VMx5

VM link installer

Installer manual
VMx5 – VM link installer

9UMENX523-1200
Release: 210503

VMx5 – VM link installer

1. VMx5 VM link

1.1. Introduction

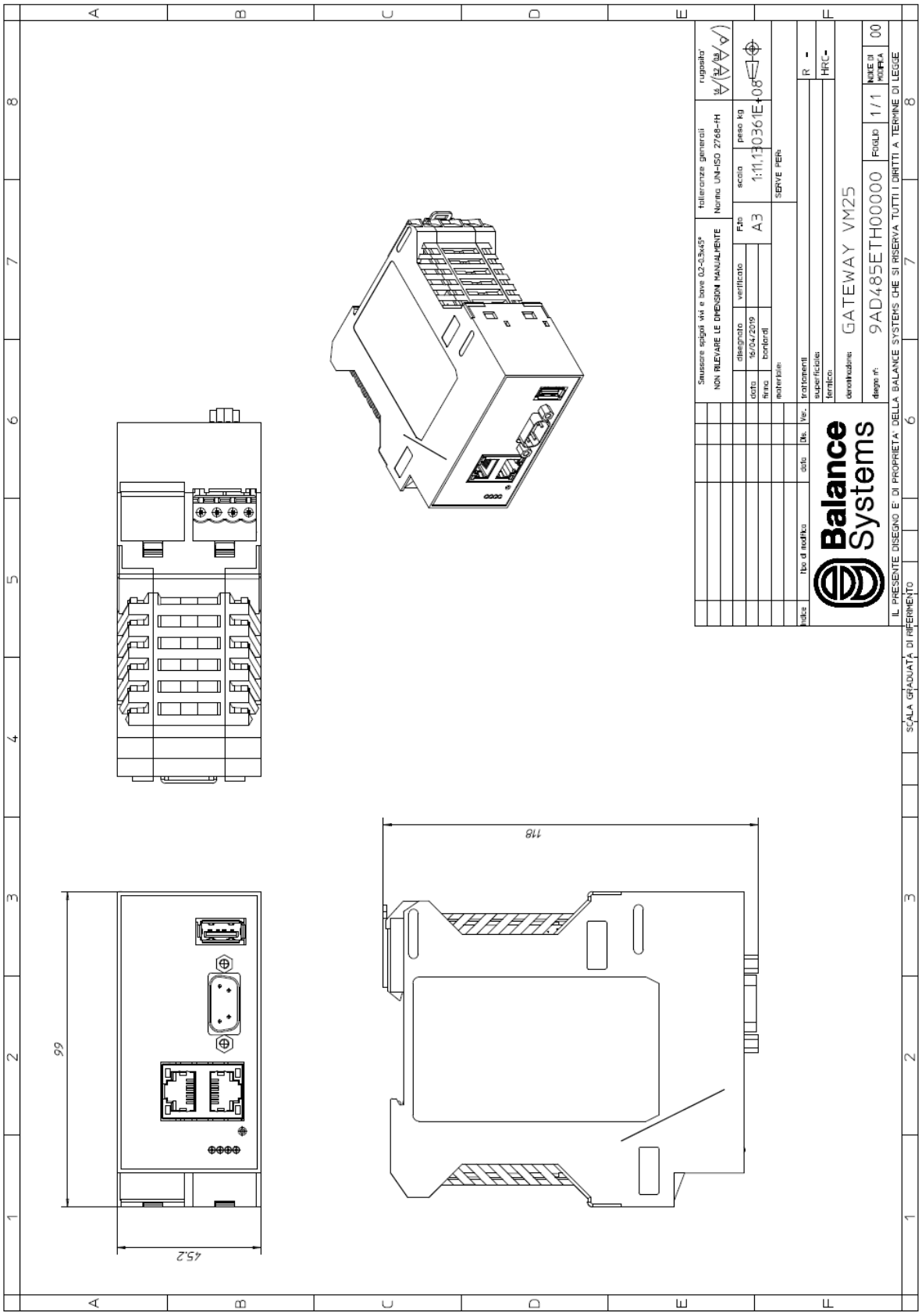
The VMx5 VM link is the device which allows TCP/IP connection between VM25 (or VM15) control unit and Machine PCU where VM25 HMI (or VM15 HMI) and VMx5 service are installed.

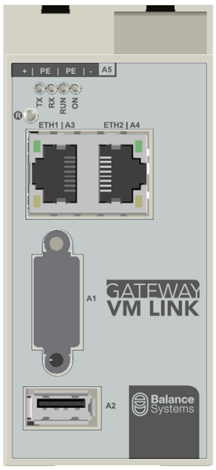
VM25 VM link performs:

- TCP/IP connection between VM25 control unit and Machine PCU
- VMx5 systems firmware upgrade, backup and restore by VMx5 service
- Local firmware upgrade by USB port
- Service operation by secondary Ethernet port

This documentation concerns the installation and use of the VMx5 VM link starting with version 12.0.

1.2. Layout, labels and technical data



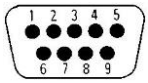
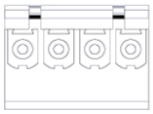
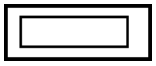
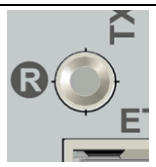
Front label	Side label
	

Side label includes:

- Electrical technical data
- Default IP addresses (A3 and A4 RJ45 ports)
- Protection grade
- Part number and serial number

PRODUCT DESCRIPTION		**NOTES**
Function	Gateway TCP/IP-BS Link used to connect the host (i.e. Siemens PCU50) to the VMx5 control unit.	
ENVIRONMENTAL		
Temperature Range	0 – 50 °C	
ELECTRICAL		
Input voltage	24 Vdc	
Max power	5 W	
Type of connection	Terminal block connections	
MECHANICAL		
Size (length x width x height)	45,2 x 118 x 99 mm	
Weight	160g	
Mounting specifications	Standard TS35 vertical DIN rail	
Case Material	Polyamide	
Protection grade	IP20	
Mechanical reference drawing	9AD485ETH0XX00	
INTERFACES		
BS Link Bus on RS485	1 (A1 connector) – to VM25 control unit	
USB 2.0 port	1 (A2 connector) – Local firmware upgrade	
Ethernet TCP/IP port (RJ45)	1 (A3 connector) – to Machine PCU	
Ethernet TCP/IP port (RJ45)	1 (A4 connector) – service operations	
SOFTWARE		
Version	12.x	
Remote connection for service	Yes, through TCP/IP (A4 connector)	
System software update	Yes, through TCP/IP or USB (A3 or A2 connectors)	
OTHER SUPPLIED ITEMS		
VMx5 control unit - Gateway VM Link connection cable	0,5 m	9WM000-5000000

1.3. Interfaces and LED signalling

VM link			
Type	**ID**	**Name**	**Description**
 D-Sub 9 pole female	A1	BS Link	SERIAL BS Link INTERFACE 1. Data (-) 4. GND 5. +24V 6. Data (+) NOTE: Pins not listed are isolated
 Phoenix 4 pin	A5	Power supply	1. +24Vdc 2. PE 3. PE 4. GND
 RJ45 female	A3	LAN 1	Ethernet port No.1
 RJ45 female	A4	LAN 2	Ethernet port No.2 (service)
 USB type A female	A2	USB	USB 2.0 host port
	R		Reset button
			**TX:** data transmission (green blinking) **RX:** data receiving (yellow blinking) **RUN:** see the table below (green blinking) **ON:** Power (green fixed)

Run LED description		
Type	**Phase**	**Description**
	Working normally	LED blink 3 times
	Service mode	LED blink 4 times
	Ethernet default configuration	LED blink 2 times
	Identification	LED blink 5 times
	Upgrade error	Fast LED blinking
	Boot and FW upgrade	Slow LED blinking

1.4. Installation

VM Link is available with p/n:

- 9AD485ETH01200 – VMx5 VM link, v12

Controlu unit – VM link connection cable is included in the supply (0,5 m)

1.4.1. Mechanical installation

VM Link can be installed inside the cabinet on standard TS35 DIN rail.

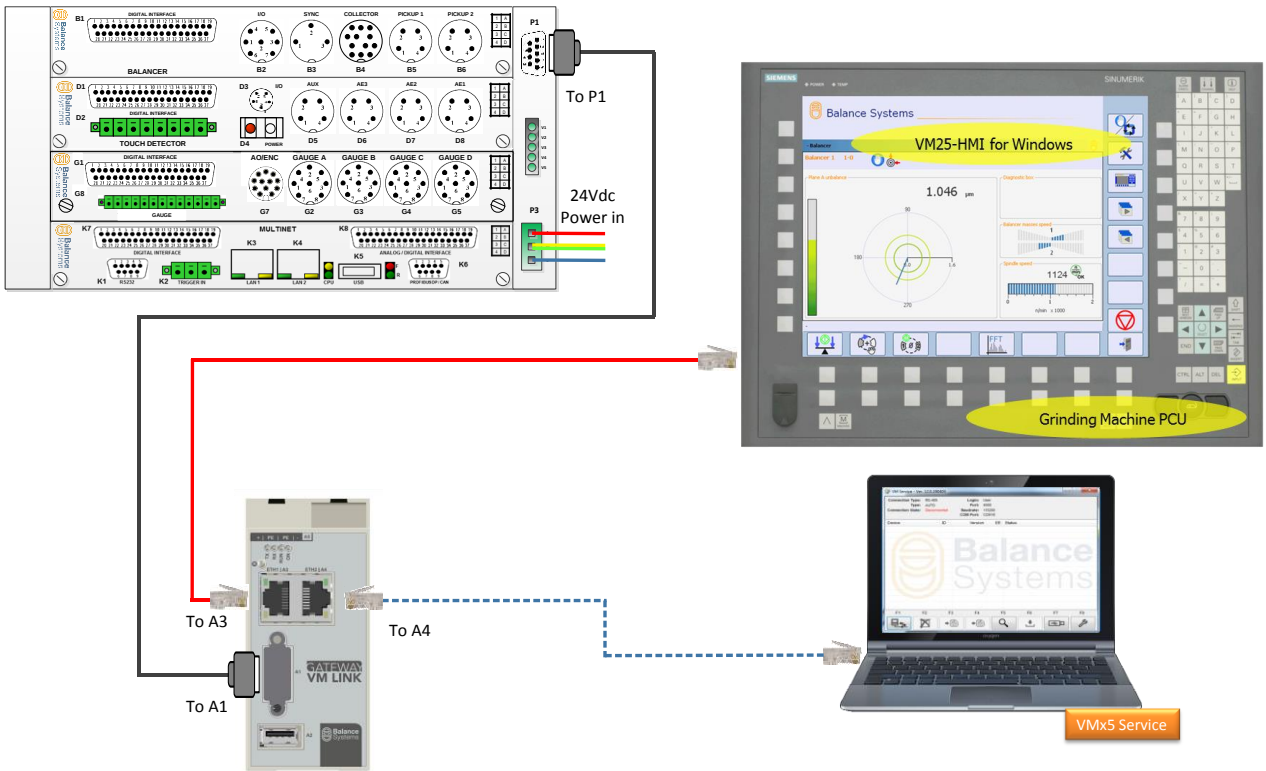
1.4.2. Hardware connections using VMx5 HMI

To startup the VM link it is necessary to connect to the control unit of the VMx5 system through a P1 connector (see figure), following this sequence:

- Connect supplied cable on the VMx5 control unit side (P1 connector)
- Connect the other side of the cable to the VM link (A1 connector)
- Connect Ethernet cable on the VM link side (A3 connector)
- Connect the other side of the Ethernet cable to the CN
- Turn on the VMx5 control unit

- In case of service operations performed by specialized personnel (not directly by VMx5 service installed on CN), it is possible to use the secondary Ethernet port (A4 connector)

Note: Since VM link is directly connected to the control unit, 24Vdc power supply (to connector A5) is unnecessary.



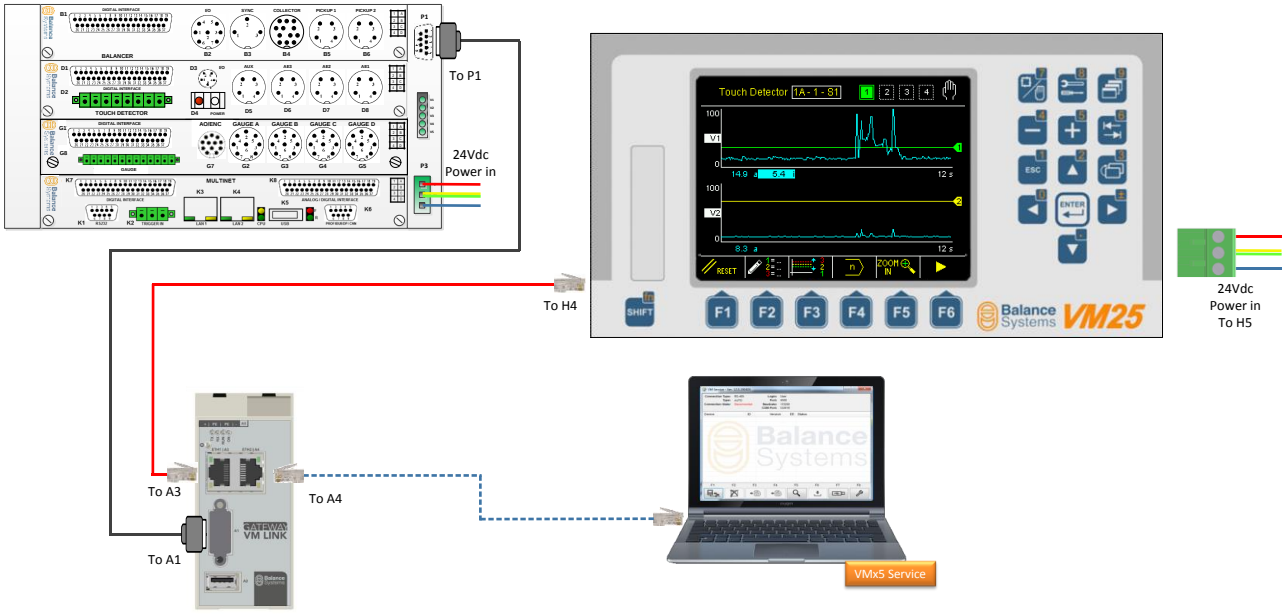
1.4.3. Hardware connections using VMx5 Panel

To startup the VM link it is necessary to connect to the control unit of the VMx5 system through a P1 connector (see figure), following this sequence:

- Connect supplied cable on the VMx5 control unit side (P1 connector)
- Connect the other side of the cable to the VM link (A1 connector)
- Connect Ethernet cable on the VM link side (A3 connector)
- Connect the other side of the Ethernet cable to the VM x5 panel H4 connector
- Turn on the VMx5 control unit

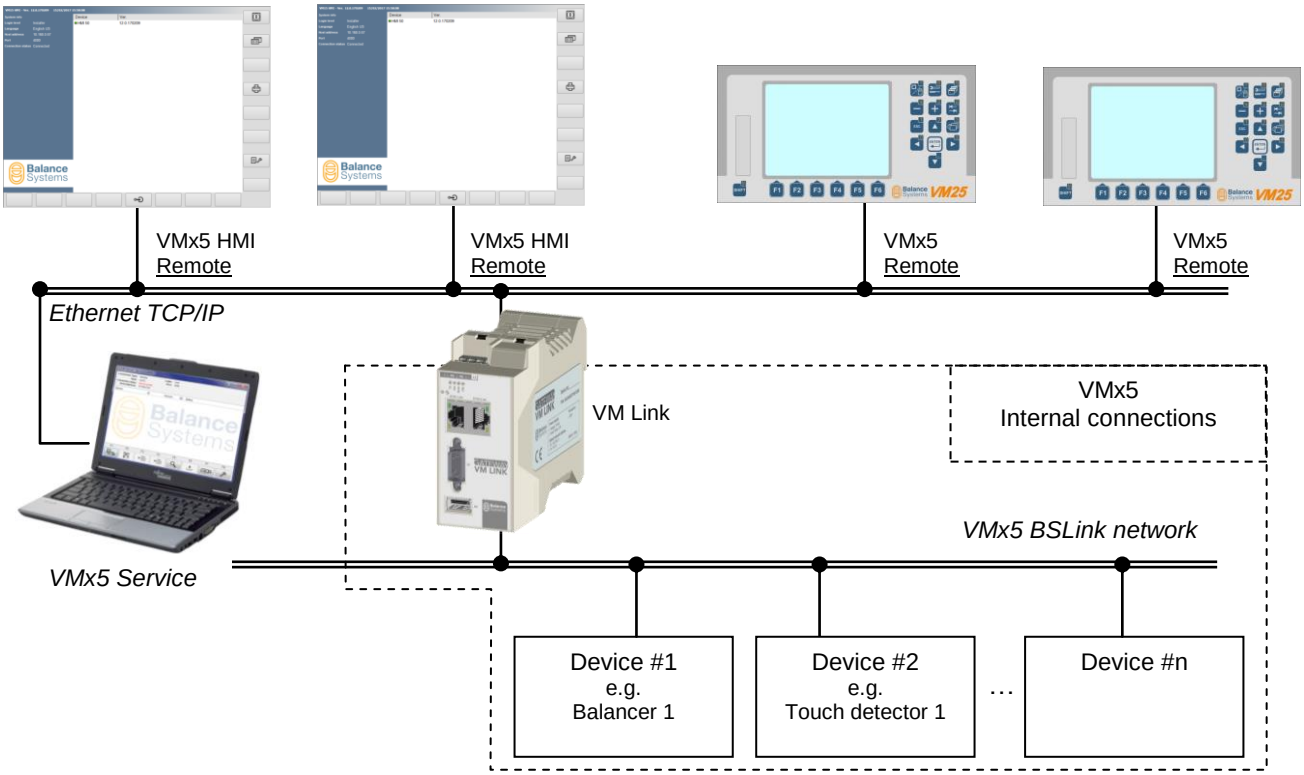
- In case of service operations performed by specialized personnel, it is possible to use the secondary Ethernet port (A4 connector)

Note: Since VM link is directly connected to the control unit, 24Vdc power supply (to connector A5) is unnecessary.
In this configuration, VMx5 panel needs to be independently supplied by external 24Vdc source.



2. Connections and configuration

2.1. VM25 System architecture



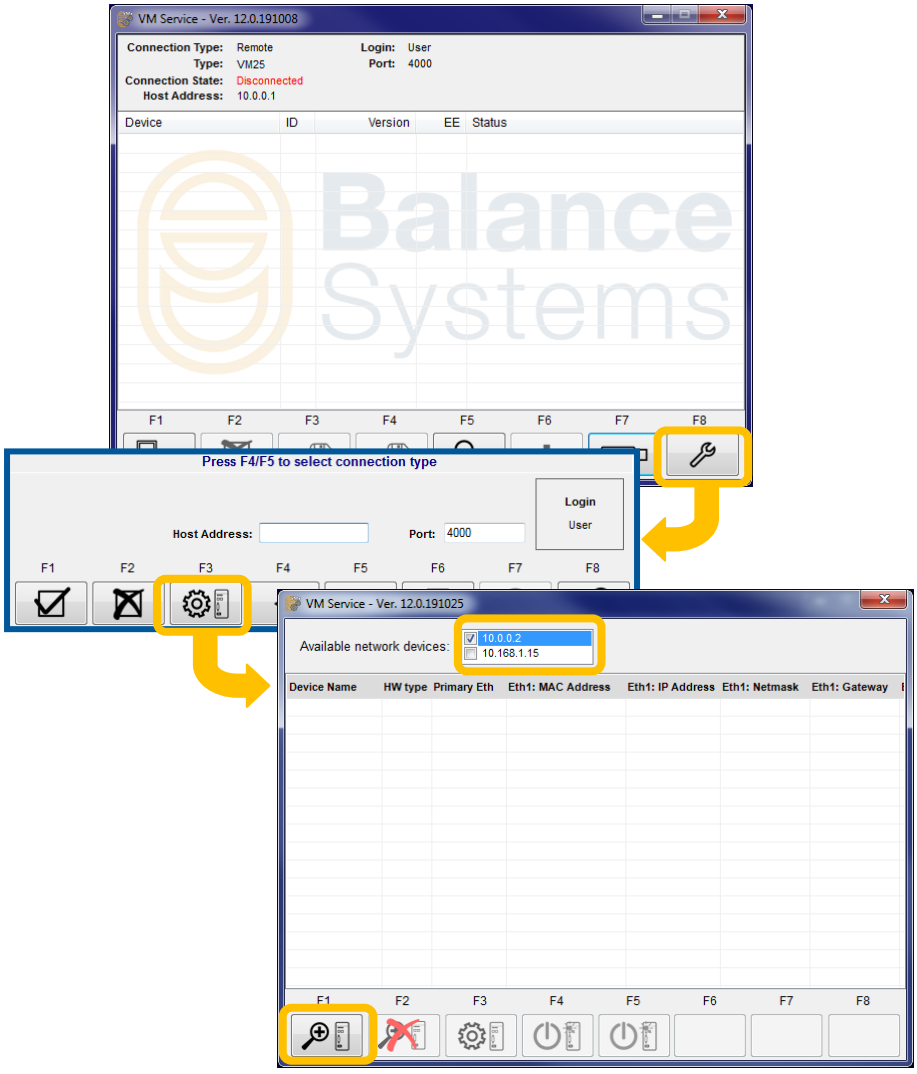
2.2. VM Link configuration by VMx5 Service

Once system connected as described in section 1.4.2 or 1.4.3, switch on the system, login as installer level (to access as installer level, please see the procedure described in 9UMENX519-1200 yymmdd VMx5 HMI Installer or 9UMENx515-1200 Panel installer yymmdd) and follow steps described below:

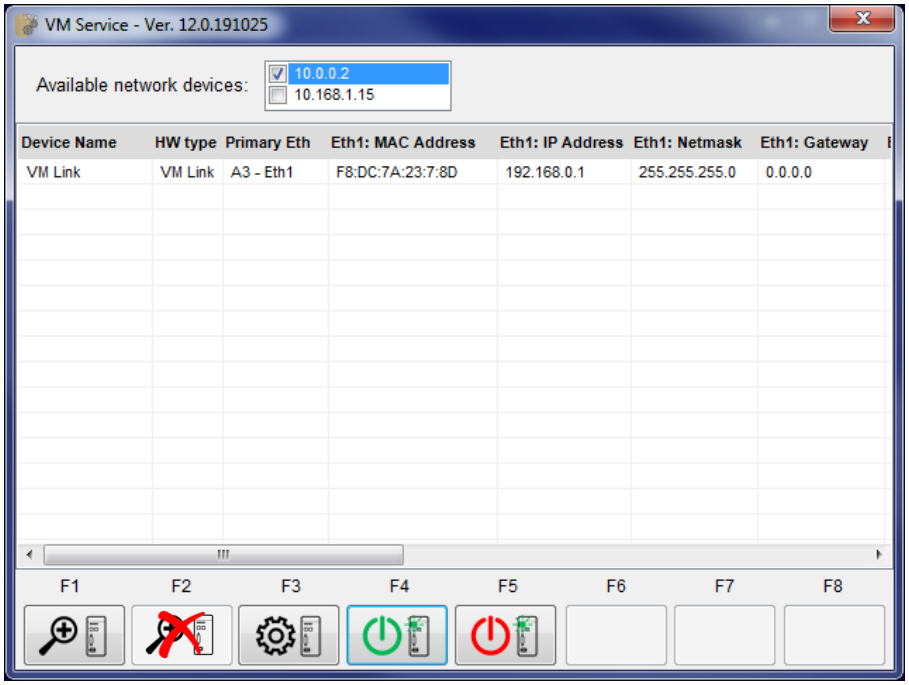
- Open VMx5 Service and press on setup button 

(F8) then press button 

(F3).
- According with available network cards IP addresses, select the network on which VM Link is connected then press on F1 button 



All recognized devices will be displayed on the screen.

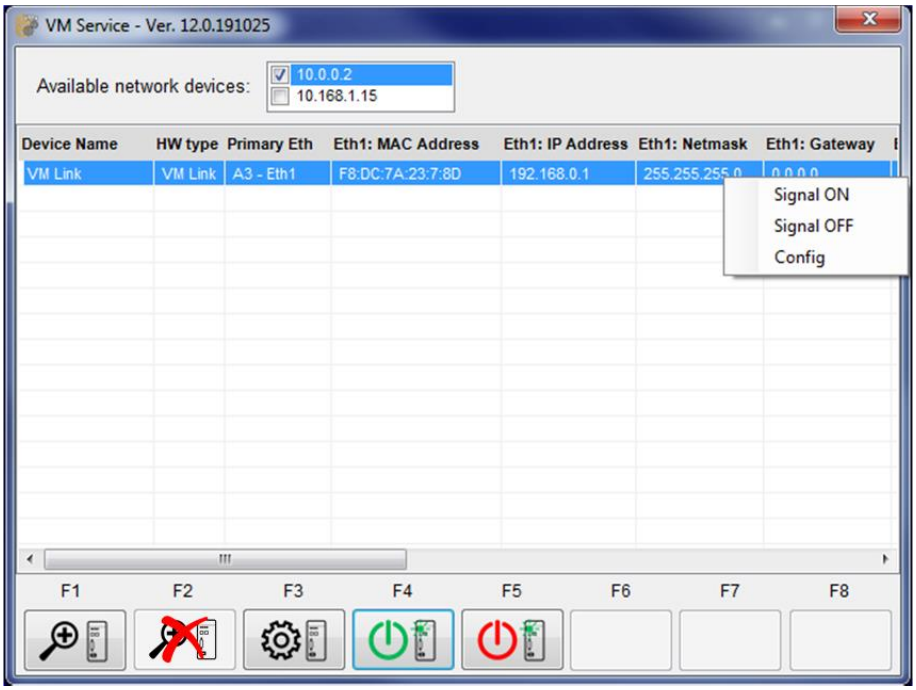


For Each recognized device, is displayed:

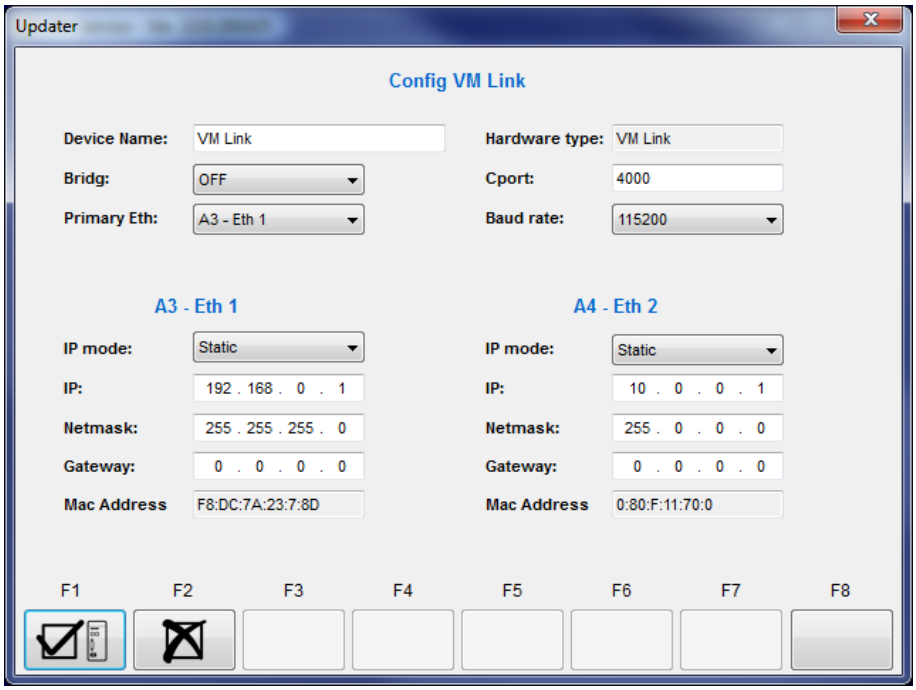
- "Device Name" (configurable)
- HW type = type of Balance Systems device
- Primary Eth = primary Ethernet ID (configurable)
- [A3] Eth#1 / [A4] Eth#2 network card MAC address
- [A3] Eth#1 / [A4] Eth#2 network card IP address (configurable)
- [A3] Eth#1 / [A4] Eth#2 network card subnet mask (configurable)
- [A3] Eth#1 / [A4] Eth#2 network card default gateway (configurable)
- [A3] Eth#1 / [A4] Eth#2 network card IP mode = IP address assignment mode (Static or DHCP) (configurable)
- Bridged
- CPort
- Baud rate

Commands			
Icon	**Command name**	**Button**	**Description**
	**Search devices**	F1	Search VM Link devices on selected network
	**Stop search devices**	F2	Stop searching VM Link devices on selected network
	**Config. Device**	F3	Access to VM Link configuration page
	**Signal ON**	F4	Identification ON: Run LED blink 5 times in order to report to the user the connected device
	**Signal OFF**	F5	Identificatin OFF

- In order to access to configuration page, click on  (F2) or right click on VM Link row e select “Config”.



Command	Description
Signal ON	Identification ON: Run LED blink 5 times in order to report to the user the connected device
Signal OFF	Identificatin OFF
Config	Access to TCP/IP configurations



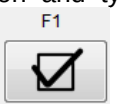
Parameter	Description
Device Name	It is possible to set the device name. Default value is VMLink
Bridged **[OFF]**	Bridge activation between network cards associated to A4 and A3 connectors: **OFF**: Bridge disabled **ON**: Bridge enabled
Primary Eth **[A3 – Eth 1]**	It defines which network card is used for PCU connection: **A3 – Eth 1**: A3 is normally used for connection to PCU **A4 – Eth 2**: A4 is normally used for connection to VMx5 service
Hardware type	*Read only*
Cport **[4000]**	TCP – IP Port used for devices communication. Example: **4000**
Baud rate [bps] **[115200]**	Com port baud rate [bps] 9600, 19200, 38400, 57600, 115200
A3 – Eth 1 – Ip mode **[Static]**	IP address assignment mode associated to A3 – Eth 1 connector: **OFF**: network card not enabled **Static**: VM Link IP address is manually assigned by the user **DHCP**: VM Link IP address is automatically assigned by DHCP server **DHCP Server**: VM Link assigns IP addresses to other hosts

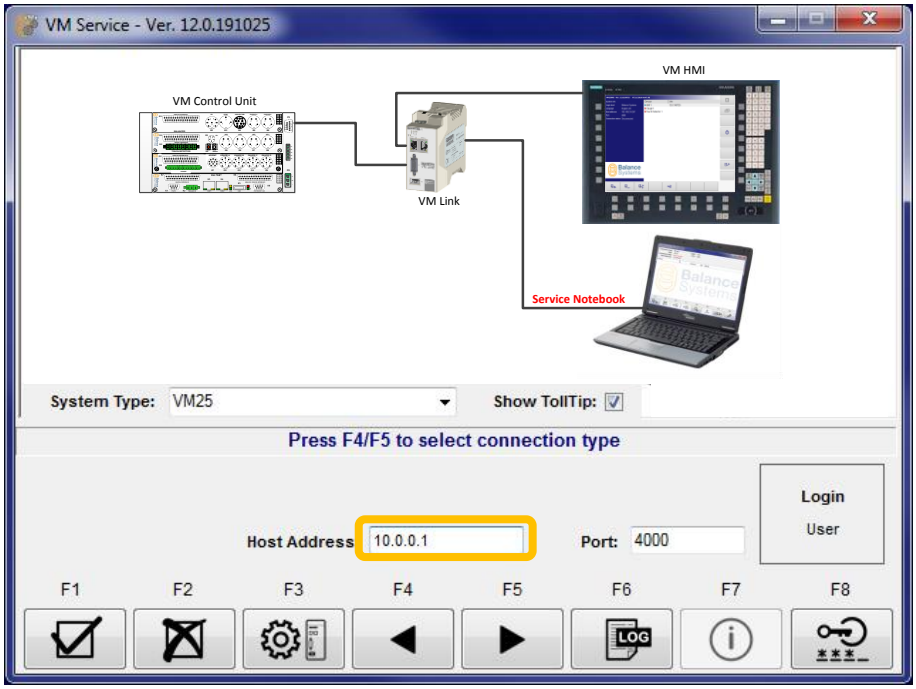
Parameter	Description
A3 – Eth 1 – Ip **[192.168.0.1]**	IP address associated to A3 – Eth 1 network card It allows to set IP address to connect VMx5 HMI
A3 – Eth 1 – Netmask **[0.0.0.0]**	IP Subnet mask associated to A3 – Eth 1 network card
A3 – Eth 1 – Gateway **[0.0.0.0]**	IP Default gateway associated to A3 – Eth 1 network card
A3 – Eth 1 – Mac address	*Read only*
A4 – Eth 2 – Ip mode **[Static]**	IP address assignment mode associated to A4 – Eth 2 connector: **OFF**: network card not enabled **Static**: VM Link IP address is manually assigned by the user **DHCP**: VM Link IP address is automatically assigned by DHCP server **DHCP Server**: VM Link assigns IP addresses to other hosts
A4 – Eth 2 – Ip **[10.0.0.1]**	IP address associated to A4 – Eth 2 network card It allows to set IP address to connect VMx5 Service
A4 – Eth 2 – Netmask **[0.0.0.0]**	Subnet mask associated to A4 – Eth 2 network card
A4 – Eth 2 – Gateway **[0.0.0.0]**	Default gateway associated to A4 – Eth 2 network card
A4 – Eth 2 – Mac address	*Read only*

Commands			
Icon	**Command name**	**Button**	**Description**
	**Confirm config.**	F1	Confirm and save network configuration
	**Cancel**	F2	Do not confirm network configuration and exit

- Set proper network parameters according with network administrator and press Confirm config. button  (F1)

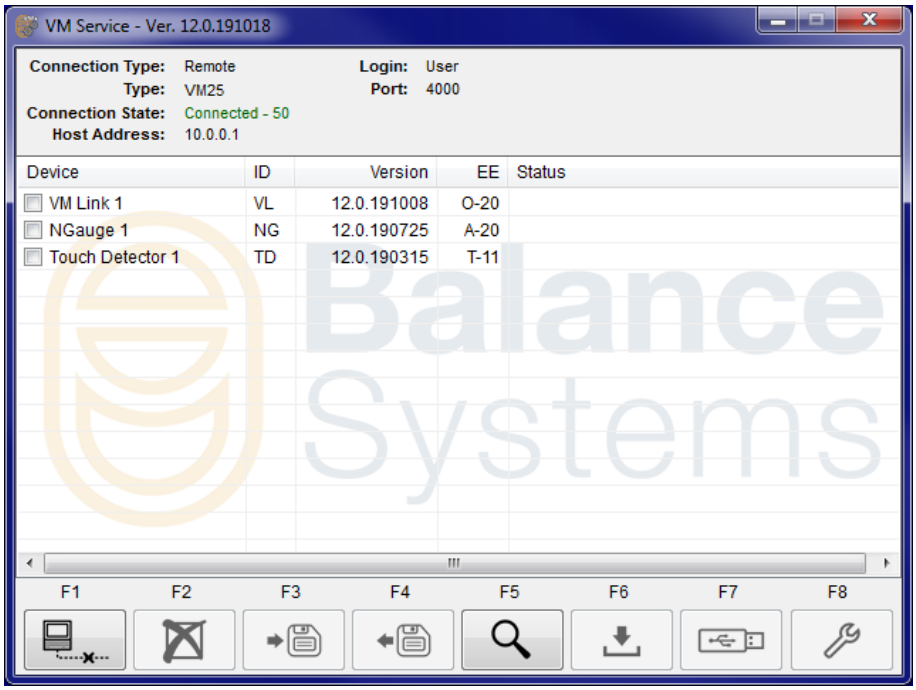
- In order to check the correct communication with VMLink, proceed as follow:
  - Starting by VMx5 service main page, press setup button 

to access the setup menu
  - With F4 and F5 buttons, select the following connection configuration and type the IP address associated to A4 connector (i.e.: 10.0.0.1) then press F1 button 

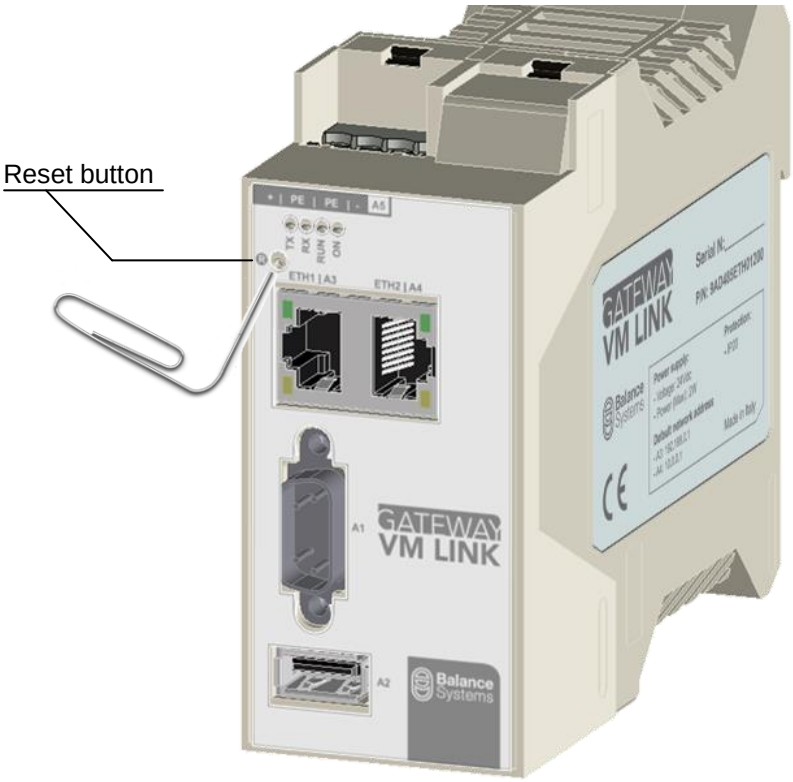


  - Make sure that the PC or PCU network card on which VMx5 service is installed, is in the same subnet of VM Link network card (A4). i.e.: IP address 10.0.0.2.

- Click on F1 connect button  . Available function cards will be displayed as follow.



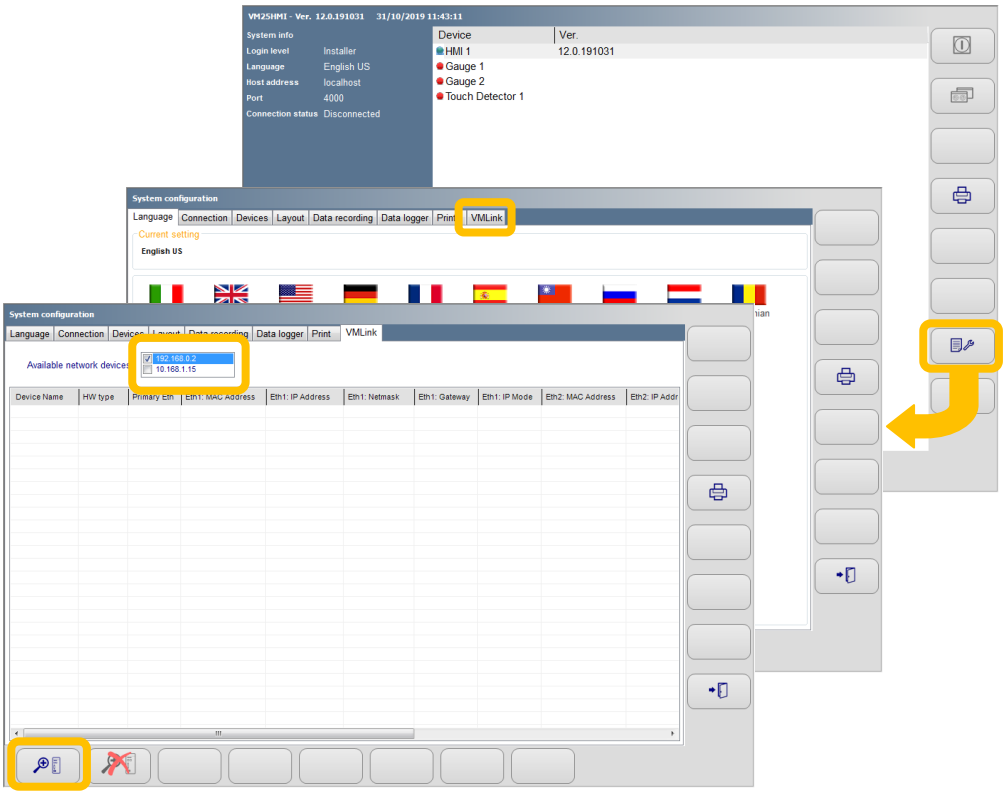
Note: It is possible to temporary set VM Link network card default settings pressing reset button for 5 seconds and waiting until run led starts to blink 2 times.
Default settings will be hold until device is switched ON. Repeat the procedure to change VM Link network card settings.



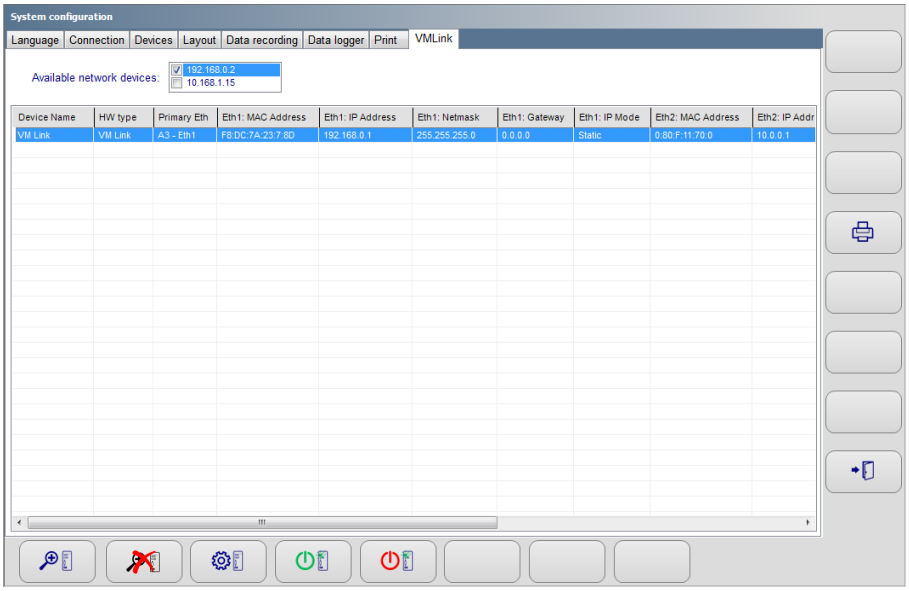
2.3. VM Link configuration by VMx5 HMI

Once system connected as described in section 1.4.2, switch on the system, login as installer level (to access as installer level, please see the procedure described in 9UMENX519-1200 yymmdd VMx5 HMI Installer) and follow steps described below:

- Open VMx5 HMI and click on **Parameters**  **[Shift+F7]** then select the tab VMLink to configure the device.
- According with available network cards IP addresses, select the network on which VM Link is connected then press on F1 button 



All recognized devices will be displayed on the screen.

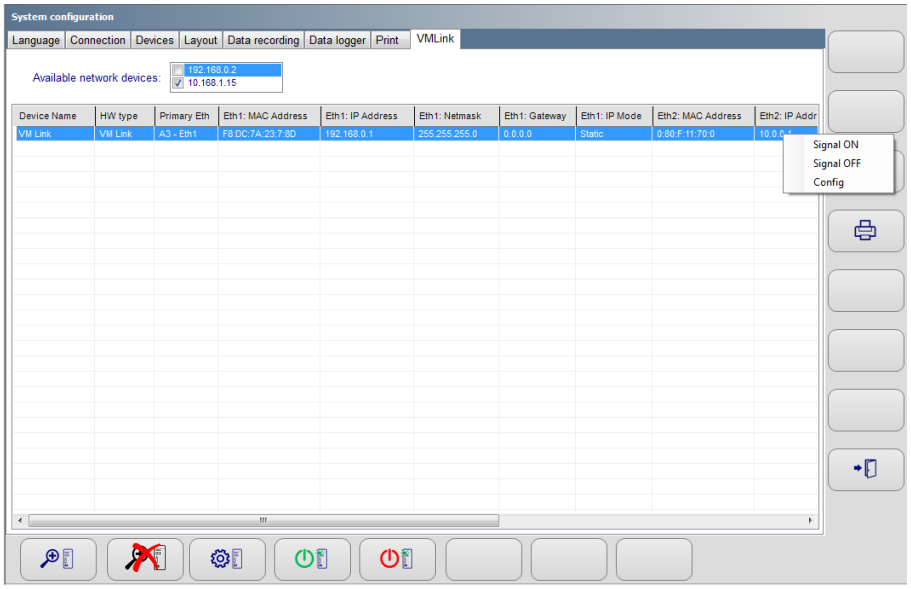


For Each recognized device, is displayed:

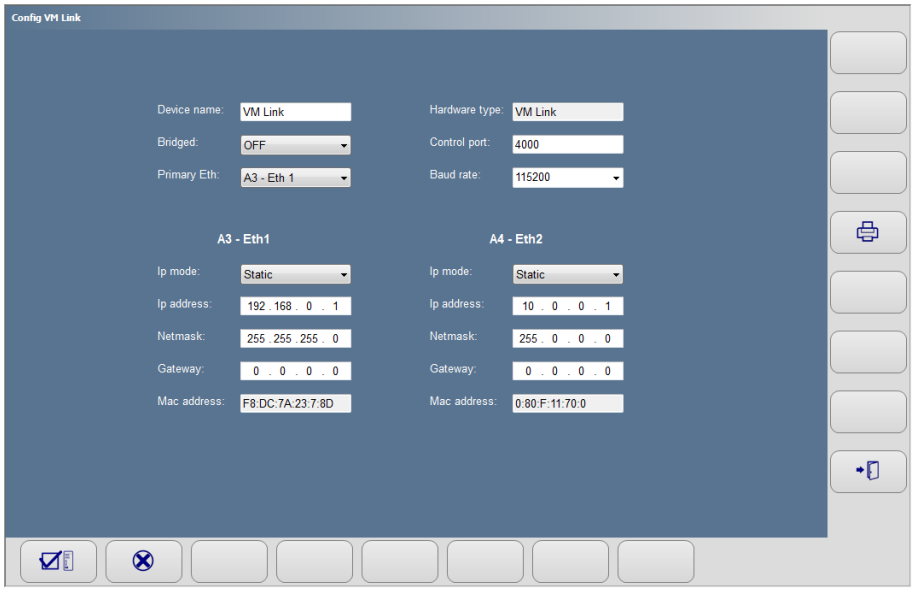
- "Device Name" (configurable)
- HW type = type of Balance Systems device
- Primary Eth = primary Ethernet ID (configurable)
- [A3] Eth#1 / [A4] Eth#2 network card MAC address
- [A3] Eth#1 / [A4] Eth#2 network card IP address (configurable)
- [A3] Eth#1 / [A4] Eth#2 network card subnet mask (configurable)
- [A3] Eth#1 / [A4] Eth#2 network card default gateway (configurable)
- [A3] Eth#1 / [A4] Eth#2 network card IP mode = IP address assignment mode (Static or DHCP) (configurable)
- Bridged
- CPort
- Baud rate

Commands			
Icon	**Command name**	**Button**	**Description**
	**Search devices**	F1	Search VM Link devices on selected network
	**Stop search devices**	F2	Stop searching VM Link devices on selected network
	**Config. Device**	F3	Access to VM Link configuration page
	**Signal ON**	F4	Identification ON: Run LED blink 5 times in order to report to the user the connected device
	**Signal OFF**	F5	Identificatin OFF

- In order to access to configuration page, click on  (F2) or right click on VM Link row e select “Config”.



Command	Description
Signal ON	Identification ON: Run LED blink 5 times in order to report to the user the connected device
Signal OFF	Identificatin OFF
Config	Access to TCP/IP configurations



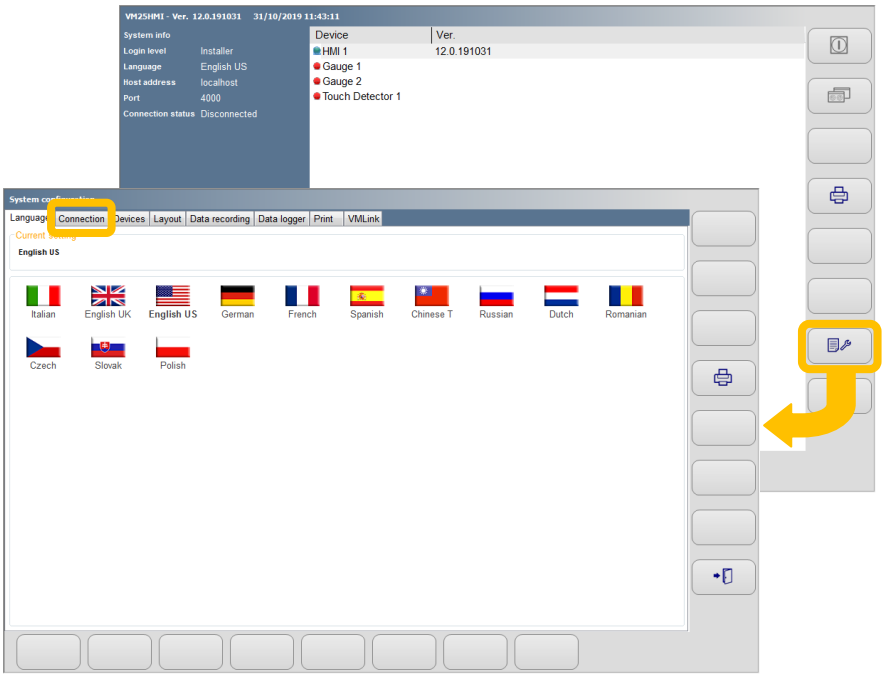
Parameter	Description
Device Name	It is possible to set the device name. Default value is VMLink
Bridged **[OFF]**	Bridge activation between network cards associated to A4 and A3 connectors: **OFF**: Bridge disabled **ON**: Bridge enabled
Primary Eth **[A3 – Eth 1]**	It defines which network card is used for PCU connection: **A3 – Eth 1**: A3 is normally used for connection to PCU **A4 – Eth 2**: A4 is normally used for connection to VMx5 service
Hardware type	*Read only*
Cport **[4000]**	TCP – IP Port used for devices communication. Example: **4000**
Baud rate [bps] **[115200]**	Com port baud rate [bps] 9600, 19200, 38400, 57600, 115200
A3 – Eth 1 – Ip mode **[Static]**	IP address assignment mode associated to A3 – Eth 1 connector: **OFF**: network card not enabled **Static**: VM Link IP address is manually assigned by the user **DHCP**: VM Link IP address is automatically assigned by DHCP server **DHCP Server**: VM Link assigns IP addresses to other hosts

Parameter	Description
A3 – Eth 1 – Ip **[192.168.0.1]**	IP address associated to A3 – Eth 1 network card It allows to set IP address to connect VMx5 HMI
A3 – Eth 1 – Netmask **[0.0.0.0]**	IP Subnet mask associated to A3 – Eth 1 network card
A3 – Eth 1 – Gateway **[0.0.0.0]**	IP Default gateway associated to A3 – Eth 1 network card
A3 – Eth 1 – Mac address	*Read only*
A4 – Eth 2 – Ip mode **[Static]**	IP address assignment mode associated to A4 – Eth 2 connector: **OFF**: network card not enabled **Static**: VM Link IP address is manually assigned by the user **DHCP**: VM Link IP address is automatically assigned by DHCP server **DHCP Server**: VM Link assigns IP addresses to other hosts
A4 – Eth 2 – Ip **[10.0.0.1]**	IP address associated to A4 – Eth 2 network card It allows to set IP address to connect VMx5 Service
A4 – Eth 2 – Netmask **[0.0.0.0]**	IP Subnet mask associated to A4 – Eth 2 network card
A4 – Eth 2 – Gateway **[0.0.0.0]**	IP Default gateway associated to A4 – Eth 2 network card
A4 – Eth 2 – Mac address	*Read only*

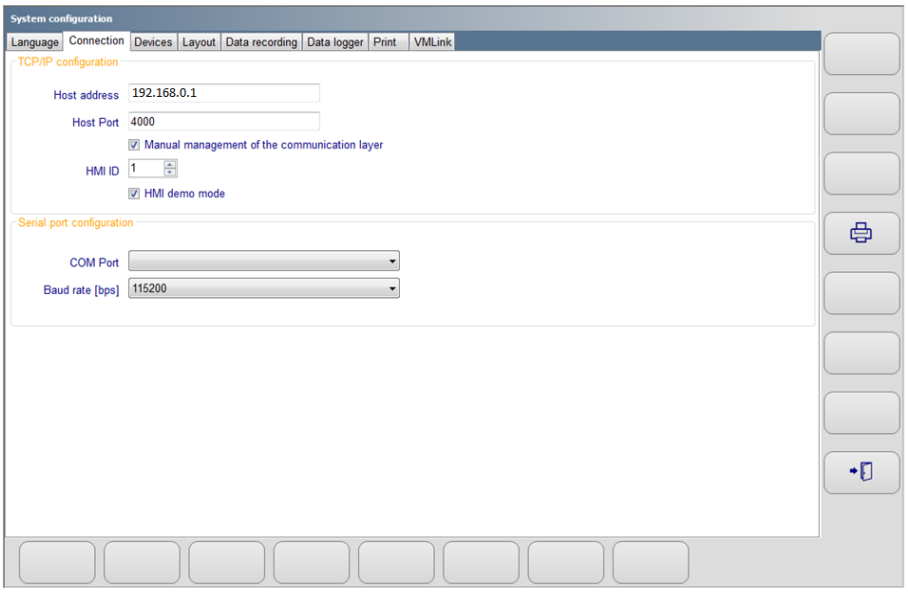
Commands			
Icon	**Command name**	**Button**	**Description**
	**Confirm config.**	F1	Confirm and save network configuration
	**Cancel**	F2	Do not confirm network configuration and exit

- Set proper network parameters according with network administrator and press Confirm config. button  (F1)
- Press exit button 

- In order to check the correct communication with VMLink, proceed as follow:
  - Go back to system page and click again on **Parameters**  **[Shift+F7]** then, select the tab Connection to configure the connection to VM Link.



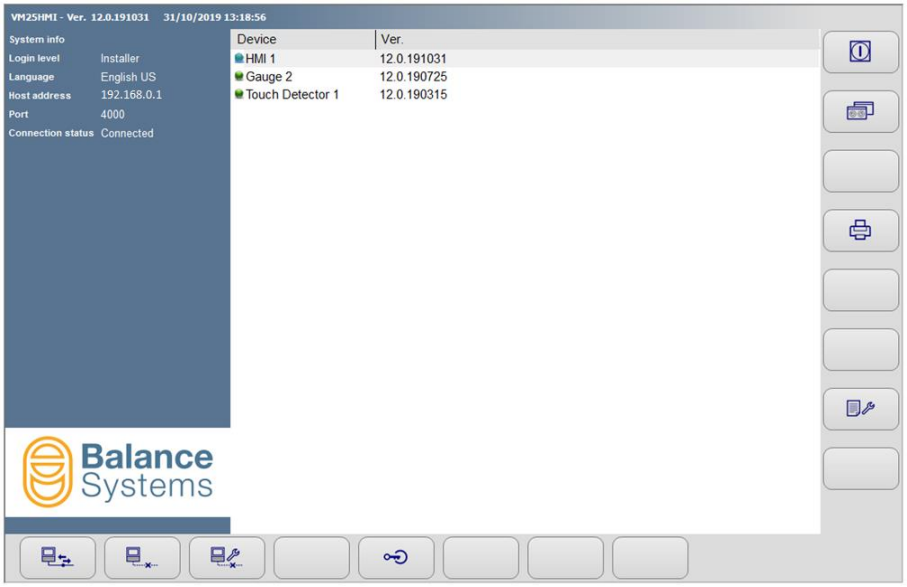
  - type the IP address associated to A3 connector (i.e.: 192.168.0.1)
  - Make sure that typed IP address on this parameter is the same as IP address associated to A3 port in VM Link configuration.
    Example: 192.168.0.1



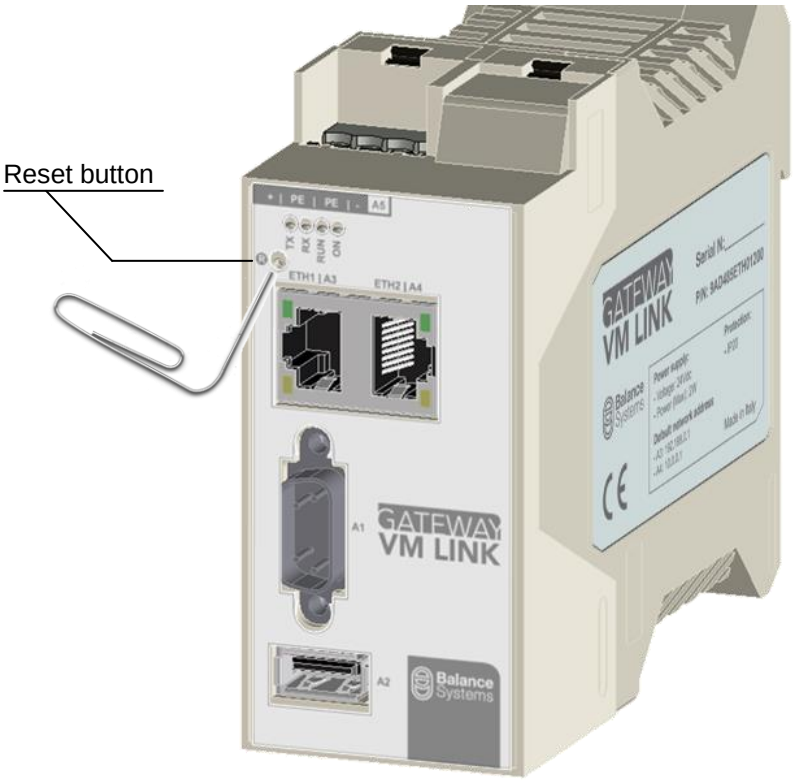
  - Make sure that the PC or PCU network card on which VMx5 HMI is installed, is in the same subnet of VM Link network card (A3). i.e.: IP address 192.168.0.2.

Parameter	Description
Host address **[localhost]**	IP address of the device to which the VMx5 rack is physically connected. Example: **192.168.0.1**
Host port **[4000]**	Number of the Ethernet port. Example: **4000**
Manual managing of the communication layer ☐	[check box]. When activated, the communication task with the VMx5 rack is manually managed by the installer. This feature is reserved for special applications guided by Balance Systems
HMI Id **[1]**	Address of the actual VMx5 HMI instance in the VMx5 system (values from 1 to 49) Should be used when more than one VMx5 HMI or VMx5 Control Panel are connected to the same system. Setting “0” the address is automatically assigned (values from 50 to 127)

- Press exit button  and click on **Connect** command  **[F1].**
Available function cards will be displayed as follow:



Note: It is possible to temporary set VM Link network card default settings pressing reset button for 5 seconds and waiting until run led starts to blink 2 times.
Default settings will be hold until device is switched ON. Repeat the procedure to change VM Link network card settings.



2.4. VM Link configuration by VMx5 Panel

Once system connected as described in section 1.4.3, switch on the system, login as installer level (to access as installer level, please see the procedure described in 9UMEN2515-1200 yymmdd VM25 Panel Installer) and follow steps described below:

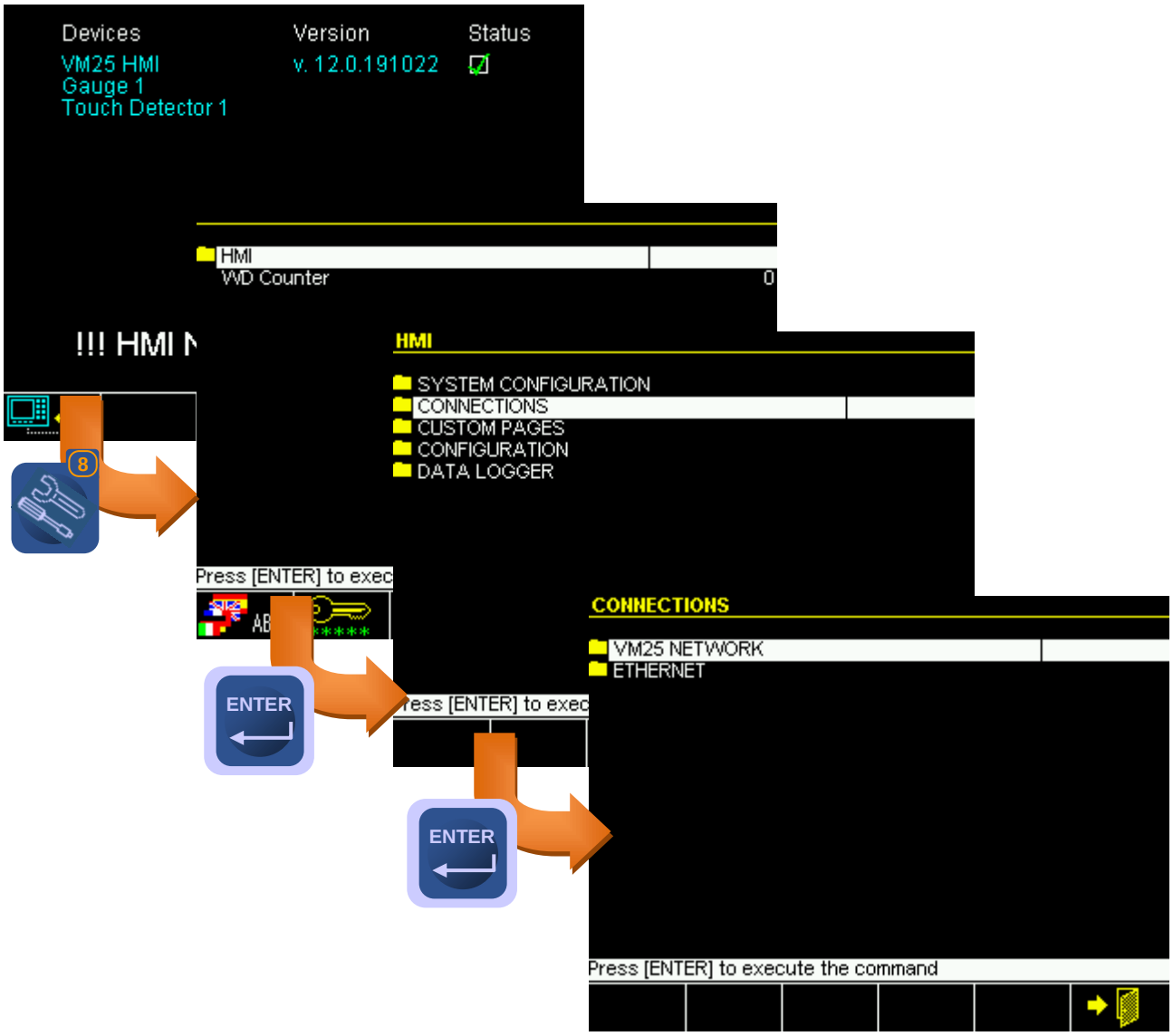
- Starting from system page press 

and select HMI pressing 

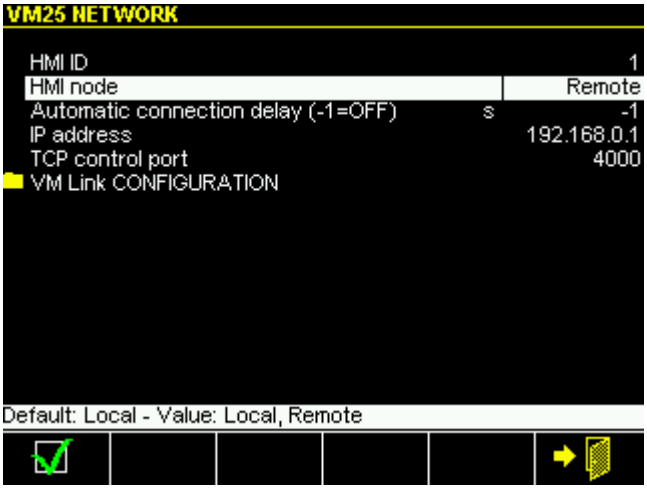
- Select Connection folder pressing 

then select VM25 network pressing 

again.

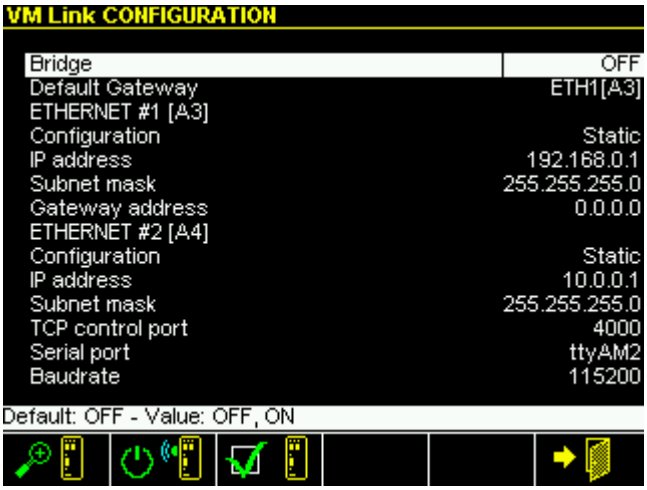


- Select HMI node = REMOTE and press ENTER



Parameter	Description
HMI ID **[1]**	Address of the actual VM25 Panel instance in the VM25 system (values from 1 to 49) Should be used when more than one VM25 HMI or VM25 Control Panel are connected to the same system By setting “0” the address is automatically assigned (values from 50 to 127)
HMI Node = REMOTE	Set VMx5 Panel as “Remote” in order to connect to VM Link device
Automatic connection delay (-1=OFF) [s] **[OFF]**	It indicates the automatic connection delay to VM Link at start up. **-1:** OFF (Manual connection to VM Link) **ON:** delay time evaluated in seconds
IP address **[127.0.0.1]**	VM Link IP address. Make sure that typed IP address on this parameter is the same as IP address associated to A3 port in VM Link CONFIGURATION folder. Example: **192.168.0.1**
TCP control port **[4000]**	VM Link control port

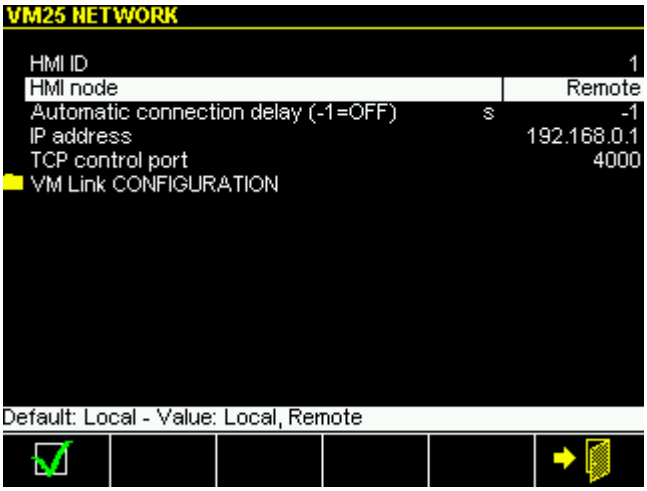
- Open VM Link CONFIGURATION folder pressing ENTER



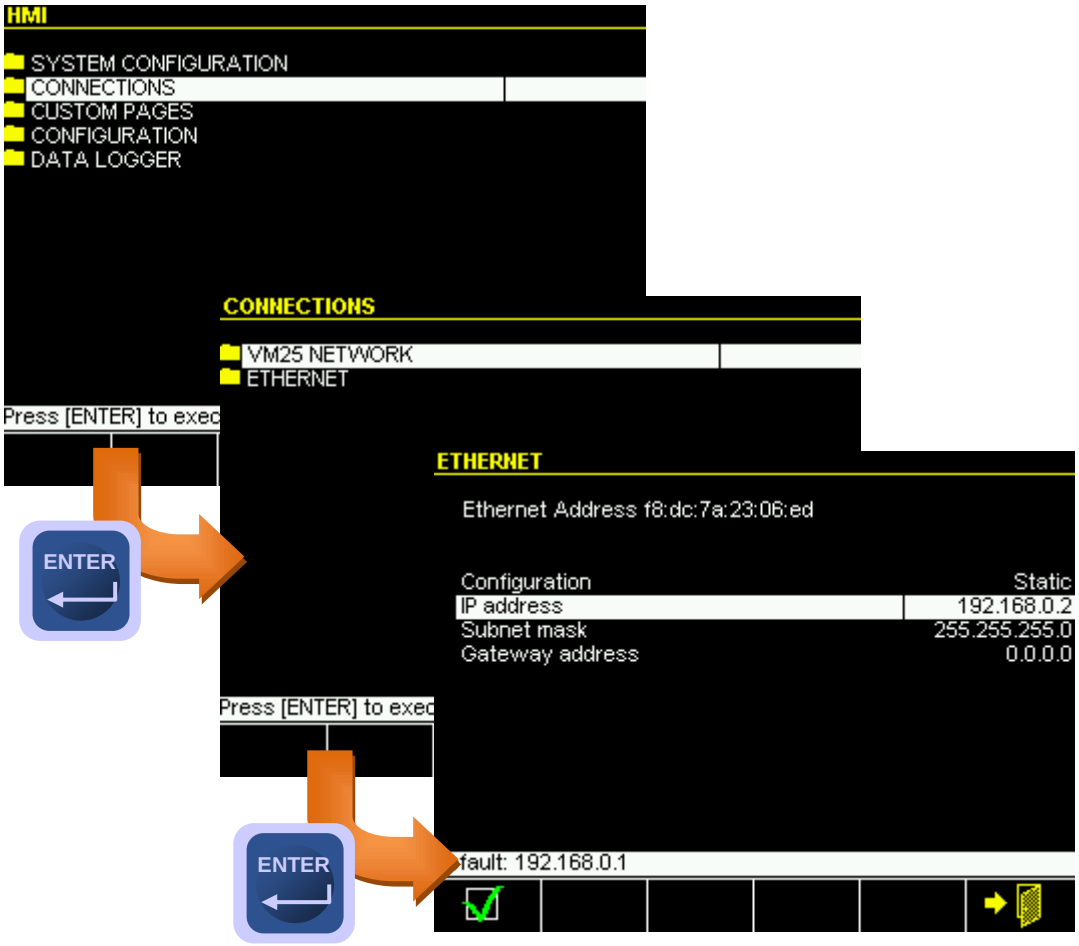
Parameter	Description
Bridge **[False]**	Bridge activation between network cards associated to A4 and A3 connectors: **OFF**: Bridge disabled **ON**: Bridge enabled
Default Gateway **[ETH0[A3]]**	It defines for which network card, default gateway is associated: **ETH1[A3]**: default gateway is associated to network card associated to A3 connector **ETH2[A4]**: default gateway is associated to network card associated to A4 connector
Configuration (Ethernet #1 [A3] / #2 [A4])	IP address assignment mode associated to A3 connector: **OFF**: network card not enabled **Static**: VM Link IP address is manually assigned by the user **DHCP**: VM Link IP address is automatically assigned by DHCP server **DHCP Server**: VM Link assigns IP addresses to other hosts
IP address (Ethernet #1 [A3] / #2 [A4]) **[192.168.0.1]**	IP address associated to A3 / A4 network card It allows to set IP address to connect VMx5 panel / service
Subnet mask (Ethernet #1 [A3] / #2 [A4]) **[255.255.255.0]**	IP Subnet mask associated to A3 / A4 network card
Gateway address (Ethernet #1 [A3] or #2 [A4]) **[0.0.0.0]**	IP Default gateway associated to A3 or A4 network card. Network card association is defined by “Default Gateway” parameter
TCP control port **[4000]**	TCP – IP Port used for devices communication. Example: **4000**
Serial port **[ttyAM2]**	Serial port identification for control unit connection **ttyAM2**: internal port (A1) **ttyUSB0**: external port (reserved)
Baud rate [bps] **[115200]**	Com port baud rate [bps] 9600, 19200, 38400, 57600, 115200

Commands			
Icon	**Command name**	**Button**	**Description**
	Devices finding	F1	Apply new settings
	Signal OFF Signal ON	F2 F2	Identification OFF Identification ON: Run LED blink 5 times in order to report to the user the connected device
	Confirm config.	F3	Confirm and save network configuration
	Exit	F6	Exit and restore the automatic tuning

- Set proper network parameters according with network administrator and press Confirm config. button  (F3)
- In order to check the correct communication with VMLink, proceed as follow:
  - Go back in VMx5 NETWORK folder pressing  (F6) and type the IP address associated to A3 connector (i.e.: 192.168.0.1)
  - Make sure that typed IP address on this parameter is the same as IP address associated to A3 port in VM Link CONFIGURATION folder.
    Example: 192.168.0.1

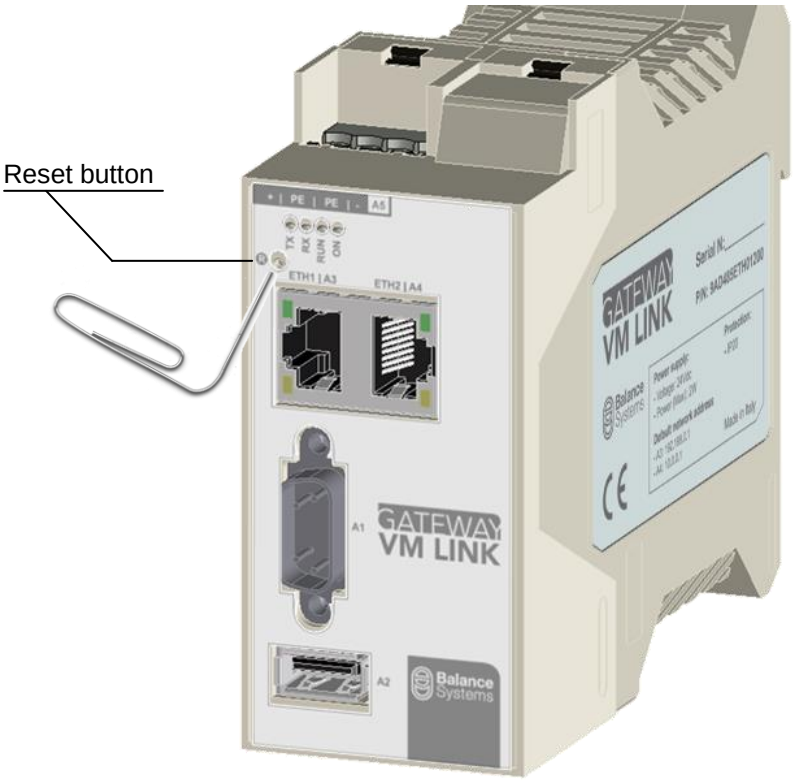


- Make sure that panel network card, is in the same subnet of VM Link network card (A3). i.e.: IP address 192.168.0.2.
  To check, go back to CONNECTION folder e select ETHERNET folder



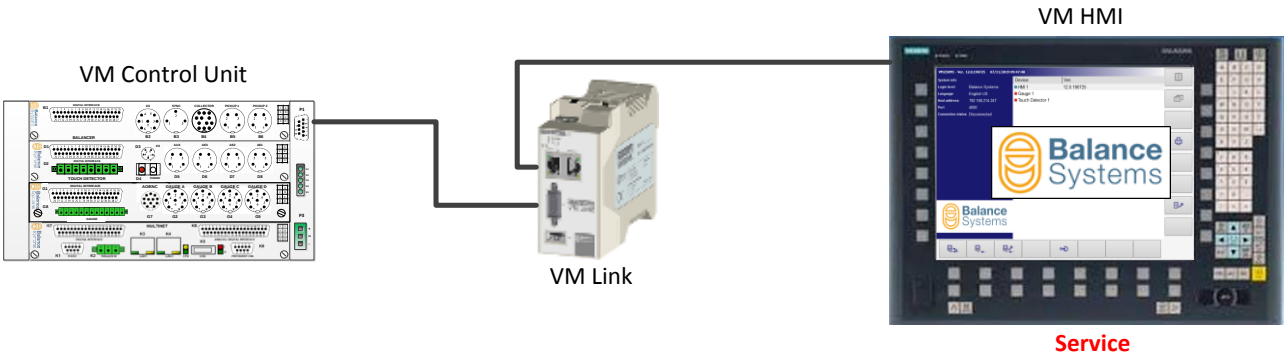
- Press  (F1) to confirm then exit  (F6) and go back on system page and start the communication with the control unit  .

Note: It is possible to temporary set VM Link network card default settings pressing reset button for 5 seconds and waiting until run led starts to blink 2 times.
Default settings will be hold until device is switched ON. Repeat the procedure to change VM Link network card settings.



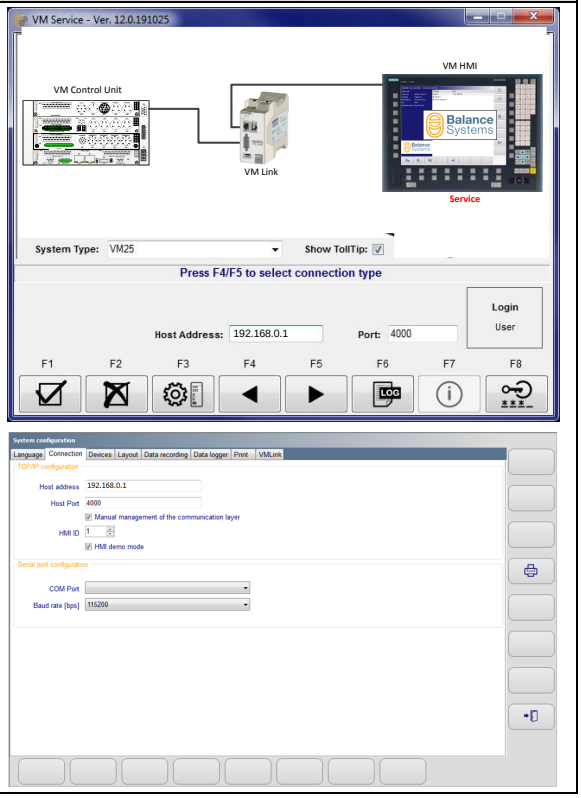
2.5. Others VM Link configurations

2.5.1. VMx5 HMI and VMx5 Service installed on the same PCU



In this configuration, only A3 Ethernet port is used.

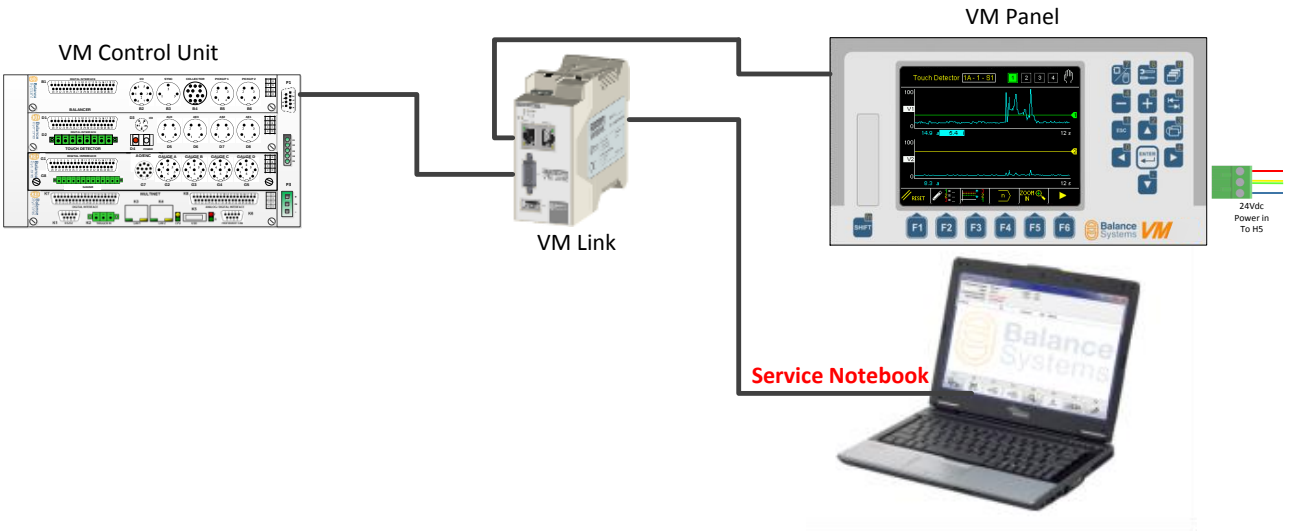
Set IP VM Link parameter, VMx5 Service and HMI host address as follow:

VM Link IP configuration		Service and HMI connection settings
Parameter	**Value**	
Primary Eth [A3 – Eth 1]	A3 – Eth 1	
Cport [4000]	4000	
Baud rate [bps] [115200]	115200	
A3 – Eth 1 – Ip mode [Static]	Static	
A3 – Eth 1 – Ip [192.168.0.1]	Set desidered address to associate both VMx5 HMI and VMx5 Service. (i.e.: 192.168.0.1)	
A4 – Eth 2 – Ip [10.0.0.1]	Port not used	

Make sure that PCU network card on which VMx5 HMI and VMx5 Service is installed, is in the same subnet of VM Link network card (A3). i.e.: IP address 192.168.0.2.

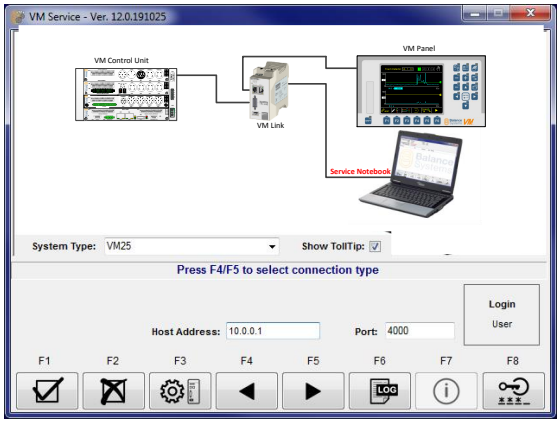
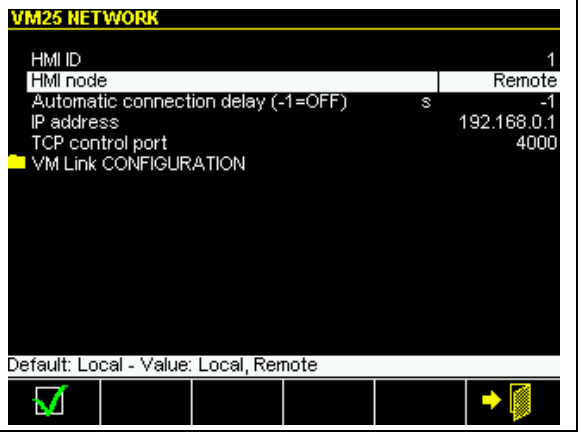
Details about each parameter are described in sections 2.2, 2.3 and 2.4.

2.5.2. VMx5 Panel and Service both connected directly to VM Link

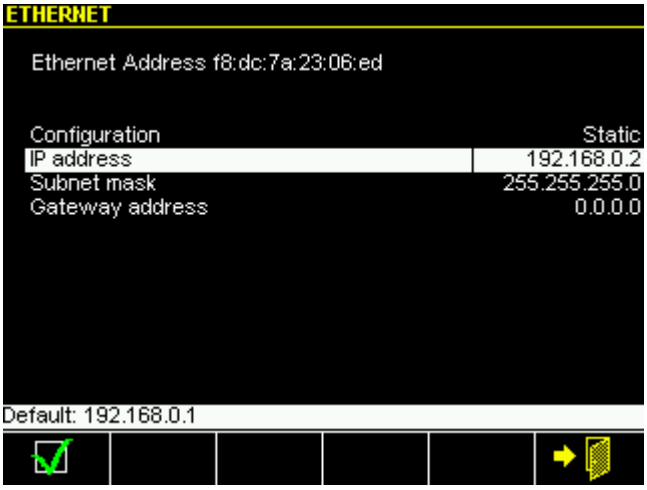


In this configuration, both A3 and A4 Ethernet ports are connected to VMx5 Panel and VMx5 Service respectively.

Set IP VM Link parameter, VMx5 Service and Panel host address as follow:

VM Link IP configuration		Service and HMI connection settings
Parameter	**Value**	
Primary Eth [A3 – Eth 1]	A3 – Eth 1	
Cport [4000]	4000	
Baud rate [bps] [115200]	115200	
A3 – Eth 1 – Ip mode [Static]	Static	
A3 – Eth 1 – Ip [192.168.0.1]	Set desidered address to associate VMx5 Panel. (i.e.: 192.168.0.1)	
A4 – Eth 2 – Ip [10.0.0.1]	Set desidered address to associate VMx5 Service. (i.e.: 10.0.0.1)	

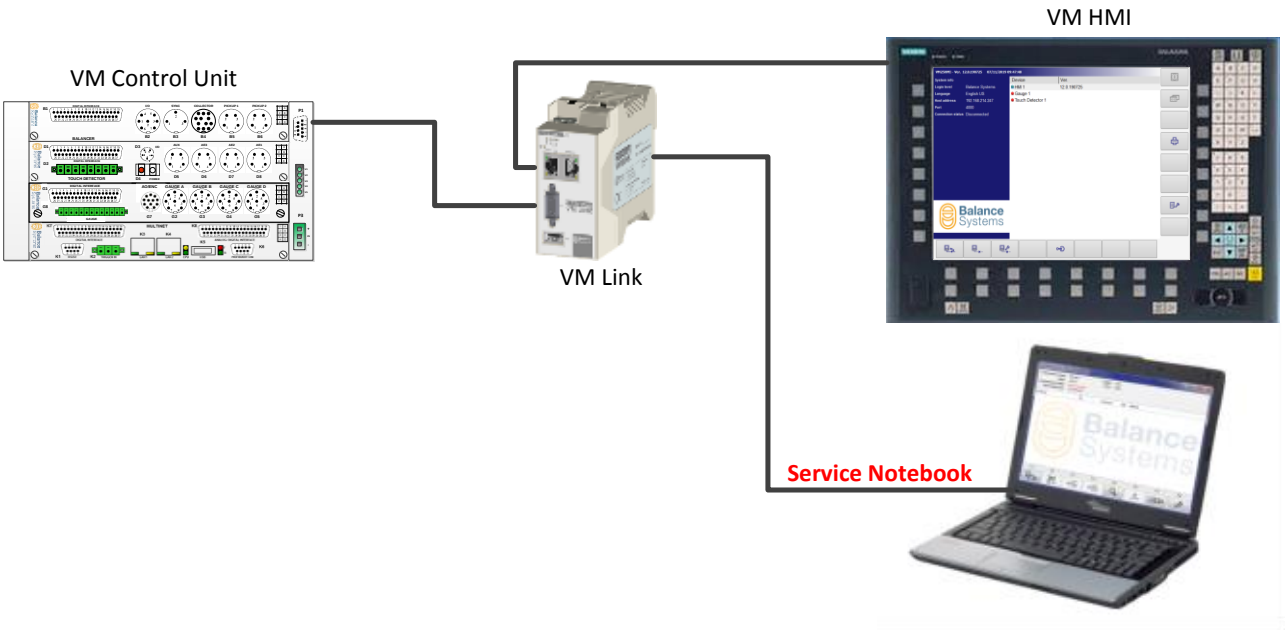
Make sure that panel network card, is in the same subnet of VM Link network card (A3). i.e.: IP address 192.168.0.2.



Make sure that PC network card on which VMx5 Service is installed, is in the same subnet of VM Link network card (A4). i.e.: IP address 10.0.0.2.

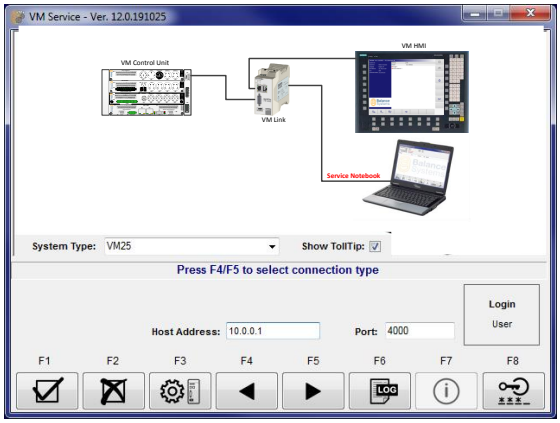
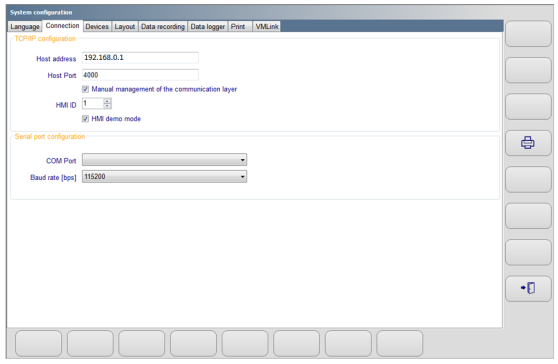
Details about each parameter are described in sections 2.2, 2.3 and 2.4.

2.5.3. VMx5 HMI and Service both connected directly to VM Link



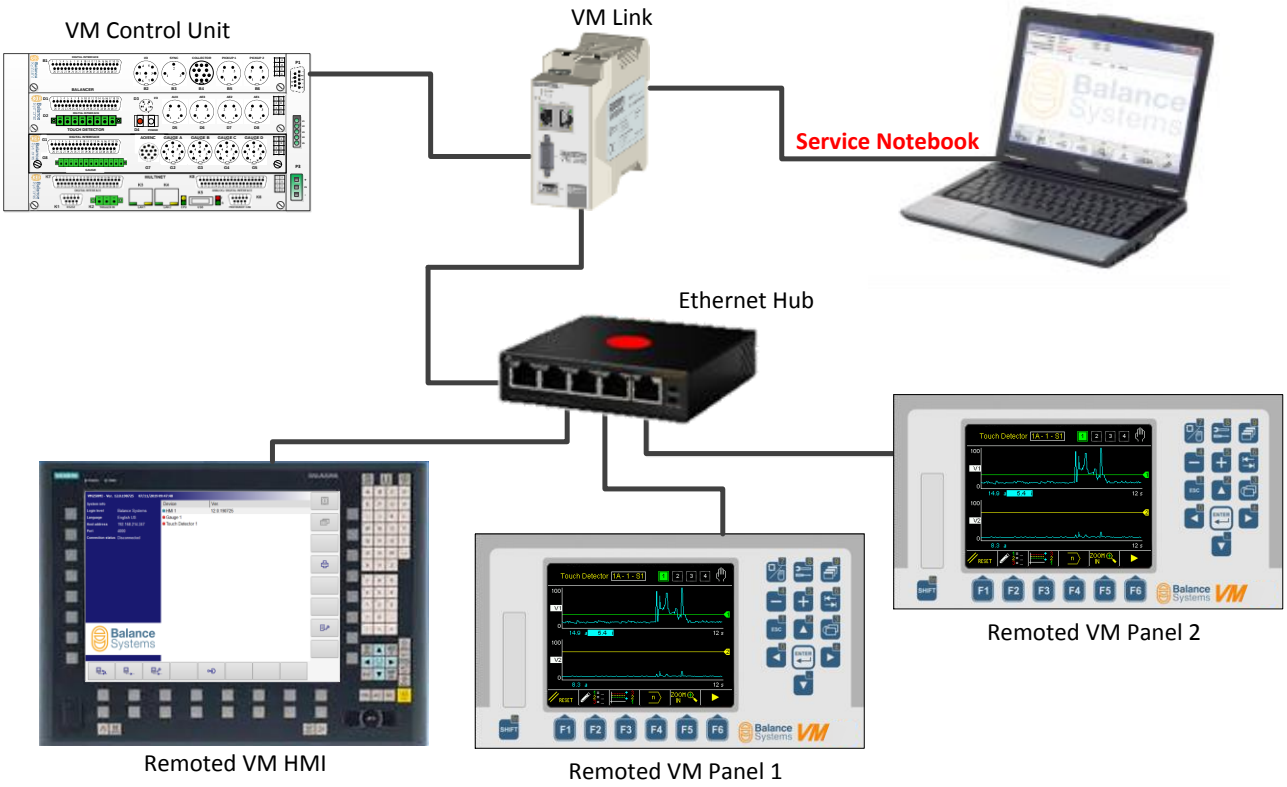
In this configuration, both A3 and A4 Ethernet ports are connected to VMx5 HMI and VMx5 Service respectively.

Set IP VM Link parameter, VMx5 Service and HMI host address as follow:

VM Link IP configuration		Service and HMI connection settings
Parameter	**Value**	 
Primary Eth [A3 – Eth 1]	A3 – Eth 1	
Cport [4000]	4000	
Baud rate [bps] [115200]	115200	
A3 – Eth 1 – Ip mode [Static]	Static	
A3 – Eth 1 – Ip [192.168.0.1]	Set desidered address to associate VMx5 HMI. (i.e.: 192.168.0.1)	
A4 – Eth 2 – Ip [10.0.0.1]	Set desidered address to associate VMx5 Service. (i.e.: 10.0.0.1)	

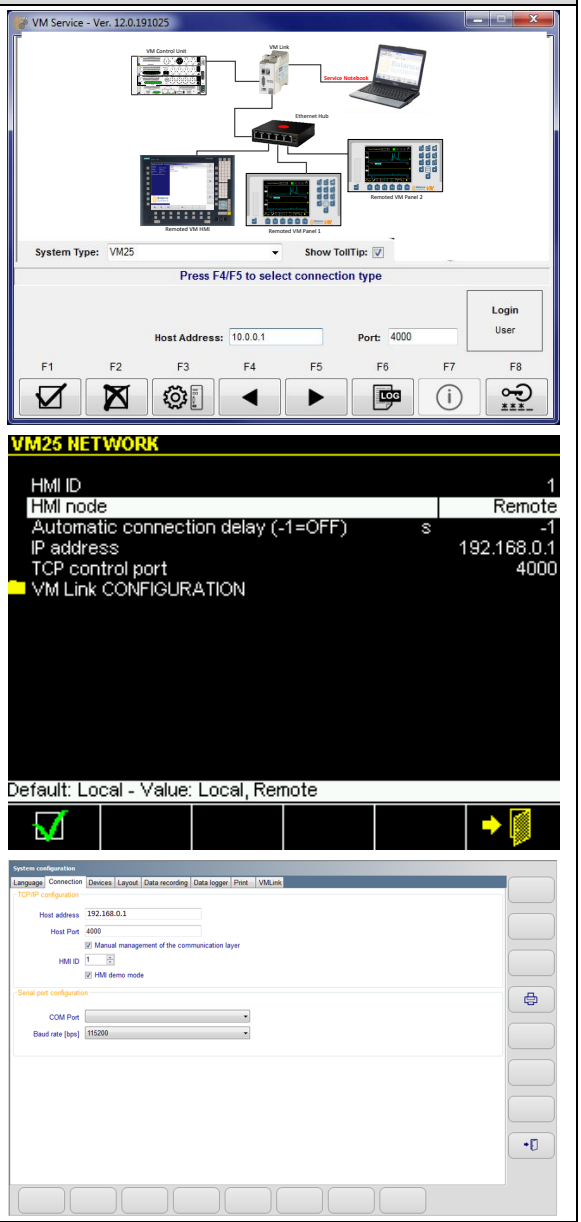
Make sure that PCU and PC network cards on which VMx5 HMI and VMx5 Service are installed, are in the same subnet of VM Link network cards (respectively A3 and A4). i.e.: IP address 192.168.0.2 and 10.0.0.2. Details about each parameter are described in sections 2.2, 2.3 and 2.4.

2.5.4. VMx5 Service directly connected to VM Link and remoted panels and HMI



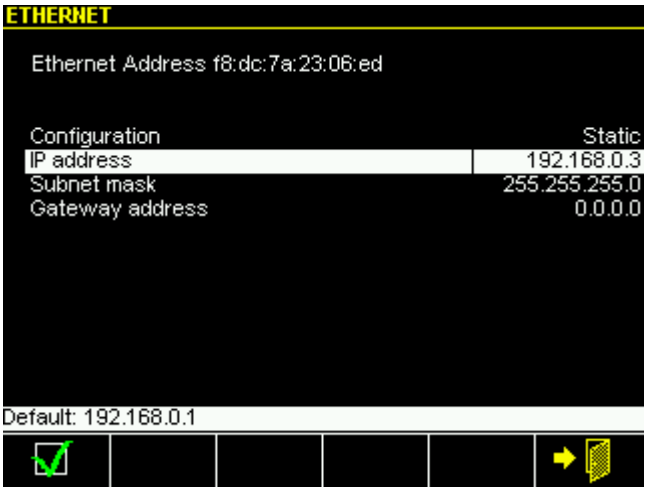
In this configuration, both A3 and A4 Ethernet ports are connected to Ethernet Hub and VMx5 Service respectively.

Set IP VM Link parameter, VMx5 Service, HMI and host address as follow:

VM Link IP configuration		Service and HMI connection settings
Parameter	**Value**	
Primary Eth [A3 – Eth 1]	A3 – Eth 1	
Cport [4000]	4000	
Baud rate [bps] [115200]	115200	
A3 – Eth 1 – Ip mode [Static]	Static	
A3 – Eth 1 – Ip [192.168.0.1]	Set desidered address to associate remoted VMx5 HMI and Panel (via Ethernet Hub). (i.e.: 192.168.0.1)	
A4 – Eth 2 – Ip [10.0.0.1]	Set desidered address to associate VMx5 Service. (i.e.: 10.0.0.1)	

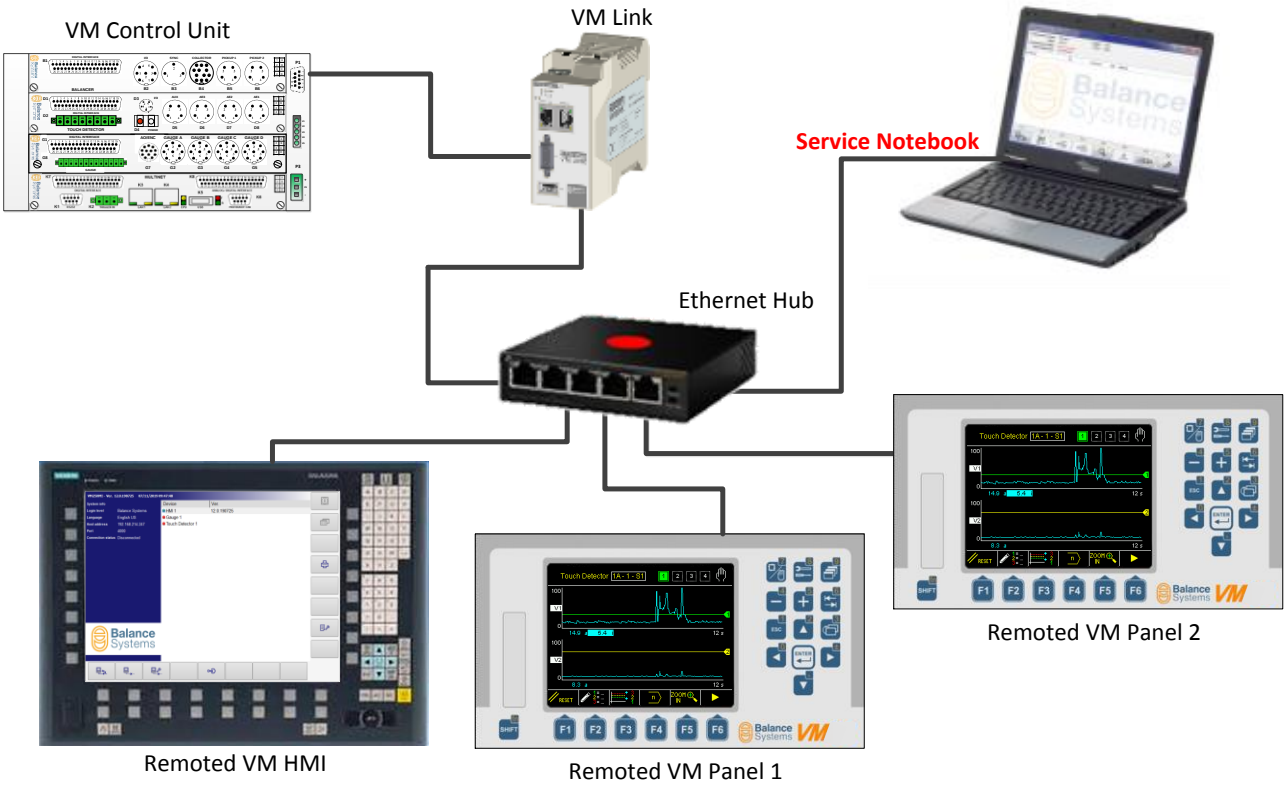
Make sure that PCU and PC network cards on which VMx5 HMI and VMx5 Service are installed, are in the same subnet of VM Link network cards (respectively A3 and A4). i.e.: IP address 192.168.0.2 and 10.0.0.2.

Make sure that panel network card, is in the same subnet of VM Link network card (A3). i.e.: IP address 192.168.0.3.



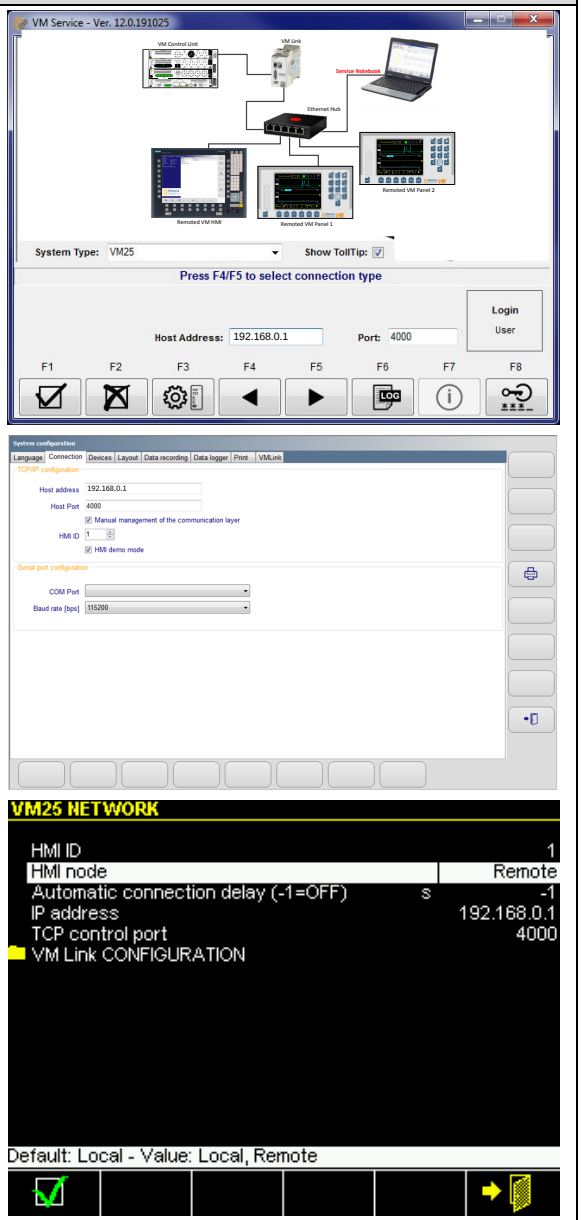
Details about each parameter are described in sections 2.2, 2.3 and 2.4.

2.5.5. Remoted panels, HMI and VMx5 Service



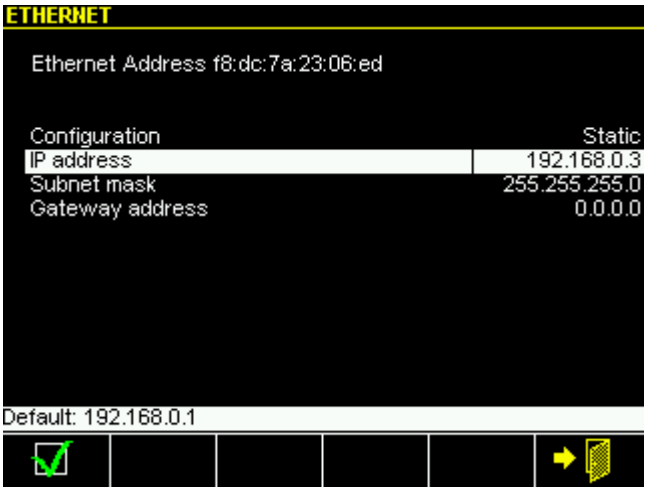
In this configuration, only A3 Ethernet port is used.

Set IP VM Link parameter, VMx5 Service, HMI and Panel host address as follow:

VM Link IP configuration		Service and HMI connection settings
Parameter	**Value**	
Primary Eth [A3 – Eth 1]	A3 – Eth 1	
Cport [4000]	4000	
Baud rate [bps] [115200]	115200	
A3 – Eth 1 – Ip mode [Static]	Static	
A3 – Eth 1 – Ip [192.168.0.1]	Set desidered address to associate both VMx5 HMI and VMx5 Service. (i.e.: 192.168.0.1)	
A4 – Eth 2 – Ip [10.0.0.1]	Port not used	

Make sure that PCU network cards on which VMx5 HMI and VMx5 Service are installed, are in the same subnet of VM Link network card (A3). i.e.: IP address 192.168.0.2 and 192.168.0.4.

Make sure that panel network card, is in the same subnet of VM Link network card (A3). i.e.: IP address 192.168.0.3.



Details about each parameter are described in sections 2.2, 2.3 and 2.4.

3. VM Link firmware upgrade

3.1. Firmware upgrade by VMx5 service

Firmware upgrade/downgrade, backup and restore are executable by VMx5 service as the same as all balance systems functions cards.
Further details are specified on 9UMENX512-1200 yymmdd VMx5 Service manual.

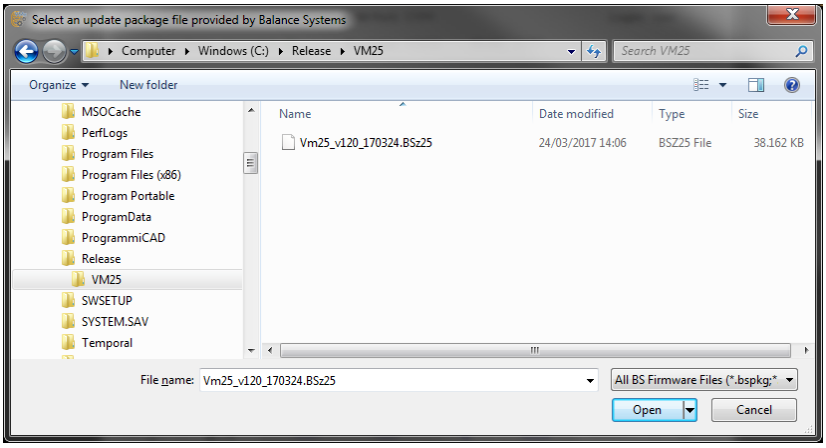
3.2. Firmware upgrade by A2 USB port

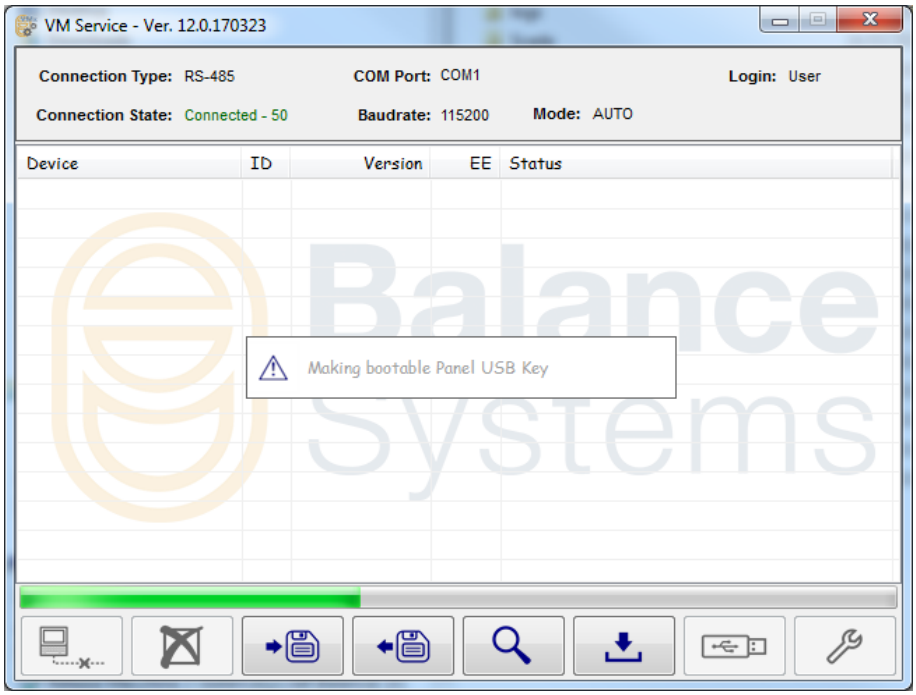
Local VM Link firmware upgrade is executable with USB hard drive directly connected to A2 USB port following these few steps:

3.2.1. USB pen-drive setup

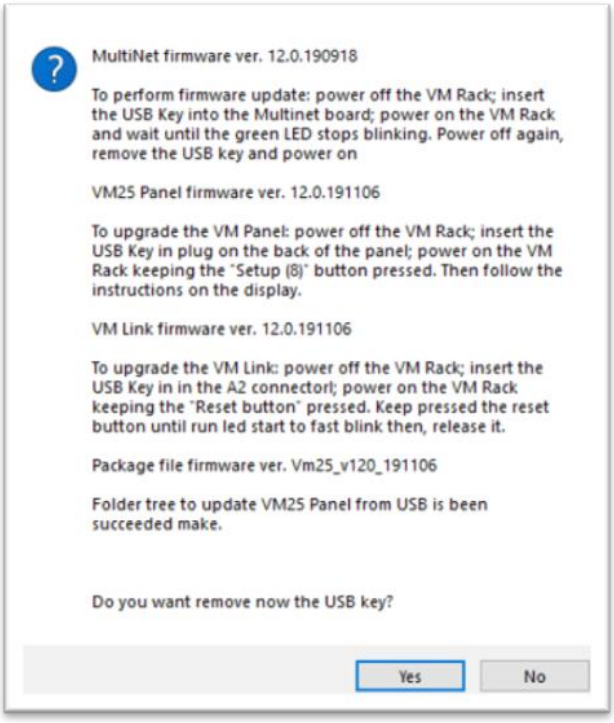
- Insert an USB pen-drive into an USB port of the PC. The pen-drive should be formatted as FAT32. If the pen-drive is not formatted the VMX5 service will do it.
- Open VMx5 Service and press the button 

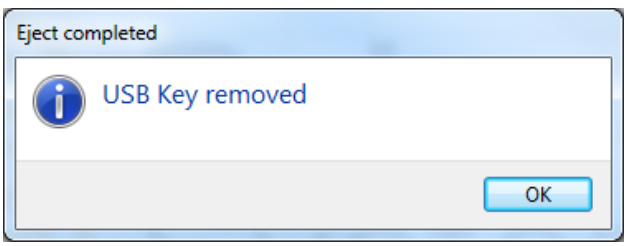
to enter in the procedure
- Select an update package file (file type " ***.BSz** " or " ***.BSz15** " or " ***.BSz25** ") provided by Balance Systems and press "open" to start the creation of the device.





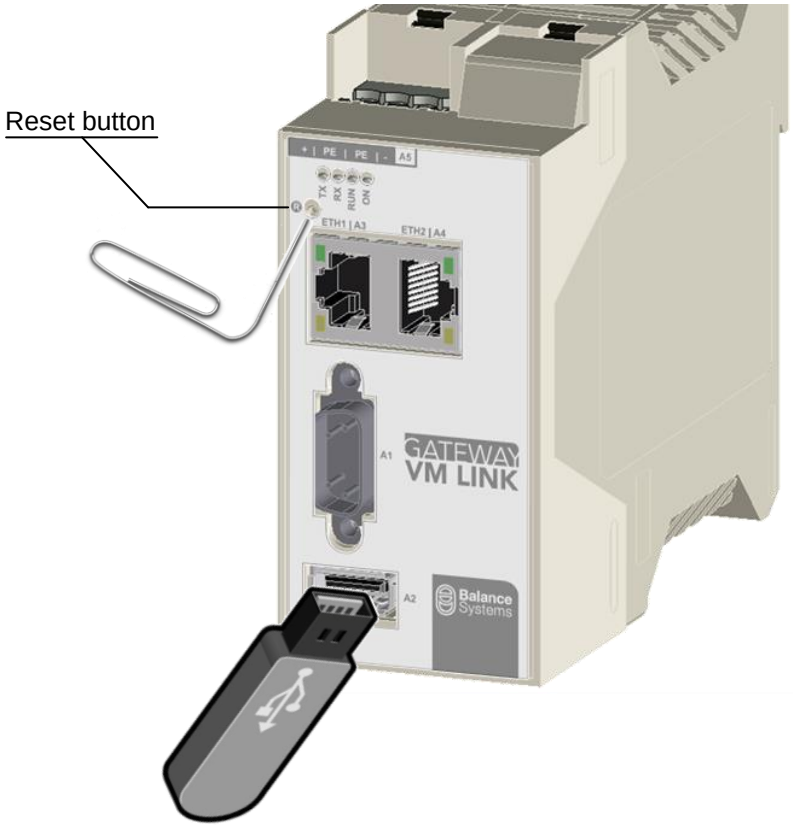
- At the end of the procedure, the following message will appear on screen.





3.2.2. Firmware upgrade

- Switch off VM Link device.
- Insert USB hard drive in the A2 connector.
- Using a paper clip, press the reset button as indicated below and switch on VM Link device. Keep pressed the reset button until run led start to fast blink then, release the reset button.



- Wait until run led start to blink as “Working normally” mode (LED blink 3 times).
- If some errors occours, run led start to blink as specified in the section 1.3

4. Appendix

Documents referred to in the text		
Name document	**Paragraphs**	**Link**
Components	1.2.1	9UMEN2506-1200 VM25 Components.pdf
Setup parameters	3.3, 4	9UMEN1505-1200 Parameter Setup.pdf
Service	2, 3.2, 3.3.2, 3.3.3	9UMEN0012-1100 VM25 Service v110 En.pdf
User panel	4	9UMEN0014-1200 VM25 Panel User v120 En.pdf