

Extension Modules with Digital Input



SMR1P1-01-00-00-00_1

General Specifications :

- * 16 Digital Input (NPN / PNP)
- * Modbus RTU communication protocol with RS485
- * USB – Device (For device configuration)
- * Modular connection (up to 16 modules including itself)
- * Led indicators:
 - Power Supply, USB, RS-485
 - Active Digital Input led indicators

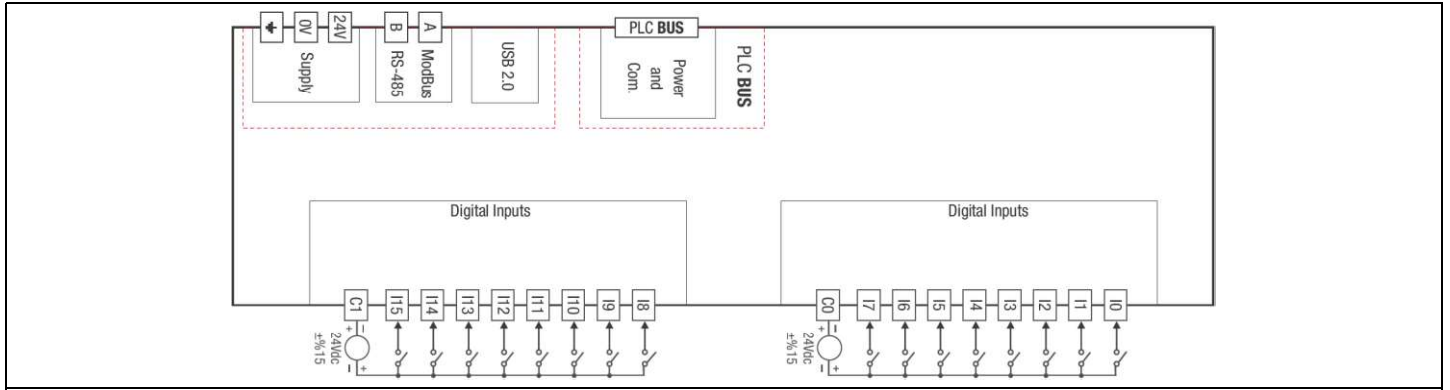
Technical Specifications

Module Type	SMR1P1-01-00-00-00
Supply Voltage	24 VDC \pm 20% (19,2 VDC - 28,8 VDC)
Power Consumption	1W
Communication	RS-485 Modbus RTU
USB Device	Mini USB, USB 2.0
Digital Inputs	
Number of Inputs	16
Type	NPN / PNP
Nominal Input Voltage	24 VDC
Active Level	Low Level < 7 VDC, High Level > 10 VDC
Input Resistance	> 5,9 k Ω
Maximum Current	6 mA
Response Time	20 μ sn
Detection Speed	Filter option between 1-500 msec
Led Indicators	
Power	Always ON if the power input is in working limits, flashes 0.1s when undervoltage detected Flashes 0.5s if the communication between Master and Slave module didn't start Flashes 1s if the communication between Master and Slave module broken Flashes 0.2s ON / 2s OFF if the device in Software Boot Mode
USB	Always ON if the USB cable plugged, flashes during data transfer
RS485	Flashes during Modbus data transfer
Digital Input	ON when input active, OFF otherwise
Çevresel Özellikler	
Operation Temp.	-10°...+60° C
Storage Temp.	-20°...+70° C
Isolation	* There is no isolation between Power, RS485 and USB * 1000 VAC between Digital Inputs and Power Input

Modbus Parameters Addresses

Address	R/W	Parameter Name	Definition	Default
Modbus Parameters				
40001	R/W	ID	Modbus ID can be set between 1 – 255	1
40002	R/W	Baud Rate (kbps)	0- 1200 3- 9600 6- 57600 1- 2400 4- 19200 7- 115200 2- 4800 5- 38400	6
40003	R/W	Stop Bit	0- 1 Bit 1- 2 Bit	0
40004	R/W	Parity	0- None 1- Even 2- Odd	0
Device Parameters				
40005	R	Reserved	In case of Master Mode, shows number of connected Slave Modules	-
40006	R	Type/Bus Order	b15-b8 : module types according to code : SMR1P1-01-00-00-00_1 = 0xA2 b7-b0 : module bus order : 0- Master module N- N'th Slave module in the bus (max. 15) 17- Single module (No other device on bus)	-
40007	R	Version	HW and SW versions displayed on a bitwise basis b15-b12 : Hardware Version b11-b6 : Software Major Version b5-b0 : Software Minor Version	-
40008	R/W	Error Status ²	Error status displayed on a bitwise basis b0 : Low Power Supply Voltage Level b1 : Analog Input could not read b2 : RS485 communication timeout error ¹ b8 : Error in slave module number ¹ b9 : Error in slave module type ¹ b10 : Error in communication between slave modules ¹ b15-b12 : The number of the Slave module in which the error was detected <i>Note-1 : Error bits are only valid for Master Module.</i> <i>Note-2 : In case of communication timeout error arises in Master Module, communication between slave modules interrupted. By writing 3083 to the relevant address, the error bit cleared and the communication started again.</i>	-
40009	R/W	Timeout Duration	Defined for Master Module. Range : (0 – 60sec)	3
Digital Input Parameters				
40011	R	Digital Inputs	Digital Inputs Status in bitwise notation. b15-b0 : I15 - I0 (0 : OFF, 1 : ON)	-
40012	R/W	I0 Filter Time	Value Range : (1 – 500ms)	50
40013		I1 Filter Time		
40014		I2 Filter Time		
40015		I3 Filter Time		
40016		I4 Filter Time		
40017		I5 Filter Time		
40018		I6 Filter Time		
40019		I7 Filter Time		
40020		I8 Filter Time		
40021		I9 Filter Time		
40022		I10 Filter Time		
40023		I11 Filter Time		
40024		I12 Filter Time		
40025		I13 Filter Time		
40026		I14 Filter Time		
40027	I15 Filter Time			

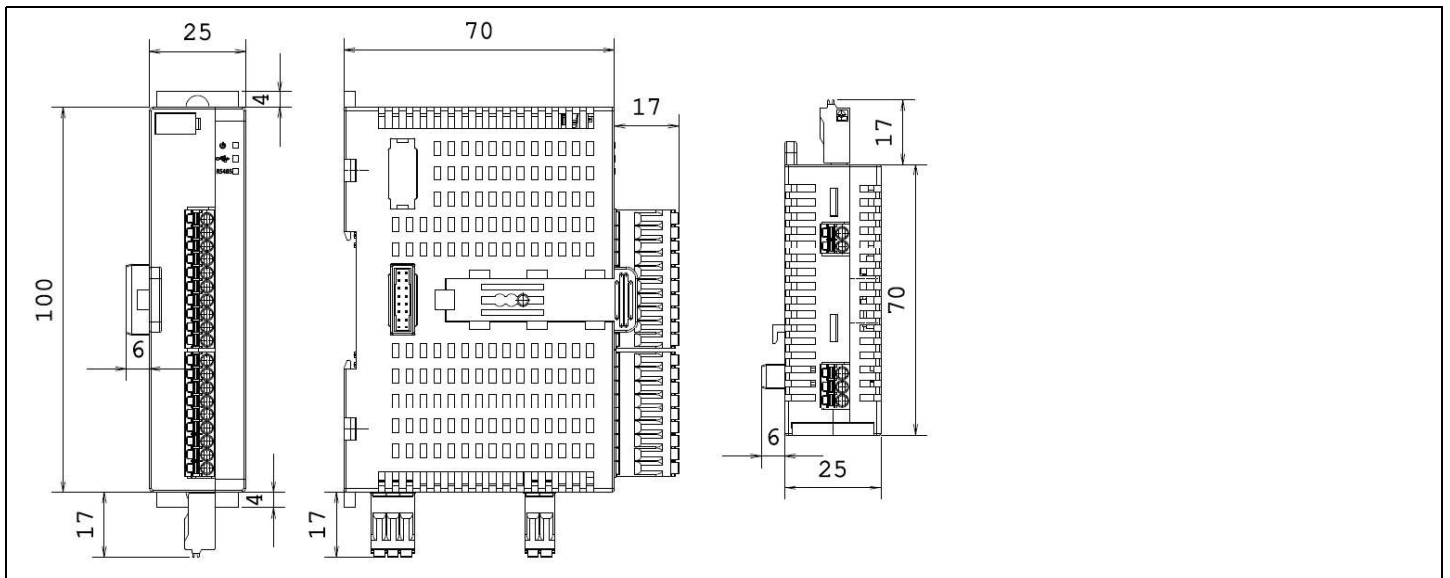
Installation & Wiring



* Do not connect AC Power to any I/O terminal, otherwise serious damage may occur in module. Please check all wiring prior to energizing device. In order to prevent electromagnetic interference, be sure the grounding made corrected. Connect ground terminal in the power input connector to the overall system ground. Don't touch any terminals after energizing the device, in case of need to touch any terminal, de-energize the device before connection.

* For RS485 communication connection; Connect the termination resistor (120R) between A&B terminal of the master module (located at the far left of the extension module group). In case of more than one extension module group, connect it between the A&B terminals of the master module (located at the far left of the extension module group) of the group at the end of the communication line. Use shielded and twisted-pair communication cable. Ground the shield connection of the cable to power input earth terminal.

Dimensions



Product Order Codes

Extension Modules with Digital Inputs	Digital Input	Analog Input	Digital Output	Analog Output	USB	RS485
SMR1P1-01-00-00-00_1	16 x NPN / PNP	-	-	-	+	+