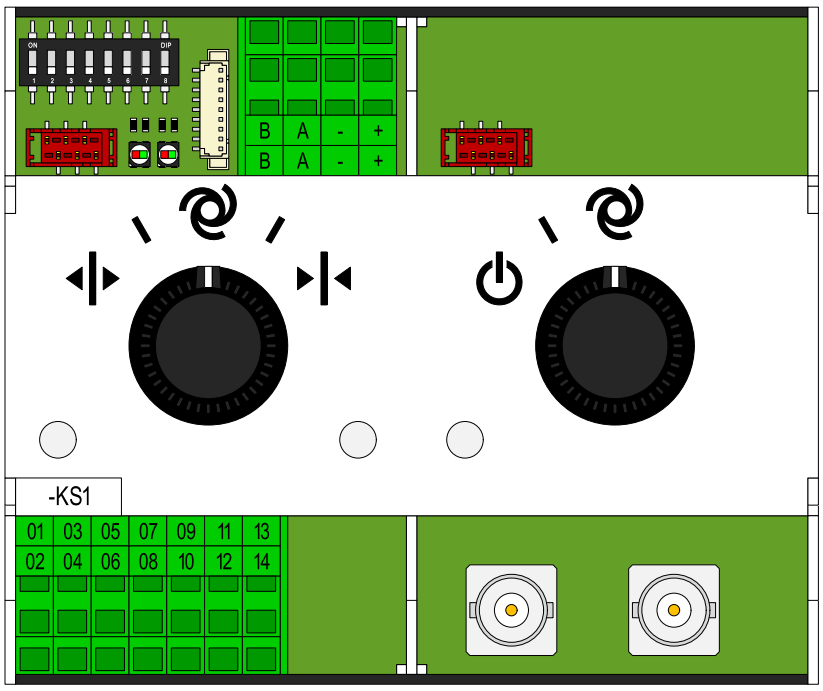
Image



Commercial data

Product code	20801620
Product desription	Smartswitch 29-5091b[00]_53 pH control servo flow
Packing unit	1
Weight	0.199 [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	Conformiteit met EMC richtlijn 2014/30/EU
RoHS	Conformiteit met RoHS richtlijn 2011/65/EU
WEEE	Conformiteit met WEEE richtlijn 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	VCOM	Common relay outputs
02	VCOM	Common relay outputs
03	OUT_ON	Outputr relay 1 [contactor device on]
04	OUT_OP	Output relay 2 [contactor device open]
05	IN_P	Input pulse
06	OUT_CL	Output relay 3 [contactor device close]
07	NA	Not available
08	NA	Not available
09	NA	Not available
10	NA	Not available
11	GND	GND measurements [IN_P], [IN_D1], [IN_D2]
12	GND	GND measurements [IN_P], [IN_D1], [IN_D2]
13	IN_D2	Input digital 2
14	IN_D1	Input digital 1

15	pH_1	Input pH1
16	NA	Not available

Connection data, details

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

01	VCOM	Terminal P-contacts of relays. Connect desired voltage type that has to be switched; DC24V [+], or AC24V [P].
02		

03	OUT_ON	Relay contact for switching the power stage of a H2O2 (hydrogen perioxide) dosing pump and an acid dosing pump. The relay contact switches what is provided on the terminal(s) [VCOM].

04	OUT_OP	Relay contact for switching the integrator input [UP] of an acid dosing pump. The relay contact switches what is provided on the terminal(s) [VCOM]. A higher position of the acid pump integrator has to result in a lower pH value.

06	OUT_CL	Relay contact for switching the integrator input [DOWN] of an acid dosing pump. The relay contact switches what is provided on the terminal(s) [VCOM]. A lower position of the acid pump integrator has to result in a higher pH value.

05	IN_P	Pulse input for the signal of a flow sensor, that registers the shifted amount of flued in the main pipe of a watersupply system.
11	GND	

14	IN_D1	Digital input for dry contact [NO], that when closed will initiate a start of the control.
12	GND	

13	IN_D2	Digital input for dry contact [NC], that when opened will initiate a stop of the control.
12	GND	

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

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

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 max.	1200 [m]	1
Transmission speed	115.2 [kBit/s]	

Pulse input

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

Acidity input

Number of inputs	1
Measuring range	0.0…10.0

Relay output

Number of outputs	3
Contact configuration	Normally open contact
Switching voltage max.	24 [V], AC/DC
Switching current max.	1 [A], bij 24 [V], AC/DC
Service life electrical	10^5 operations

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].

Location	LED status	Status decice control
Rotary switch [1]	Green continuously	The control [open] is currently active. The connected device is being opened.
Rotary switch [1]	Red continuously	The control [close] is currently active. The connected device is being closed.
Rotary switch [2]	Green continuously	The control [on] is currently active. The connected device is on.

pH sensor

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

Flow sensor

Product code	04004000	
Product description	F15 flowmeter P51530-P0	
[05] - IN_P	[1]	Red
[11] - GND	[2]	Black

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:
- Suitable for bus systems based on RS485,
- Twisted pair(s),
- Shielded,
- Characteristic impedance 120 [Ohm].

Recommended cable types:
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]

Schematic