

VM15

Multinet parameter

Installer manual
VM15 – Multinet parameter

9UMEN1508-1200
Release: 180505

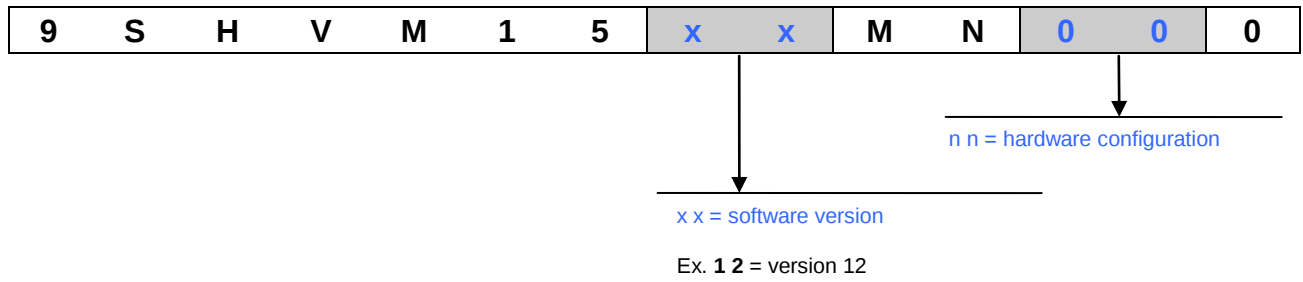
VM15 Multinet parameter

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1. Interface cards

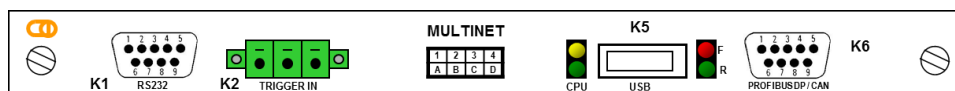
1.1. Multinet [type MN]

1.1.1. Part number

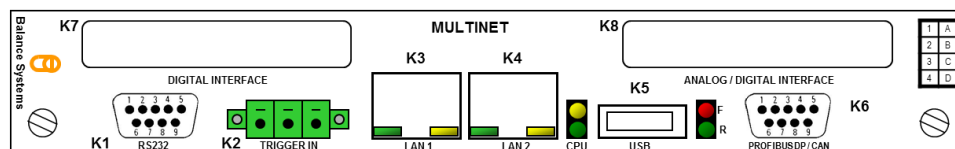


Connections and auxiliary functions depend on the hardware configuration.

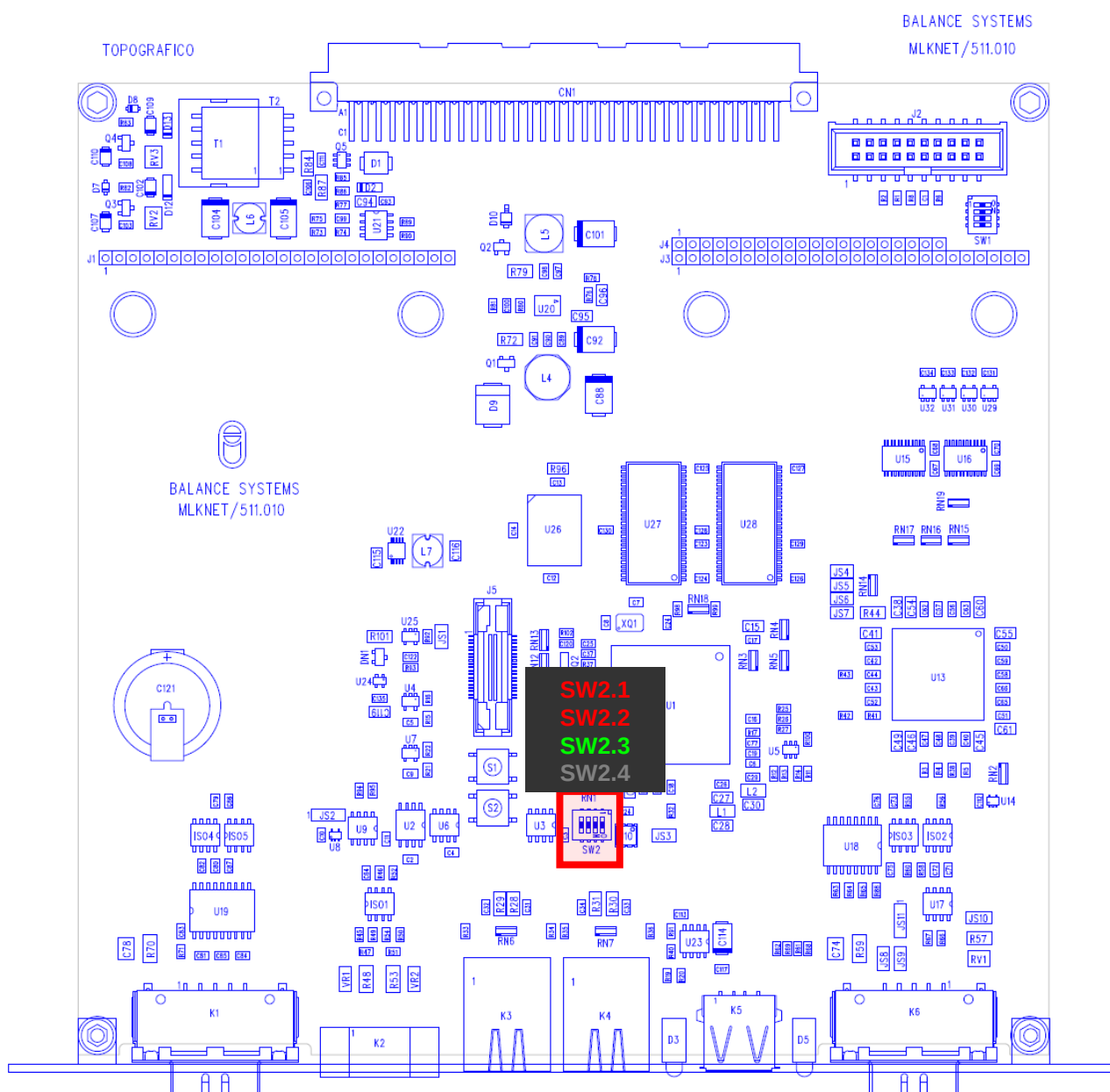
1.1.2. Card layout and topographic scheme



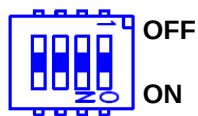
p/n 9SHVM15xxMN000



p/n 9SHVM15xxMN020



1.1.3. Hardware setup

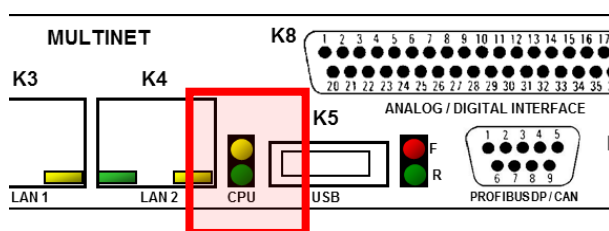


In the table below are highlighted the factory presets.

Card address	SW2.1	SW2.2
Multinet 1	Off	Off

Fieldbus configuration	Off	On
SW 2.3	Profibus DP	Profinet

1.1.4. Hardware diagnostic



CPU
Yellow led: FAULT
Green led: RUN

1.1.5. Firmware upgrade

The firmware upgrade is possible by using an USB pen-drive connected to the USB port (connector K5).

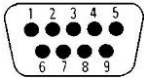
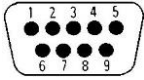
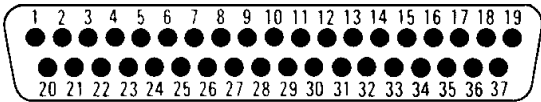
Preliminary steps:

- Check that the following files are present on the root of the USB pen-drive. Other files can be present or not depending on the software release.
 - Boot.inf
 - MN_01.bin
 - Multi.inf

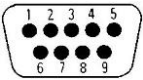
Procedure:

- Power off the VM15;
- Plug in the USB pen-drive into the USB port (connector K5) on the back side of the multinet card;
- Power on the VM15;
- The firmware on Multinet card will be automatically updated to the newer version;
- At the end of the process the VM15 restarts automatically for normal operation;

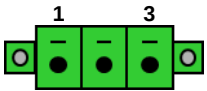
1.1.6. Connectors

Multinet [type MN]			
Type	ID	Name	Description
 D-Sub 9 pole female	K1	RS232	SERIAL RS232 INTERFACE
 Phoenix 3 pin	K2	TRIGGER IN	HARDWARE TRIGGER INPUT
 RJ45 female	K3	LAN 1	Ethernet port No.1 - Profinet
 RJ45 female	K4	LAN 2	Ethernet port No.2 - Profinet
 USB device	K5	USB	USB 1.1 host port
 D-Sub 9 pole female	K6	PROFIBUS DP	PROFIBUS DP INTERFACE
 D-Sub 37 pole male	K7	DGT I/O	DIGITAL INTERFACE

1.1.7. RS232 Serial Interface [connector K1]

Connector K1 D-Sub 9 pole female		
		
PIN	Name	Description
1	Earth	Earth
2	TX	Data transmission
3	RX	Data receiving
4	RTS	Request to send
5	CTS	Clear to send
6	--	N.C.
7	GND	Ground
8	--	N.C.
9	--	N.C.

1.1.8. Trigger input [connector K2]

Connector K2 Type Phoenix 3 pin – MC 1,5/13-GF-3,5 THT		
		
PIN	Name	Description
1	+24 Vdc	Power supply, 24Vdc
2	Input	Digital input
3	GND	Power supply, ground

1.1.9. Profinet Interface [connectors K3 / K4]

Connectors K3 / K4 on RJ45 female

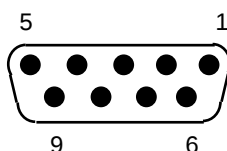


For all the details regarding Profinet application, see the document VM15 Profibus DP - Profinet on MULTINET card.

1.1.10. Profibus DP Interface [connector K6]

Connector K6 D-Sub 9 pole female

Red led: FAULT
Green led: RUN



PIN	Signal
See EN 50170-2-2	

PIN	Name	Description
1	--	N.C.
2	--	N.C.
3	B-Line	Positive Rx/TxD
4	RTS	Request to send (*)
5	GND Bus	Isolated GND (*)
6	+ 5V Bus	Isolated 5V (*)
7	--	N.C.
8	A-Line	Negative Rx/TxD
9	--	N.C.

(*) Not used.

For all the details regarding Profinet application, see the document VM15 Profibus DP - Profinet on MULTINET card.

2. Multinet [type MN] parameter tree



OPTION

Fieldbus
K7 connector
K8 connector
BSLink baudrate
Master mode
Hardware version *(read only)*



WORK

No working parameter



SETUP

FIELDBUS APPLICATION

Fieldbus Hw configuration
Slave address
Data block PLC to VM15
Data block VM15 to PLC

	Device	No.	Config	Monitor	Enable
SLOT 1					
SLOT 2					
SLOT 3					
SLOT 4					
SLOT 5					

See documentation supplied with Profibus/Profinet system

K1 connector: SERIAL PORT

Baudrate
Data bit
Stop bit
Parity
Flow control *(read only)*

3. Multinet [type MN] parameter setup

3.1. Option

ID	Parameter	Description
	Fieldbus [OFF]	The Multinet supports the following fieldbus type: OFF: No fieldbus ###: ON: Profibus DP or Profinet RT device I/O. The type of fieldbus is defined by dip switch 2.3 on the Multinet card (see section 1)
	K7 connector [OFF]	Use of the digital I/O interface on connector K7 OFF: Interface not used
	K8 connector [OFF]	Use of the digital I/O interface on connector K8 OFF: Interface not used
	BSLink baudrate [bps] [9600]	Internal bus communication speed.
	Master mode [OFF]	Enable to work as master on VM15 internal bus. OFF: The default master is the VM15 panel or HMI. The multinet card is a slave. The multinet card becomes master when at the start-up the default master is absent. ON: The multinet card becomes the master when needed.
	Hardware version (read only)	

3.2. Setup

3.2.1. FIELDBUS APPLICATION

3.2.1.1. Profibus DP application

See documentation supplied with Profibus DP system: VM15 Profibus DP - Profinet on MULTINET card.

3.2.1.2. Profinet application

See documentation supplied with Profinet system: VM15 Profibus DP - Profinet on MULTINET card.

3.2.2. K1 connector: Serial port

ID	Parameter	Description
	Baud rate [9600]	Indicates the data transfer speed on the serial channel (4800 / 9600 / 19200 / 38400)
	Data bit [7]	Indicates how many bits make up the data being transferred (7 or 8 bits)
	Stop bit [1]	Indicates how many bits make up the stop sequence (1 or 2 bits)
	Parity [OFF]	Indicates the type of parity control carried out on the transferred data (OFF / EVEN / ODD)
	Flow control (read only)	Indicates what type of transfer control must be used (HARDWARE)

4. Appendix

Documents referred to in the text	
Name document	Link
VM15 Profibus-Profinet Signals interface	9UMEN1509-1200 yymmdd VM15 Profibus-Profinet Signals interface
VM15 Profibus-Profinet on MN card	9UMEN1503-1200 yymmdd VM15 Profibus-Profinet on MN card