Mod. TCxC

CANopen

FIELDBUS MODULE FOR PNEUMATIC MANIFOLD VALVES & I/O SIGNAL

- *Industry standard connection M8-M12-M23-7/8"*
- *Integrated connection to manifold valves - ISO VDMA & Compact Series*
- *24 coils valves capability*
- *Auxiliary max capability of 64digital input + 40digital output*
- *Optical & via network Diagnostic Monitor*
- *IP 65 protection grade*

Automation

rev.04a8

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Every conceivable measure has been taken to ensure the correctness and completeness of this documentation. However, as errors can never be fully excluded we would appreciate any information or ideas at any time.

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We wish to point out that the software and hardware terms as well as the trademarks of companies used and/or mentioned in the present manual are generally trademark or patent protected.

Important note

To ensure fast installation and start-up of the units described in this manual, we strongly recommend that the following information and explanations are carefully read and abided by.

Personnel Qualification

The use of the product detailed in this manual is exclusively geared to specialists having qualifications in PLC programming, electrical specialists or persons instructed by electrical specialists who are also familiar with the valid standards. UNIVER S.p.A. declines all liability resulting from improper action and damage to UNIVER S.p.A. products and third party products due to non-observance of the information contained in this manual.

Intended Use

For each individual application, the components supplied are to work with a dedicated hardware and software configuration. Modifications are only permitted within the framework of the possibilities documented in the manuals.
All other changes to the hardware and/or software and the non-conforming use of the components entail the exclusion of liability on part of UNIVER S.p.A.
Please direct any requirements pertaining to a modified and/or new hardware or software configuration directly to UNIVER S.p.A.

Safety Notes

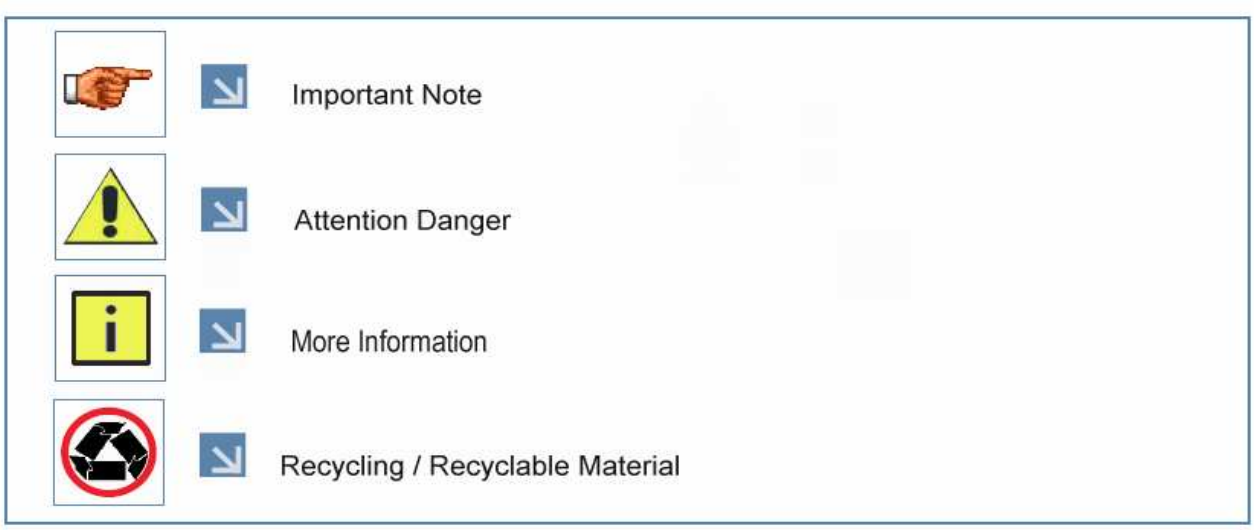
Attention
Switch off the system prior to working on bus modules!
In the event of deformed contacts, the module in question is to be replaced, as its functionality can no longer be ensured on a long-term basis.

ESD (Electrostatic Discharge)
The modules are equipped with electronic components that may be destroyed by electrostatic discharge. When handling the modules, ensure that the environment (persons, workplace and packing) is well grounded. Avoid touching conductive components, e.g. gold contacts.

Abbreviation

DI Digital Input
DO Digital Output
I/O Input/Output
ID Identifier
HW Hardware
SW Software
LSB Least Significant Digit
MSD Most Significant Digit
VLS24 Logic & Sensor power supply
VA24 Output power supply

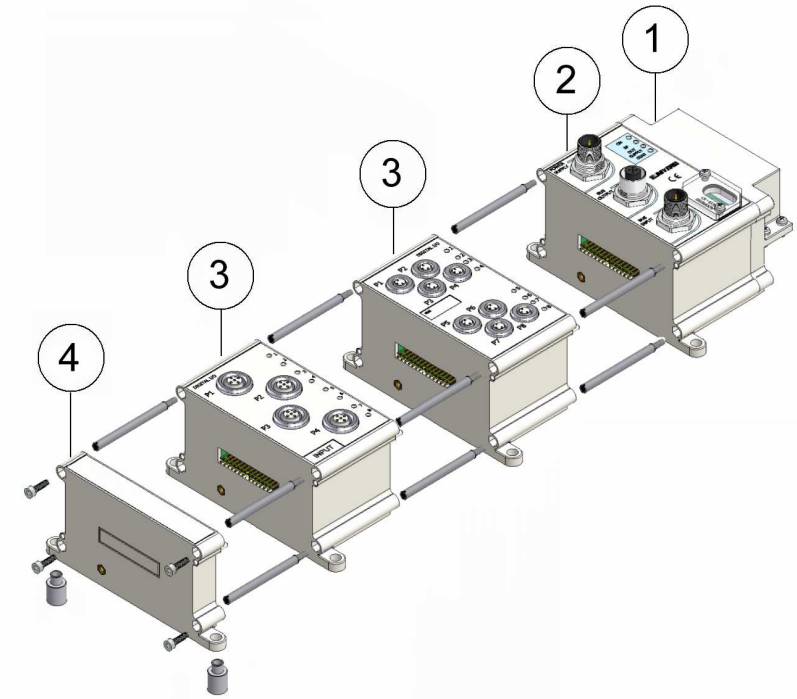
Legend of symbols



System descripiton

The TCxC is a modular fieldbus slave device for controlling manifold valve and digital input and output which use **CANopen** fieldbus.

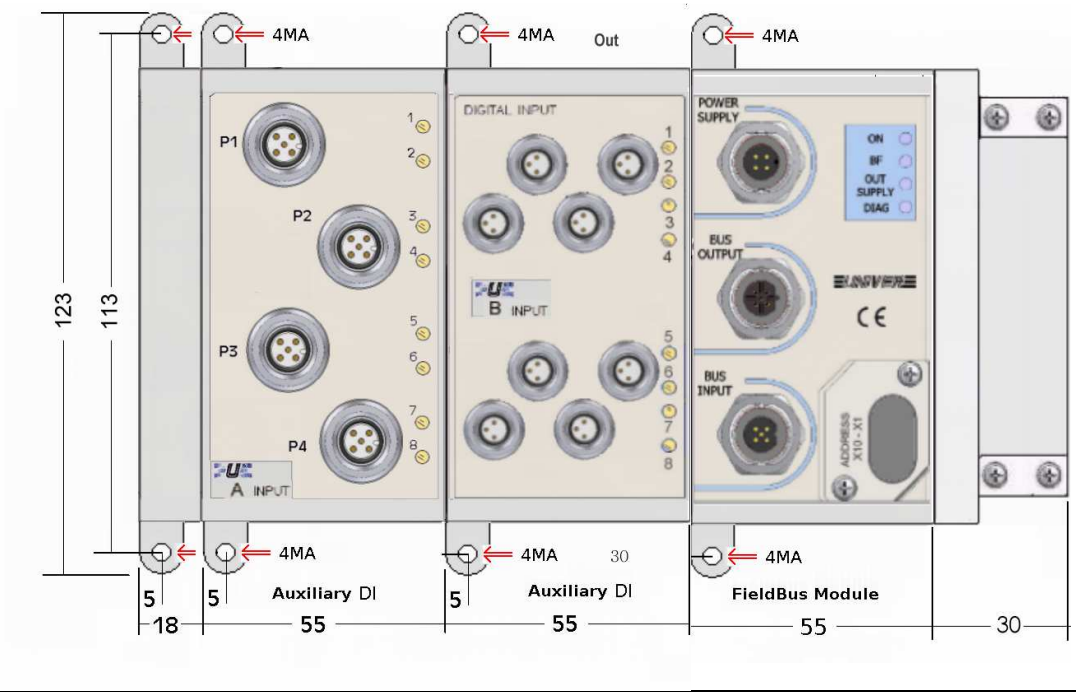
The system structure here described consists of an MANIFOLD OUTPUT INTERFACE (1), of an FIELDBUS module (2) of an AUXILIARY DI/DO modules (3), the end module (4) completes the system.



Module installation

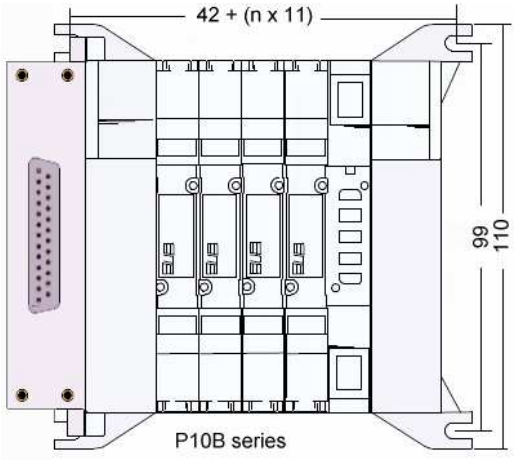
Before installing the module, verify that all its parts are intact and have not been damaged during transport, pay attention to the overall dimentions.

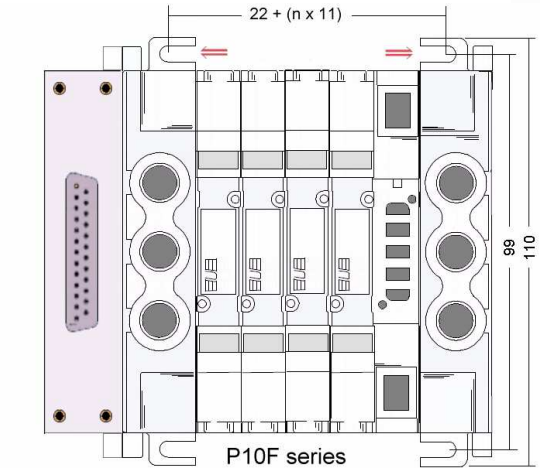
We do recommend to fix the device in the specified hole with M4 screws on a single metal surface to grant a good ground connection



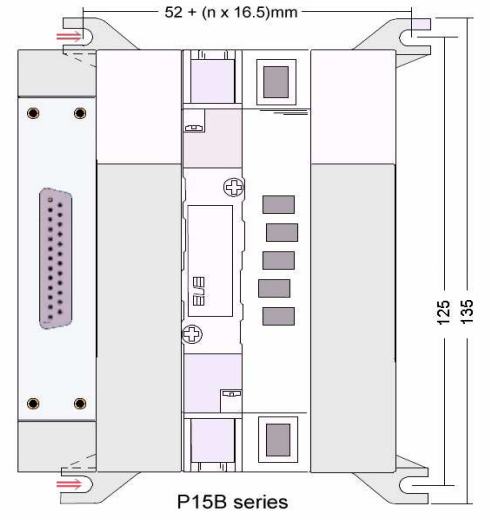
The overall length changes according to the numbers of the auxiliary I/O modules used and manifold valves type.

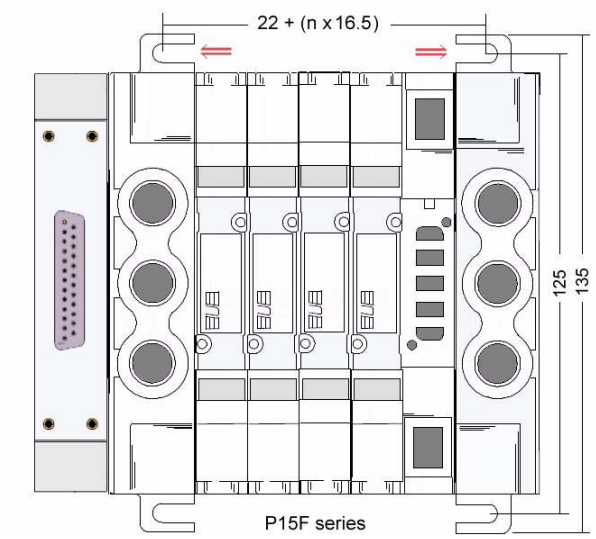
P10 Compact manifold dimentions



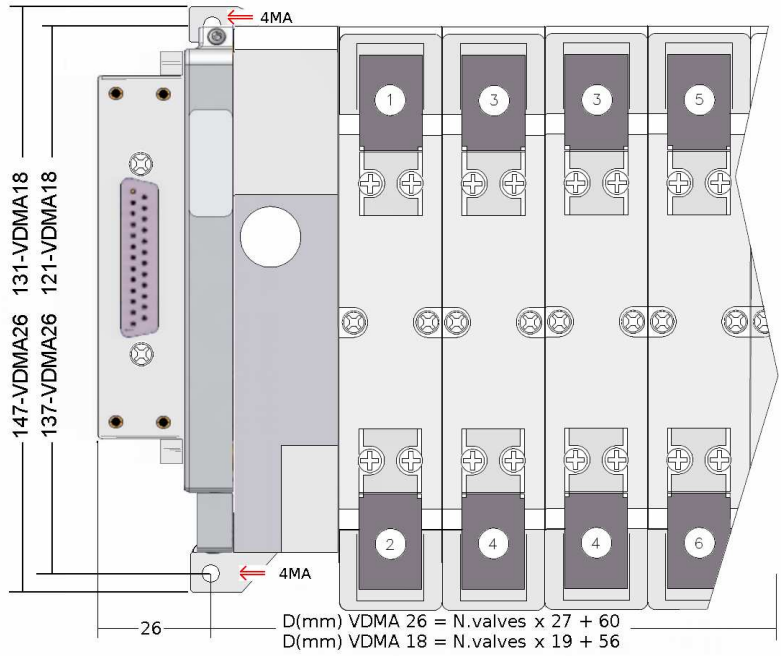


P15 Compact manifold dimentions





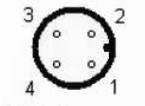
ISO VDMA manifold dimentions



EDS file specification

EDS is an abbreviation of Electronic Data Sheet. EDS file on disk contains configuration data for specific device types, information about configurable attributes for a device, including object addresses of each parameter and provide for an open configuration tool while reading the device information and recognizing the device characteristics.

Connectors pin assignement



M12 A coded

Aux Supply (MALE)
Looking into pins

Pin	Function	
1	VLS24	Logic/Sensor Supply
2	0VA	VA24 common
3	0VLS	VLS24 common
4	VA24	Output Supply

Bus OUT (FEMALE)
Looking into socket

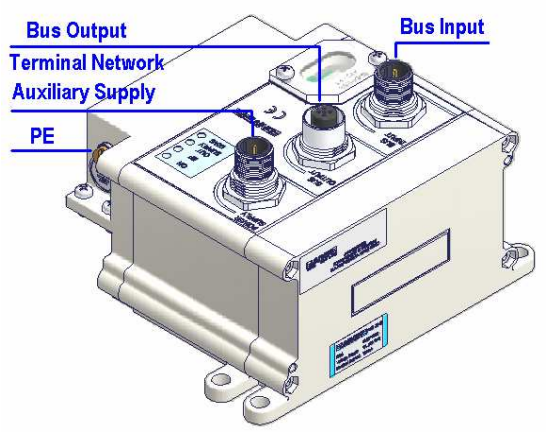
M12 A coded

Bus IN (MALE)
Looking into pins

Pin	IN OUT
1	Drain
2	VLS24
3	0VLS
4	CAN - H
5	CAN - L

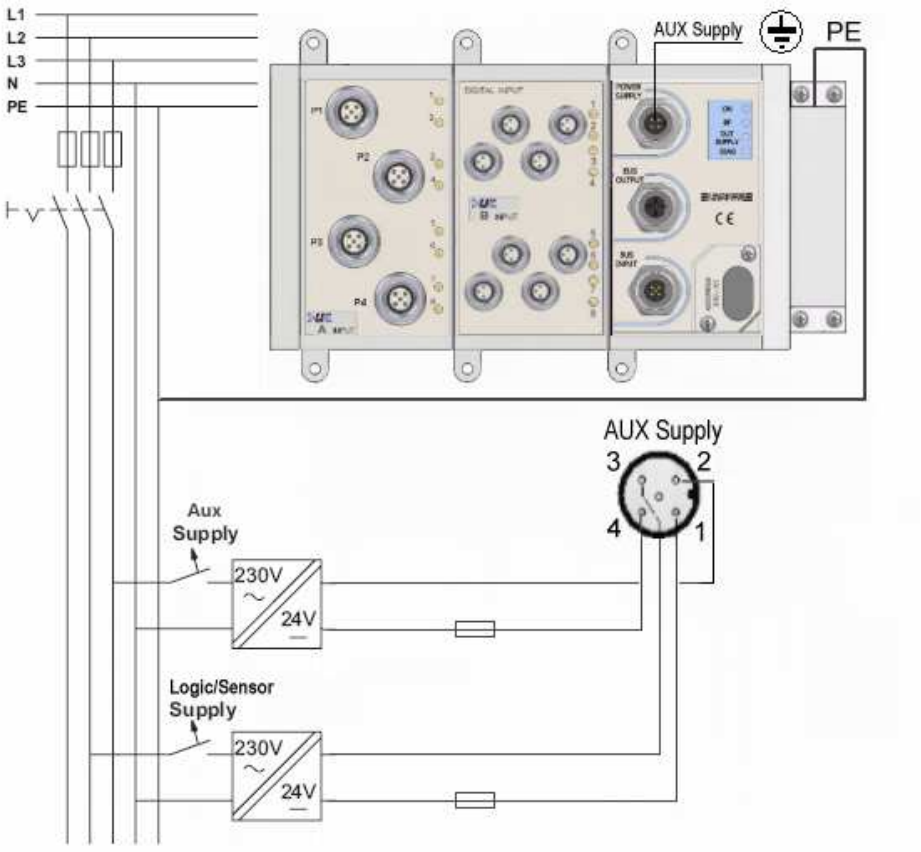
System supply connection

Connect the module to the appropriate CAN network cable
The PE connection has to be connected externally to the ground

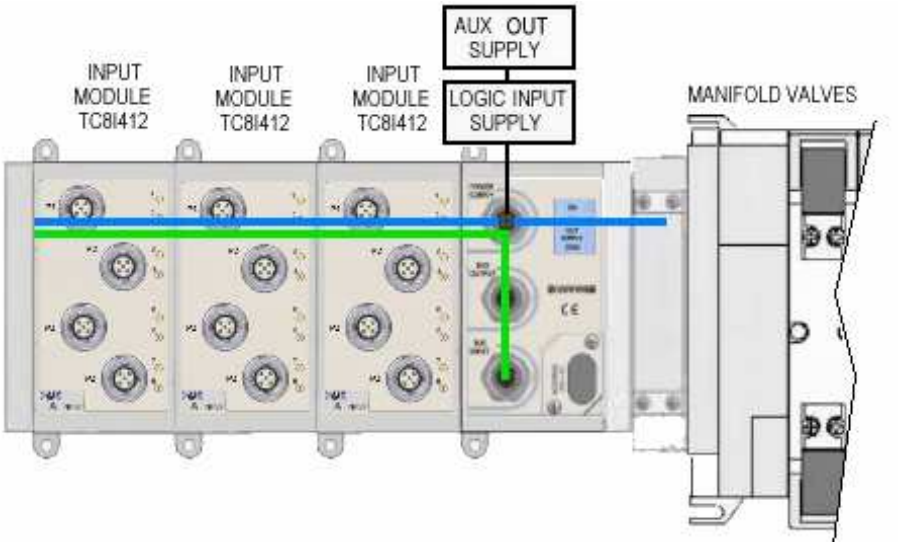


The fieldbus module requires a dual power supply:
VLS24 (24Vdc) for the Logic & Sensor supply
VA24 (24Vdc -10%+15%) for output and manifold valves.

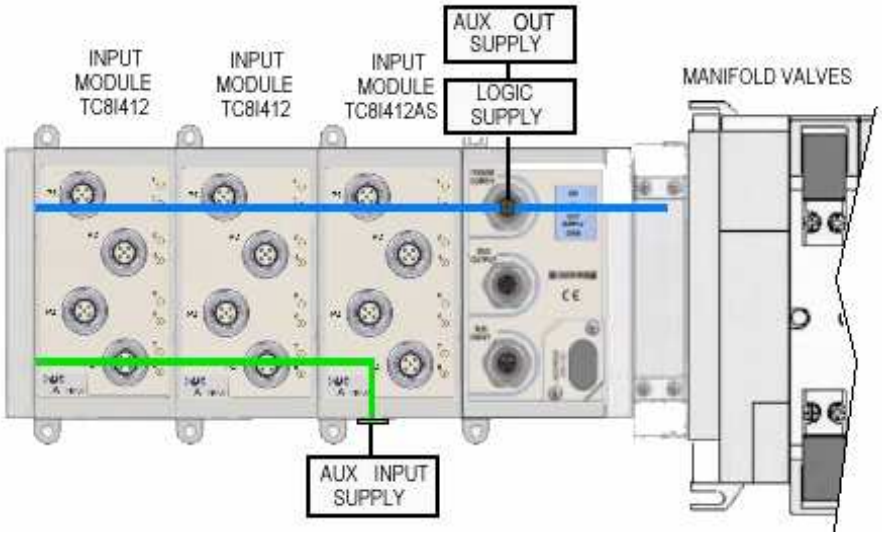
Supply Example



Dual Power Supply System



Triple Power Supply System using TC8I412AS Input Module

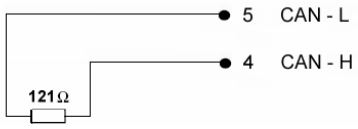


Terminal network resistor

A DeviceNet must be terminated at each end of the trunk line. The host controller and the last slave on the network must always be terminated to eliminate reflections, even if only two nodes are present.

The DeviceNet specifications for the terminating resistor are:

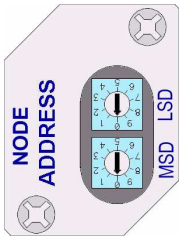
- 121 ohm
- 1% metal film
- ¼ Watt

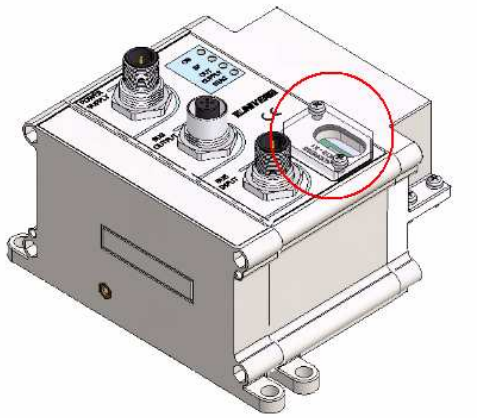


Connect terminating connector (part No. **TZ-M5M12-T** on the Output Bus connector.

How to Set the Module Address

Max Valid Node Address are **01** to **89**
Each module is delivered set for node address **63**
The Dip or Rotary switches, are located
on the top panel.





Rotary Switch	**MSD** X10 ***M**ost **S**ignificant **D**igit*	**LSD** X1 ***L**east **S**ignificant **D**igit*
Address Set	**6**	**3**

To set the address, remove the cover, tourn rotary switch to the desired address, tourn OFF the device and then tourn ON again(The address is read only at power up)
Remember to close the cover cap again to guarantee the protection degree

Baudrates function mode

The adapter supports these rates: From 10Kbaud to 1Mbaud

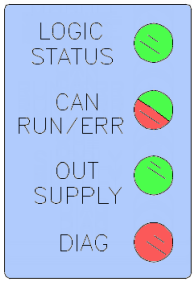
Baudrates setting table

X10 MSD swich	***9***								
X1 LSD swich	***0***	***1***	***2***	***3***	***4***	***5***	***6***	***7***	***8***
K Baudrates mode	10	20	50	100	125	250	500	800	1000
The device scans the setting code at firstly power supply it.									

Baurates setting mode:

Before supplying the device:
Set the MSD rotary switch X10 on "9" position.
Set the LSD rotary switch X1 according to the baudrates setting table for the requested value (default 1Mbts).
Turn on the power and then set the Address Code on rotary switches
Turn off the device supply wait a few second and turn on the supply.

Module diagnostic and status indicators



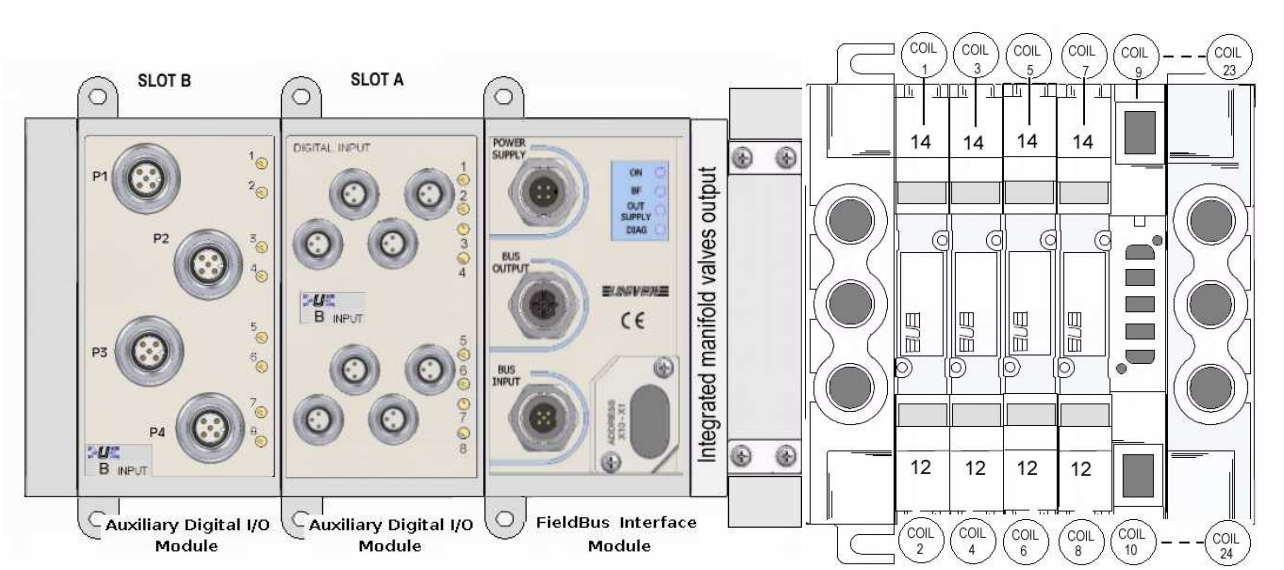
Des.	Colour LED	Meaning
LOGIC STATUS	**Green**	System ready
	ON:	Node power ON & ready
	OFF:	Node off-line or not powered
CAN RUN / ERR	**Green ON**	Bus connected
	Red ON	Bus disconnected
OUT SUPPLY	**Green**	Actuator Supply
	ON:	Actuator Supply present
	OFF:	Actuator Supply missing
DIAG	**Red**	Diagnostic
	OFF:	No error
	FLASH:1	Actuator supply missing
	FLASH:2	Output overload
	FLASH:3	High noise level
	FLASH:4	Auxiliary Modules Fail
	FLASH:5	No I/O module detected
	FLASH:6	Reserved
	FLASH:7	Reserved
	FLASH:8	Unknown module
	FLASH:9	Input supply missing or protection active
	FLASH:10	Reserved
	FLASH:11	Oversize I/O Byte

For Network diagnostic functions see pg.15

Module specifications

FieldBus Data	***CANopen***	
Bus Input Connector *Bus Output Connector*	*Circular M12 Male 5 pins* *Circular M12 Female 5 pins*	
Bus Function Display	*LOGIC STATUS _ Green* *CAN RUN _ Green/ Red*	
Auxiliary Function display	*Out Supply_Green* *Local Diagnostic_ Red*	
Address Slave	*Switchable 00 to...99*	
Communication Rate – Autobode mode	*10-20-50-100-125-250-500-800Kbaud -1Mbaud*	
EDS filename	*TCxC .eds*	
Basic Module part code	*TCxC*	
Electrical Data		
Power Supply connector	*Circular M12 4pins male A code*	
Logic - Digital Input Voltage Supply VLS24	*24 Vdc +/- 20%*	
Logic Nominal Current	*100mA*	
Digital Inputs max Current	*1A @ 20°C - overload protected (20mA per input)*	
Output voltage Supply VA24	*24 Vdc -10+15% (valves coil range)*	
Output Current VA24 (all output	*2,5A max - overload protected*	
Output Manifold Valves Capability	*24 coil max - (12 bistable valves - 1,5A per 12 coils)*	
Auxiliary Digital Output Capability	*max 40 digital output (5 auxiliary module)*	
Auxiliary Digital Input Capability	*max 64 digital input (8 auxiliary module)*	
Environmental Conditions		
weight	*370g*	
Overall Dimentions	*85 x 123 x 75 mm*	
MTBF - Mean Time Between Failures	*197.359 Hours*	*50°C*
Protection Degree	*IP 65*	*IEC 60529*
Relative humidity	*5 to 85%*	*IEC 60068-2-30*
Operating Temperature	*5°C ÷ 50°C*	*IEC 60068-2-1*
Storage Temperature	*-25°C ÷ 80°C*	*IEC 60068-2-2*
Vibration	*5g tested 10-500Hz*	*IEC 60068-2-6*
Shock operating	*22g*	*IEC 60068-2-27*

Valves Coil & Input/Output Slot Allocation



The physical position of the expansion modules establishes the increment of the Data-Byte allocation according to a sequence which evolves increasingly from the FieldBus module to the left.

Output manifold valves consumes-data definition

		Coil	Byte-Bit Consumes	Coil	Byte-Bit Consumes	Coil	Byte-Bit Consumes
Valve Function	side**14**	**1**	**0**-1	**9**	**1**-0	**17**	**2**-0
	side**12**	**2**	**0**-2	**10**	**1**-1	**18**	**2**-1
	side**14**	**3**	**0**-3	**11**	**1**-2	**19**	**2**-2
	side**12**	**4**	**0**-4	**12**	**1**-3	**20**	**2**-3
	side**14**	**5**	**0**-5	**13**	**1**-4	**21**	**2**-4
	side**12**	**6**	**0**-6	**14**	**1**-5	**22**	**2**-5
	side**14**	**7**	**0**-7	**15**	**1**-6	**23**	**2**-6
	side**12**	**8**	**0**-0	**16**	**1**-7	**24**	**2**-7

The digital output manifold valves use always 24 Bit(3 Byte).

Auxiliary Digital OUTPUT consumes-data definition.

		Byte-Bit Consumes				
Module Slot		***A***	***B***	***C***	***D***	***E***
Port-Pin Function	**P 1**-4	**3**-0	**4**-0	**5**-0	**6**-0	**7**-0
	P 1-2	**3**-1	**4**-1	**5**-1	**6**-1	**7**-1
	P 2-4	**3**-2	**4**-2	**5**-2	**6**-2	**7**-2
	P 2-2	**3**-3	**4**-3	**5**-3	**6**-3	**7**-3
	P 3-4	**3**-4	**4**-4	**5**-4	**6**-4	**7**-4
	P 3-2	**3**-5	**4**-5	**5**-5	**6**-5	**7**-5
	P 4-4	**3**-6	**4**-6	**5**-6	**6**-6	**7**-6
	P 4-2	**3**-7	**4**-7	**5**-7	**6**-7	**7**-7

The maximum auxiliary digital output configurable are 40 Bit(5 Byte).

Auxiliary Digital INPUT produces-data definition

		Byte-Bit Produces						
Module Slot		***A***	***B***	***C***	***D***	***E***	***G***	***H***
Port-Pin Function	**P 1**-4	**0**-1	**1**-0	**2**-0	**3**-0	**4**-0	**5**-0	**6**-0
	P 1-2	**0**-2	**1**-1	**2**-1	**3**-1	**4**-1	**5**-1	**6**-1
	P 2-4	**0**-3	**1**-2	**2**-2	**3**-2	**4**-2	**5**-2	**6**-2
	P 2-2	**0**-4	**1**-3	**2**-3	**3**-3	**4**-3	**5**-3	**6**-3
	P 3-4	**0**-5	**1**-4	**2**-4	**3**-4	**4**-4	**5**-4	**6**-4
	P 3-2	**0**-6	**1**-5	**2**-5	**3**-5	**4**-5	**5**-5	**6**-5
	P 4-4	**0**-7	**1**-6	**2**-6	**3**-6	**4**-6	**5**-6	**6**-6
	P 4-2	**0**-0	**1**-7	**2**-7	**3**-7	**4**-7	**5**-7	**6**-7

The maximum auxiliary digital input configurable are 64 Bit(8 Byte).

Diagnostic definition and configuration

The Emergency Telegram consist of 8 bytes with the data as shown below:								
Emergency Object Data								
Byte	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Content	Emergency Error Code		Error Register (Object 1001H)	Manufacturer specific Error Field				
				Main Diagnostic	**0000-0000**	**0000-0000**	**0000-0000**	**0000-0000**

Module No.2
Module No.1
Module No.4
Module No.3
Module No.6
Module No.5
Module No.8
Module No.7

Note1: The module transmits **one Emergency Telegram** in case one or more **Input** modules generate errors.
Note2: The module transmits **one Emergency Telegram** in case one or more **Output** modules generate errors.
Note3: The module transmits **two Emergency Telegrams** in case one or more input **and** one or more output modules generate errors.
Note4: Bit 6***** of Byte 3 define if the Emergency Telegram has been generated by Input or Output modules

MANUFACTURER SPECIFIC ERROR FIELD

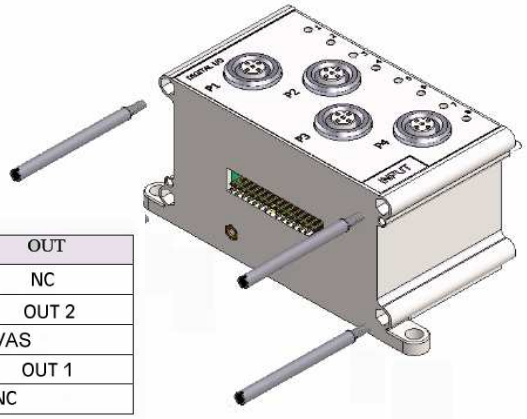
MAIN DIAGNOSTIC (BYTE 3)		
Bit	***Name***	***Description***
0	24V Main power loss	This Bit becomes active when the VA24 is no power supply (pin4 of Power Supply connector). In this condition the coils of the valves are not supplied to even if the logic command is ON.
1	Module fail	This Bit becomes active when the module is in fault condition (replace the module)
2	Output fail	This Bit becomes active, when one or more outputs are overloaded or in short circuit condition for the auxiliary output module (not supported on TB3P and TB4P module)
3	High noise level	This Bit becomes active, when internal bus communication errors are detected, caused by an high level of noise coupling the cables connected to the module
4	24V Input power loss	This Bit becomes active when an overload or short circuit is present in one or more input module connectors
5	Reserved	
6*	I/O module	Value 0 for Input modules, Value 1 for Output modules
7	Module info Monitor	This Bit becomes active, when module extended diagnostic are present

INPUT/OUTPUT DIAGNOSTIC MODULE NIBBLE (BYTE 4….7)	
Bin.Code	***Description***
0000	This Value indicate no error present
0001	This Value indicate VA24 voltage missing ☺
0010	This Value indicate one or more outputs in overloaded or in short circuit condition ☺
0011	This Value indicate detection of internal bus communication errors, caused by an high level of noise coupling the cables connected to the module
0100	This Value indicate module fail
0101	This Value indicate overload or short circuit is present in one or more input module connectors

Code value from **0110** to **1111** are not assigned ☺ Output module only

Auxiliary Digital I/O Modules Connection

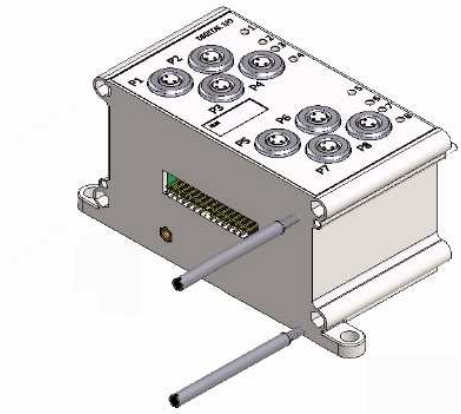
COD.**TC8I412**
N.8 Digital Input - M12
COD.**TC8I412AS**
N.8 Digital Input - M12 AUX-SUPPLY
COD.**TC8U412**
N.8 Digital Output - M12



Input / Output
M12 (Female)
Looking into sockets

Pin	IN	OUT
1	VS24	NC
2	INP 2	OUT 2
3	0VAS	
4	INP 1	OUT 1
5	NC	

COD.**TC8I808**
N.8 Digital Input - M8

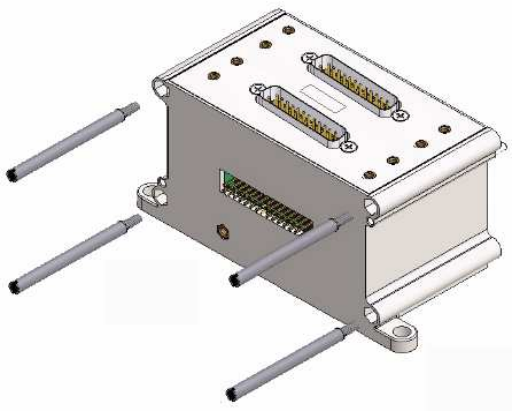


Input M8 (Female)
Looking into sockets

Pin	IN
1	VS24
4	INP
3	0VAS

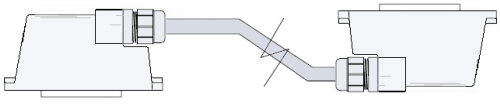
P1-P2 Pin No.	Part Code TCR32ID	Part Code TCR32UD
1	Input 0-0	Output 0-0
2	Input 0-1	Output 0-1
3	Input 0-2	Output 0-2
4	Input 0-3	Output 0-3
5	Input 0-4	Output 0-4
6	Input 0-5	Output 0-5
7	Input 0-6	Output 0-6
8	Input 0-7	Output 0-7
9	Input 1-0	Output 1-0
10	Input 1-1	Output 1-1
11	Input 1-2	Output 1-2
12	Input 1-3	Output 1-3
13	Input 1-4	Output 1-4
14	Input 1-5	Output 1-5
15	Input 1-6	Output 1-6
16	Input 1-7	Output 1-7
17/18	NC	NC
19/20	0V	0V
21/22	+INP SUPPLY	NC
23/24	0V	0V GND
25	SHIELD	SHIELD

Max radius of the curve:
static 80mm, dynamic 120mm
Outer diameter 8mm, PG9



COD. **TCR32UD**
16+16 Digital Output
Remote module

COD. **TCR32ID**
16+16 Digital Iutput
Remote module



TSCFN16D000

Auxiliary Digital I/O Modules Specifications

Input Module Specification

Part Code	**TC8I412**	**TC8I808**	**TCR32ID**
Termination type	*Circular 4 x M12*	*Circular 8 x M8*	*Sub D 2 x 25pins*
Input per Module	*8*	*8*	*16+16*
Switching Logic	*2 or 3 wire PNP devices*		
Operating Voltage Supply ***VS24***	*24V dc+/- 25%*		
Power dissipation max per module	*0,18W*		
Sensor Source Current per input	*20mA*		
Signal logic "OFF"	*-30V dc to 5V dc*		
Signal logic"ON"	*13V dc to 30V dc*		
Typical input Current ON state max	*5mA*		
Typical input Current OFF state max	*1,1mA*		
Nominal Ipedence	*5Kohm*		
Delay Time ON to OFF	*1mS*		
Status Display	*Valid Input – yellow indicator ON*		

Output Module Specification

Part Code	**TC8U412**	**TCR32UD**
Termination type	*Circular 4 x M12 size*	*Sub D 2 x 25pins*
Output per module	*8*	*16+16*
Switching Logic	*Sourcing Output*	
Output Voltage Supply ***VA24***	*24 V dc +/- 15% (valves coil range)*	
Power dissipation max per module	*1,8W*	
ON state Current per Output	*0.3A*	
ON state Surge Current per Output 10mS	*1.0A*	
Overload protected per Output	*1.2A*	
Module Current rating max	*1.5A* **(1)**	
Status Display	*Energized Output – yellow indicator ON*	

Environmental Conditions

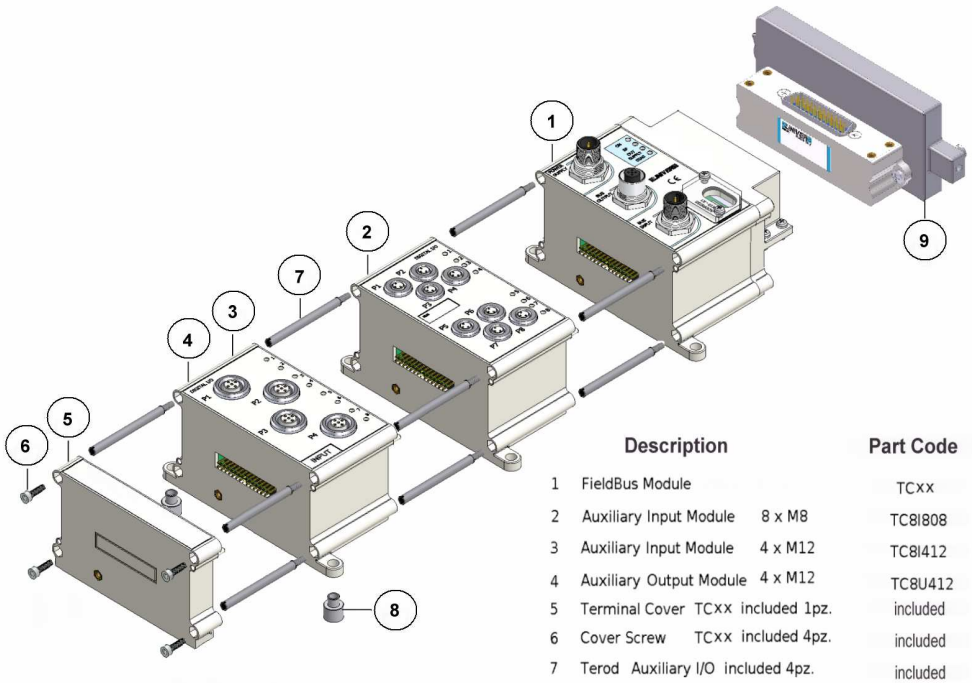
weight	*70g*	
Overall Dimentions	*30 x 123 x 75 mm*	
MTBF - Mean Time Between Failures	*197.359 Hours*	*50°C*
Protection Degree	*IP 65*	*IEC 60529*
Relative humidity	*5 to 85%*	*IEC 60068-2-30*
Operating Temperature	*5°C ÷ 50°C*	*IEC 60068-2-1*
Storage Temperature	*-25°C ÷ 80°C*	*IEC 60068-2-2*
Vibration	*5g tested 10-500Hz*	*IEC 60068-2-6*
Shock operating	*22g peak*	*IEC 60068-2-27*

Make sure all connectors and caps are securely tightened to properly seal the connections against leaks and maintain IP65 requirements. I/O cable length should be less than 10 meters

(1) The max current available for all output modules included into the system is 2.5Amax.

Modules Assembly System

The auxiliary inputs and outputs modules will be connected to FieldBus module on the opposite side of the manifold valves.



	Description	Part Code
1	FieldBus Module	TCxx
2	Auxiliary Input Module 8 x M8	TC8I808
3	Auxiliary Input Module 4 x M12	TC8I412
4	Auxiliary Output Module 4 x M12	TC8U412
5	Terminal Cover TCxx included 1pz.	included
6	Cover Screw TCxx included 4pz.	included
7	Terod Auxiliary I/O included 4pz.	included
8	Assembly Support I/O included 4pz.	included
9	Multiway Manifold Dsub adpt. VDMA 18-26	included

Identification Label

Conformity declaration

Univer S.p.A. declares under the own responsibility that the Device in object is in compliance with the EMC directive 89/336/EEC, with amendaments for 92/31/EEC and 93/68/EEC through conformance whith the following Harmonised European standards:

Date: 9 th July 2007

Device: Remote I/O & Manifold Valves Control

Term: TCxC-TExC

Manufacturer: Univer S.p.A.
Via Eraclito, 31
20128 Milano
ITALY
tel. +39 02252981
fax. +39 0225298310

CE

Harmonised European standards:

EN 61000-4-3 (1996)
EN 61000-4-6 (1996)
EN 61000-4-2 (1996)
EN 61000-4-4 (1996)
EN 61000-4-5 (1995)
EN 61000-4-6 (1996)
EN 61000-4-8
EN 61000-4-11
EN 61000-6-2 (1995)
EN 61000-6-4 (1993)

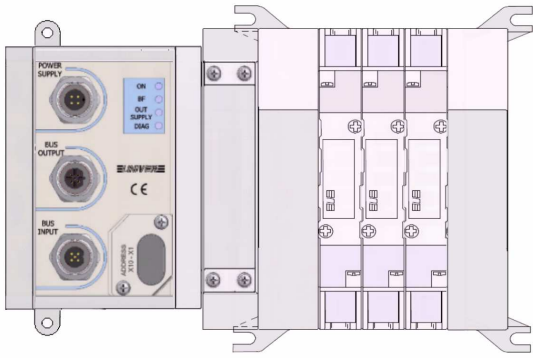
R&D Manager signature: _____

FieldBus accessories ordering code

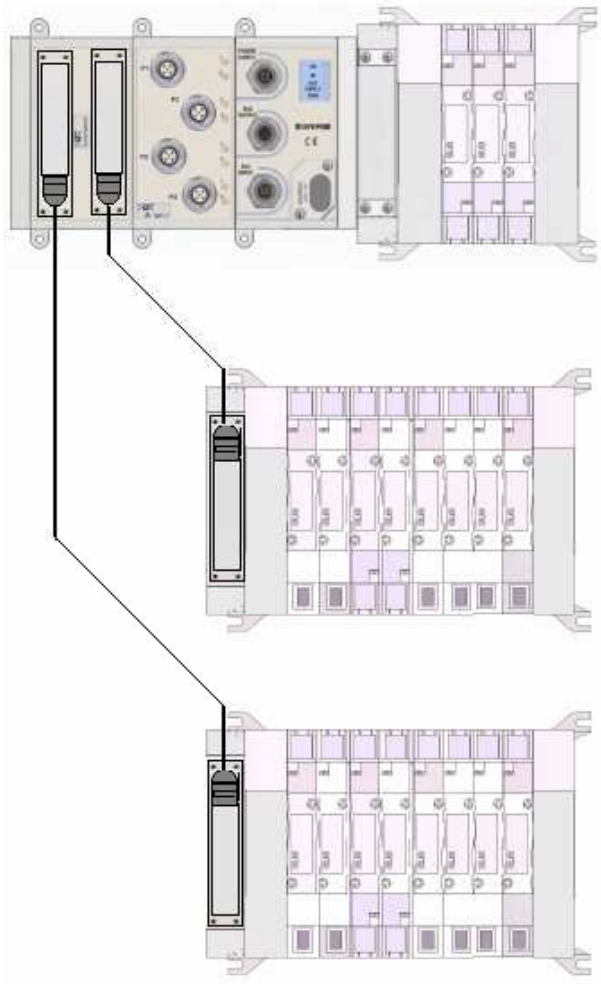
	Code	Description	Size	Type	Protection grade
	TSCF4MCF	DeviceNet (4-pin, female) Generic Aux Power Supply	7/8	Clamp screw	IP65
	TSCF5MCF	DeviceNet (5-pin, female)	7/8	Clamp screw	IP65
	TSCF5MCM	DeviceNet (5-pin, male)	7/8	Clamp screw	IP65
	TZ-F4M12	Profibus DP (4-pin, female) CANopen (4-pin, female) Interbus-S (4-pin, female)	M12	Clamp screw	IP65
	TZ-F5M12	DeviceNet (5-pin, male) CANopen (5-pin, male)	M12	Clamp screw	IP65
	TZ-M5M12	DeviceNet (5-pin, male) CANopen (5-pin, male)	M12	Clamp screw	IP65
	TZ-M5M12-B	Profibus DP, reverse keyway (5-pin, male) Interbus-S (5-pin, male)	M12	Clamp screw	IP65
	TZ-F5M12-B	Profibus DP, reverse keyway (5-pin, female) Interbus-S (5-pin, female)	M12	a Cablare	IP65
	TZ-M5M12-BT	Profibus DP, reverse keyway (5-pin, male)	M12	Network Terminator	IP65
	TZ-F5M12T	DeviceNet (5-pin, male) CANopen (5-pin, male)	M12	Network Terminator	IP65

Additional accessories for connecting can be found on www.univer-group.com webside

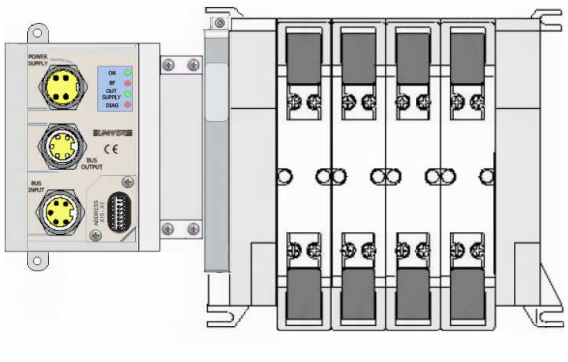
System configuration examples



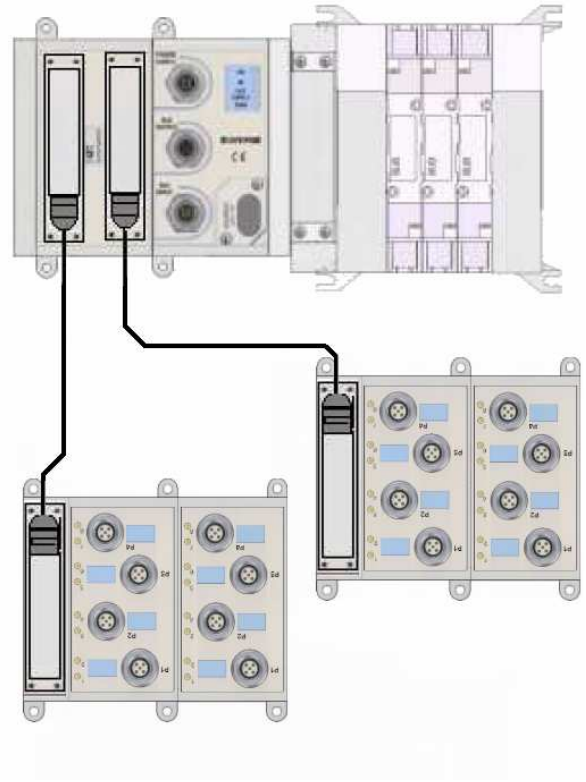
TCxC fieldbus device with
integrated COMPACT MANIFOLD



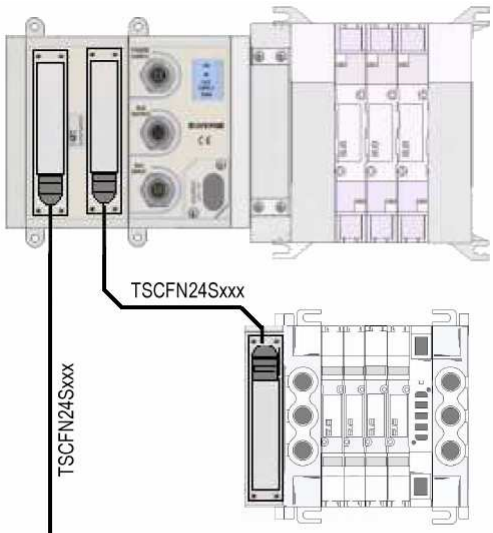
TCxC fieldbus device with
integrated COMPACT MANIFOLD
and remote expantion module
for distribuited manifolds connection



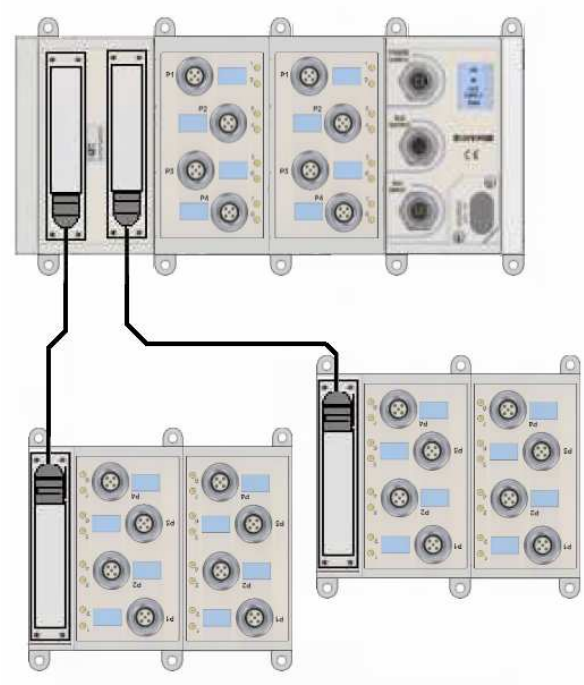
TCxC fieldbus device with
integrated ISO VDMA MANIFOLD



TCxC fieldbus device with
integrated COMPACT MANIFOLD
and remote expantion module
for distribuited manifolds connection



TCxC fieldbus device with
integrated COMPACT MANIFOLD
and remote expantion module
for passive MULTIBOX modules



TExC fieldbus device with
remote expantion module
for passive MULTIBOX modules

Dangers and residual risks

There aren't residual risks that may cause damage to the health of the person exposed. In case of maintenance, the operator is alerted by a visual sign placed near the high-risky areas, where there could be voltage dangers.

Dangers caused by Improper use

It is recommended to use only original spare parts. They are to be considered including the "misuse conditions " of any modifications or changes of any kind, that the user arbitrarily.

Correct and incorrect Use

The FieldBus Slave control unit, in all its models can be used only as reported on the operative manual manufacturer.
The requirements of security and reliability of the unit are guaranteed only by using original components.

Frequency of programmed maintenance

The unit was designed and built so as not to require a specific scheduled maintenance.

Instructions regarding removal / elimination of waste materials

If you wont to disassemble the unit is necessary to observe some basic rules to safeguard the health and the environment.

Cables, liners and plastic components, must be disposed separately from all other materials
The metal parts must be grouped by type of material.

Ordering string of fieldbus modules

TC	X	P	00	8	00	32IN

SERIES

TC	Manifold plugin & I/O module
TE	I/O module

SIZE

X	Standard connection M12
M	Multibus connection M23

FIELDBUS

A	AS-interface	16+16 I/O
C	CANopen	64+64 I/O
D	*DeviceNet*	64+64 I/O
I	INTERBUS S	32+32 I/O
P	PROFIBUS dp	64+64 I/O

AUXILIARY DIGITAL INPUT

N° 08-16-24-32-40-48-56-64

DIGITAL INPUT TYPE

S	M12 standard digital input
A	M12 digital input with auxiliary supply connector
8	M08 digital input

AUXILIARY DIGITAL OUTPUT

N° 08-16-24-32-40-48-56-64

DIGITAL I/O REMOTE MODULE CONFIGURATION

32IN	One module - 16+16 digital input	32 DI
64IN	Two modules - 16+16 digital input plus 16+16 digital input	64 DI
32UD	One module - 16+16 digital output	32 DO
32US	One module - 16+16 digital output + switched connector	32 DO
64UD	Two modules - 16+16 digital output plus 16+16 digital output	64 DO
64US	Two modules - 16+16 digital output plus 16+16 digital output + switched connectors	64 DO
3232	One module - 16+16 digital input plus One module - 16+16 digital input	32DI+32DO
6464	One module - 16+16 digital output plus One module - 16+16 digital output	64DI +64DO