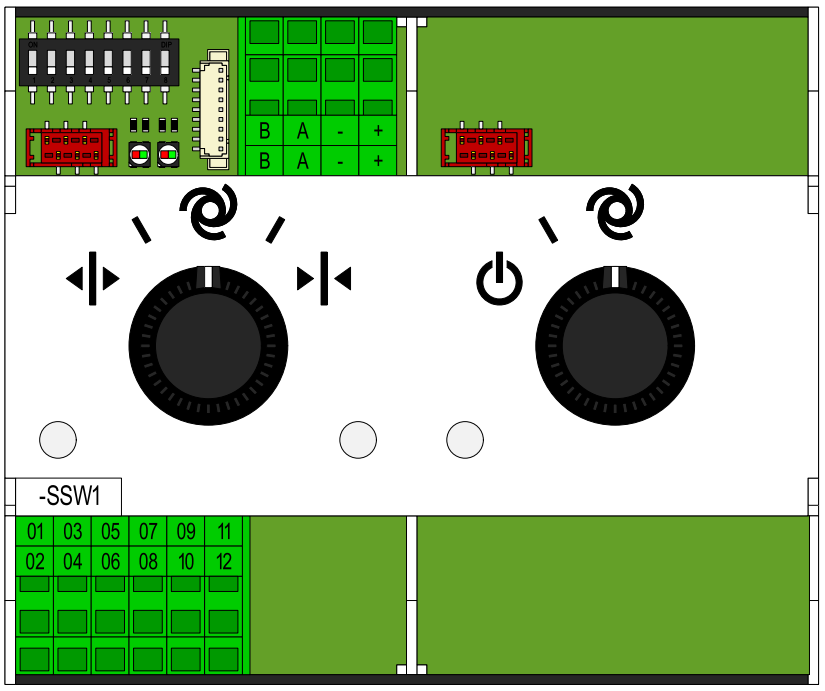
Image

Smartswitch
22-5111b[00]_53
20800100



Commercial data

Product code	20800100
Product description	Smartswitch 22-5111b[00]_53 Heating pipe
Packing unit	1
Weight	0.190 [kg]
Custom tariff number	8537.10.91
Country of origin	NL (Netherlands)

Dimensions

Witdth	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	VCOM	Common relay outputs
02	VCOM	Common relay outputs
03	OUT_ON [NO]	Output relay 1 [contactor device on] NO
04	OUT_ON [NC]	Output relay 1 [contactor device on] NC
05	OUT_OP	Output relay 2 [contactor device open]
06	OUT_CL	Output relay 3 [contactor device close]
07	IN_D1	Input digital 1
08	R_A1	Input temperature A1 [low]
09	NA	Not available
10	R_B1	Input temperature B1 [high]
11	GND	GND measurements [IN_D1], [IN_D2]
12	R_C1	Input temperature C1 [high] [compensation]

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 [NO]	Relay contact for switching the power stage of the circulation pump of a pipe heating circuit. The relay contact switches what is provided on the terminal(s) [VCOM]. The circulation pump is switched on by the control [NO].
04	OUT_ON [NC]	Relay contact for switching the power stage of the circulation pump of a pipe heating circuit. The relay contact switches what is provided on the terminal(s) [VCOM]. The circulation pump is switched off by the control [NC].
05	OUT_OP	Relay contact for switching the power stage [OPEN] of the mixing valve of a pipe heating circuit. The relay contact switches what is provided on the terminal(s) [VCOM]. Opening the mixing valve has to result in a higher pipe temperature.
06	OUT_CL	Relay contact for switching the power stage [CLOSE] of the mixing valve of a pipe heating circuit. The relay contact switches what is provided on the terminal(s) [VCOM]. Closing the mixing valve has to result in a lower pipe temperature.
08	R_A1	Analog input for pipe temperature sensor. Element = Pt1000. Connection [low].
10	R_B1	Analog input for pipe temperature sensor. Element = Pt1000. Connection [high].
12	R_C1	Analog input for pipe temperature sensor. Element = Pt1000. Connection [high] [compensation].

07	IN_D1	Digital input for dry contact [NC], that when opened will raise an alarm [PKZM] in the control. An alarm is raised, the control stays active. When not used interconnect [07] and [11].
11	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.	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	500 [m]
Transmission speed	115.2 [kBit/s]

Temperature input

Number of inputs	1
Measuring range	0.0 ... 130.0 [°C]

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.

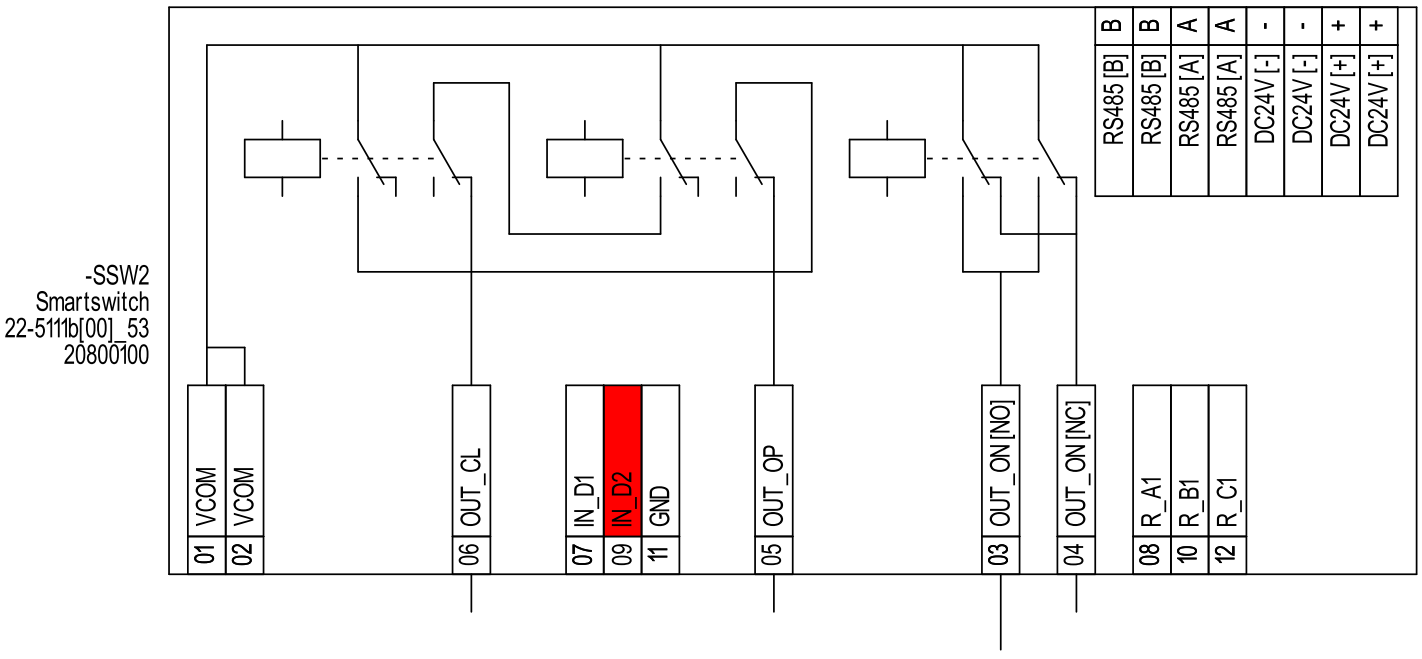
Location	LED status	Status bus communication
PCB [2]	Green blinking	Smartswitch is receiving data over the bus [Rx].
	Red blinking	Smartswitch is transmitting data over the bus [Tx].

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.

Pipe temperature sensor

Product code	30504095
Product description	MW80 IIA watertemperatuursensor
Temperature element	Pt1000
Cable length max.	25 [m]
Cable type	Afgeschermd

Schematic



RIDDER	Project name:	20800100DSH020 044 Smartswitch 22-5111b[00]_53 Heating pipe		
	Product code:	20800100		
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