

1 Device Identification area

To be consistent with Configuration data mismatch and System communication test display for SMS functionality, PM9C must provide the Schneider Electric identification Modbus area.

This area is structured as following:

@ word &FC86:	D15-D8	= Constructor identification
	D7-D0	= MSB of Equipment identification
@ word &FC87		= LSBs of Equipment identification (sale reference)
@ word &FC88		= Unused (reset to 0).
@ word &FC89		= Unused (reset to 0).
@ words &FC8A-&FC8B		= Firmware version

The detail of the values that the PM9C must return is described in the chapter "Table of Device Identification".

Read PM9C identification:

The "Read Device Identification" function is used to access in a standardized manner the information required to clearly identify a device.

The description is made up of a set of objects (ASCII character strings).

The subset of the function adapted to the PM9C is described in the chapter "Read Device Identification".

PM9C is a conformity level 2 device but it must be able to answer to basic, regular and extended identification requests.

Table of device identification

Decimal address	Hexa. address	Nb of words	Text	Unit
64646	FC86	1	D15-D8 = &01: Constructor identification D7-D0 = &00: MSB of equipment identification	-
64647	FC87	1	D15-D0 = &3B5E: LSB of equipment identification	-
64648	FC88	1	Unused (reset to 0)	-
64649	FC89	1	Unused (reset to 0)	-
64650 ⁽¹⁾	FC8A	1	MSB of firmware version Unused (reset to 0)	-
64651 ⁽¹⁾	FC8B	1	LSB of firmware version	-

Notes:

(1): The firmware version is in the LSB word only. The version is coded as a value "100" (decimal) for "1.00". "101" (decimal) will be used to code "1.01" etc

1.1 Read Device Identification: implementation

1.1.1 Request frame

The request frame is made of the following components:

Frame Field	Size (in bytes)	Description
Slave number	1	
43 (0x2B)	1	Generic access function code
14 (0x0E)	1	Read device identification
01, 02, 03 or 04	1	Type of read
00	1	Object number
CRC16	2	

The type of read is used to select a simplified (01) description, a standard (02) description, an extended (03) description.

The type (04) is used to select a specific object of the description but this type isn't supported by the PM9C.

1.1.2 Reply frame (generic form)

The reply frame is made of the following components:

<i>Frame Field</i>	<i>Size (in bytes)</i>	<i>Description</i>
Slave number	1	
43 (0x2B)	1	Generic access function code
14 (0x0E)	1	Read device identification
01, 02 or 03	1	Type of read
02	1	Conformity level (regular identification)
00	1	Continuation-frame flag (none for PM9C)
00	1	Reserved
N	1	Number of objects (according to read type)
Obj1	1	Number of first object
Lg1	1	Length first object
Txt1	lg1	ASCII string of first object
...	1	
Objn	1	Number of n th object
Lgn	1	Length of n th object
Txtn	lgn	ASCII string of n th object
CRC16	2	

1.1.3 Reply frame when the type of read requested is simplified (01)

The simplified description includes objects 0 to 2.

The reply frame is made of the following components:

<i>Frame Field</i>	<i>Size (in bytes)</i>	<i>Description</i>
Slave number	1	
43 (0x2B)	1	Generic access function code
14 (0x0E)	1	Read device identification
01	1	Type of read (simplified)
02	1	Conformity level (regular identification)
00	1	Continuation-frame flag (none for PM9C)
00	1	Reserved
3	1	Number of objects
0	1	Number of object 0
Lg0	1	Length of object 0
Txt0	Lg0	ASCII string of object 0
1	1	Number of object 1
Lg1	1	Length of object 1
Txt1	Lg1	ASCII string of object 1
2	1	Number of object 2
Lg2	1	Length of object 2
Txt2	Lg2	ASCII string of object 2
CRC16	2	

The value of each object is detailed in the "PM9C identification" table below.

1.1.4 Reply frame when the type of read requested is standard (02)

The standard description includes all objects.

The reply frame is made of the following components:

<i>Frame Field</i>	<i>Size (in bytes)</i>	<i>Description</i>
Slave number	1	
43 (0x2B)	1	Generic access function code
14 (0x0E)	1	Read device identification
02	1	Type of read (standard)
02	1	Conformity level (regular identification)
00	1	Continuation-frame flag (none for PM9C)
00	1	Reserved
5	1	Number of objects
0	1	Number of object 0
Lg0	1	Length of object 0
Txt0	Lg0	ASCII string of object 0
1	1	Number of object 1
Lg1	1	Length of object 1
Txt1	Lg1	ASCII string of object 1
2	1	Number of object 2
Lg2	1	Length of object 2
Txt2	Lg2	ASCII string of object 2
3	1	Number of object 3
Lg3	1	Length of object 3
Txt3	Lg3	ASCII string of object 3
4	1	Number of object 4
Lg4	1	Length of object 4
Txt4	Lg4	ASCII string of object 4
CRC16	2	

The value of each object is detailed in the "PM9C identification" table below.

1.1.5 Reply frame when the type of read requested is extended (03)

The extended description is the same than the standard for the PM9C. So it includes all objects.

The reply frame is made of the following components:

<i>Frame Field</i>	<i>Size (in bytes)</i>	<i>Description</i>
Slave number	1	
43 (0x2B)	1	Generic access function code
14 (0x0E)	1	Read device identification
03	1	Type of read (extended)
02	1	Conformity level (regular identification)
00	1	Continuation-frame flag (none for PM9C)
00	1	Reserved
5	1	Number of objects
0	1	Number of object 0
Lg0	1	Length of object 0
Txt0	Lg0	ASCII string of object 0
1	1	Number of object 1
Lg1	1	Length of object 1
Txt1	Lg1	ASCII string of object 1
2	1	Number of object 2
Lg2	1	Length of object 2
Txt2	Lg2	ASCII string of object 2
3	1	Number of object 3
Lg3	1	Length of object 3
Txt3	Lg3	ASCII string of object 3
4	1	Number of object 4
Lg4	1	Length of object 4
Txt4	Lg4	ASCII string of object 4
CRC16	2	

The value of each object is detailed in the "PM9C identification" table below.

1.1.6 Exception frame

This frame is replied if the type of read in the request frame is "04" (specific object):

Frame Field	Size (in bytes)	Description
Slave number	1	
171 (0xAB)	1	Generic access exception (0x2B + 0x80)
14 (0x0E)	1	Read device identification
01	1	Error "Illegal Function"
CRC16	2	

1.1.7 PM9C identification

The objects making up the PM9C identification are listed below:

Object number	Type	Length	Text (ASCII string)
0	VendorName	12	"Merlin Gerin"
1	ProductCode	20	"(EAN13)3303430151982"
2	MajorMinorRevision	5	"Vx.yy" (Application version number) ⁽¹⁾
3	VendorURL	26	"www.schneider-electric.com"
4	ProductName	4	"PM9C"

Note:

⁽¹⁾: The version number "x.yy" is formatted as described for the register 0xFC8B (LSB of the firmware version). (e.g. if the firmware version is "1.00", value in register 0xFC8B is "100" and value in object 2 is "V1.00").