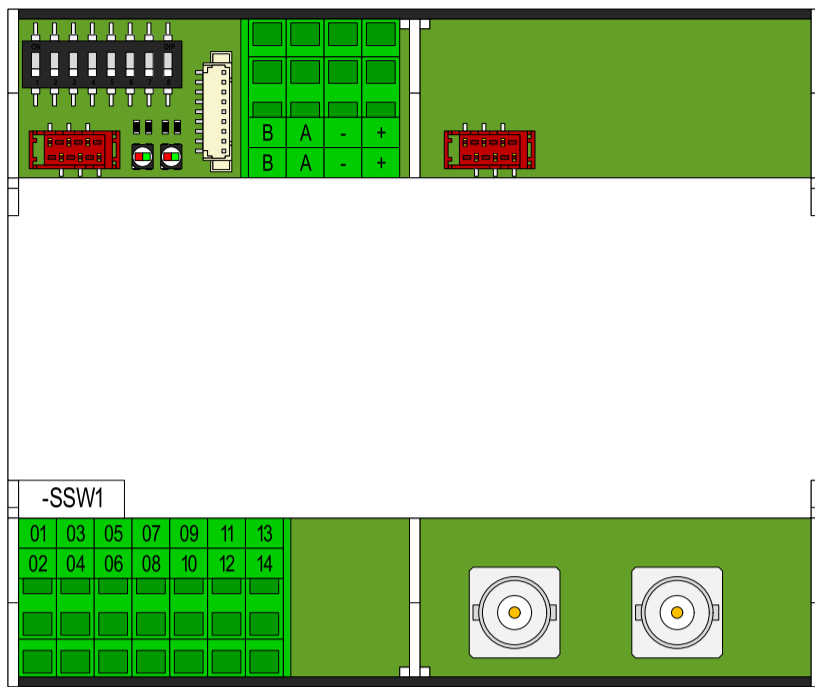


Image



Smartswitch
21-5091b[00]_00
20801610

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	NA	Not available
06	NA	Not available
07	DC24V	DC24V [+] [common FET outputs]
08	DC24V	DC24V [+] [common FET outputs]
09	NA	Not available
10	OUT_D1	Output FET 1
11	NA	Not available
12	NA	Not available
13	NA	Not available
14	NA	Not available

15	pH_1	Input pH 1
16	pH_2	Input pH 2

Commercial data

Product code	20801610
Product description	Smartswitch 21-5091b[00]_00 pH control pulse
Packing unit	1
Weight	0.154 [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, 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 an acid/lye dosing valve, dosing valve 1. The output switches to GND.
08		
10		

15	pH_1	Analog input for the signal of pH sensor 1.
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16	pH_1	Analog input for the signal of pH sensor 2.
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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]

Acidity input

Number of inputs	2
Measuring range	0.0 ... 10.0

FET output

Number of outputs	1
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].

pH sensor

Product code	04002010	
Product description	PHC pH sensor (0 -7 bar) BNC	
[15] - pH_1	BNC	Coax

Product code	04002010	
Product description	PHC pH sensor (0 -7 bar) BNC	
[16] - pH_1	BNC	Coax

Schematic

