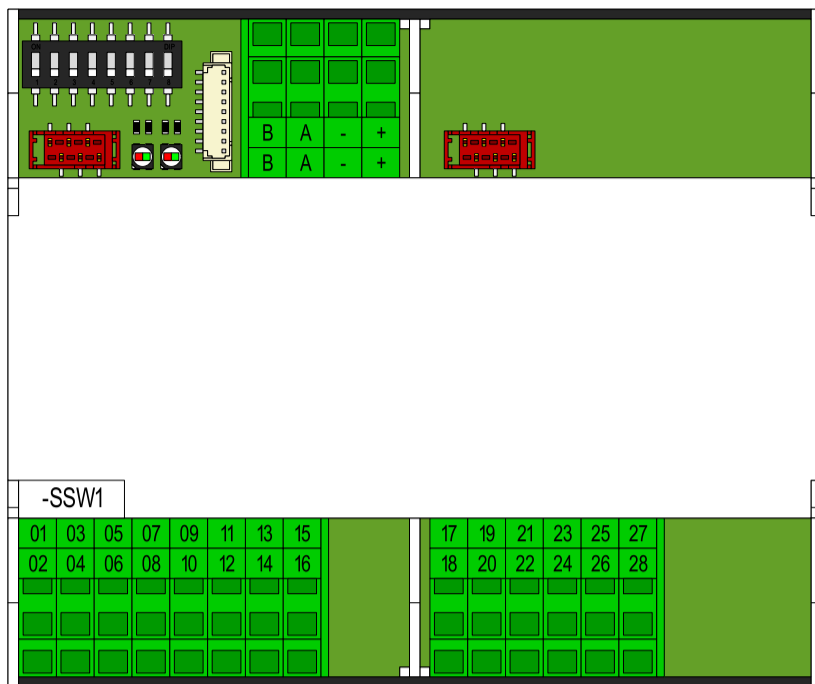


Image



Smartswitch
42-5102d[00]_00
20801511

Commercial data

Product code	20801511
Product description	Smartswitch 42-5102d[00]_00 EC concentration pulse volume
Packing unit	1
Weight	0.166 [kg]
Custom tariff number	8537.10.91
Country of origin	NL (Netherlands)

Dimensions

Width	107.60 [mm]
Height	89.60 [mm]
Depth	82.50 [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	NA	Not available
02	NA	Not available
03	NA	Not available
04	NA	Not available
05	IN_P	Input pulse
06	NA	Not available
07	DC24V	DC24V [+] [common FET outputs]
08	DC24V	DC24V [+] [common FET outputs]
09	OUT_D3	Output FET 3
10	OUT_D1	Output FET 1
11	OUT_D4	Output FET 4
12	OUT_D2	Output FET 2
13	NA	Not available
14	GND	GND measurements [IN_P], [IN_D1], [IN_D2]
15	NA	Not available
16	NA	Not available

17	R_B2	Input temperature B2 [high]
18	R_B1	Input temperature B1 [high]
19	R_A2	Input temperature A2 [low]
20	R_A1	Input temperature A1 [low]
21	EC_A2	Input EC A2
22	EC_A1	Input EC A1
23	EC_B2	Input EC B2
24	EC_B1	Input EC B1

25	OUT_D7	Output FET 7
26	OUT_D5	Output FET 5
27	OUT_D8	Output FET 8
28	OUT_D6	Output FET 6

17	R_B2	Analog input for the signal of the temperature sensor of EC sensor 2.
19	R_A2	
21	EC_A2	Analog input for the signal of the conduction element of EC sensor 2.
23	EC_B2	

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		

07	DC24V	Field Effect Transistor [FET] for switching the power stage of a fertilizer dosing valve, dosing valve 1. The output switches to GND.
08		
10		

07	DC24V	Field Effect Transistor [FET] for switching the power stage of a fertilizer dosing valve, dosing valve 2. The output switches to GND.
08		
12		

07	DC24V	Field Effect Transistor [FET] for switching the power stage of a fertilizer dosing valve, dosing valve 3. The output switches to GND.
08		
9		

07	DC24V	Field Effect Transistor [FET] for switching the power stage of a fertilizer dosing valve, dosing valve 4. The output switches to GND.
08		
11		

07	DC24V	Field Effect Transistor [FET] for switching the power stage of a fertilizer dosing valve, dosing valve 5. The output switches to GND.
08		
26		

07	DC24V	Field Effect Transistor [FET] for switching the power stage of a fertilizer dosing valve, dosing valve 6. The output switches to GND.
08		
28		

07	DC24V	Field Effect Transistor [FET] for switching the power stage of a fertilizer dosing valve, dosing valve 7. The output switches to GND.
08		
25		

07	DC24V	Field Effect Transistor [FET] for switching the power stage of a fertilizer dosing valve, dosing valve 8. The output switches to GND.
08		
27		

05	IN_P	Pulse input for the signal of a volume sensor, that registers the shifted amount of fluid in the main pipe of a watersupply system.
14	GND	

18	R_B1	Analog input for the signal of the temperature sensor of EC sensor 1.
20	R_A1	
22	EC_A1	Analog input for the signal of the conduction element of EC sensor 1.
24	EC_B1	



Project name:	20801511DSH010 044 Smartswitch 42-5102d[00]_00 EC concentration pulse volume		
Product code:	20801511		
		Initial date:	01/01/2019
		Revision date:	01/01/2019
		Author:	MBL
		Page:	1 of 2

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 voltage

Power supply	DC24V
Current consumption typically	≤ 100 [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	500 [m]
Transmission speed	115.2 [kBit/s]

Pulse input

Number of inputs	1
Measuring range	0.0 ... 1000 [Hz]

Conductivity input

Number of inputs	2
Measuring range	0.0 ... 10.0 [mS]

FET output

Number of outputs	8
Switching function	Switches to GND
Switching current max.	100 [mA], at 24 [V], DC

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].

EC sensor

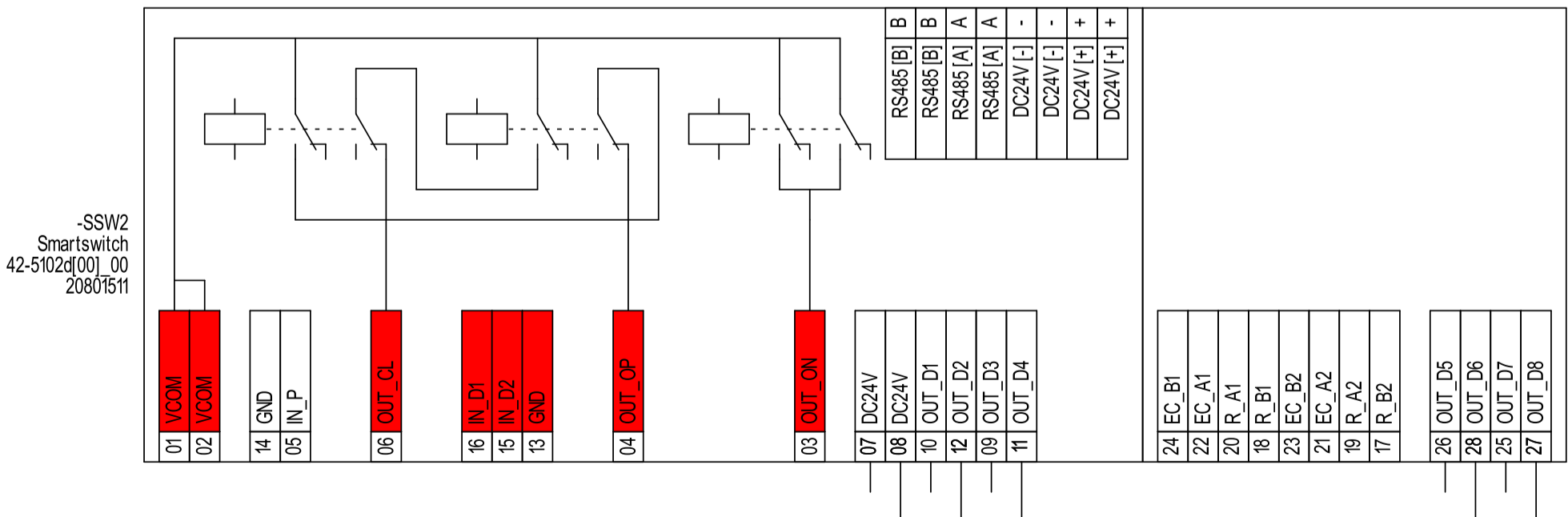
Product code	21250255	
Product description	EC-Sensor 4K7 NTC FertiMix Go!	
[24] - EC_B1	[1]	Brown
[22] - EC_A1	[2]	White
[20] - R_A1	[3]	Blue
[18] - R_B1	[4]	Black

Product code	21250255	
Product description	EC-Sensor 4K7 NTC FertiMix Go!	
[23] - EC_B2	[1]	Brown
[21] - EC_A2	[2]	White
[19] - R_A2	[3]	Blue
[17] - R_B2	[4]	Black

Volume sensor

Product code	30305321	
Product description	Watermeter Arad WST 3" puls 1:10 EV	
[05] - IN_P	[1]	?
[14] - GND	[2]	?

Schematic



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