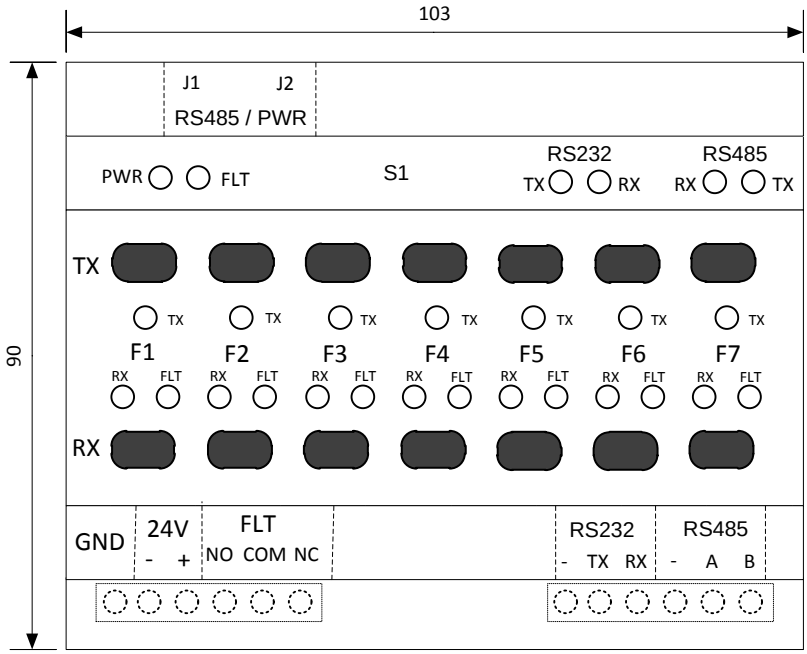
ConMod

ConMod 7FO/RS-MM Star Coupler module with 7 multi mode fiber optical channels, RS232 and RS485

elseta

About ConMod

- 4/7 fiber one RS232 and one RS485
- LED indicators for data and fault
- DIP switches to select operation mode and Light On/Off mode for each channel
- Error detection function it disconnects input if fault level appears
- Screw terminal for wiring
- RJ45 for stacking connection
- Operating temperature -50C ~ 600C
- Power supply over voltage protection
- Din rail mounting
- Specified with ST connectors 50/125 µm, 62,5/125 µm.



Front side view picture

ConMod Star Coupler 7FO/RS module

It is a stand-alone digital module designed for industrial applications, remote control and monitoring of technological processes. Device is designed to commutate optic signals also convert them to RS485 and RS232 compatible levels. It is capable of receiving signals from 9 independent channels - 7 fiber optic one RS485 and one RS232, channel chose from Master schedule and connect signal to 8 independent devices.

Star topology types available modes:

1. Master channel 1FO from/to 2FO – 7FO, RS232, RS485.
2. Master channel RS232 from/to 1FO – 7FO, RS485.
3. Master channel RS485 from/to 1FO – 7FO, RS232.

The Star Coupler ConMod 7FO/RS module has possibility to stack additional star couplers to extend fiber optical channels. Stacking is very simple just use straight Ethernet cable with RJ-45 jacks.

The Star Coupler ConMod 7FO/RS module each fiber optical channel has working modes Light ON and Light OFF. LED indication for each data input and output channel. Fault signal alarm indication for each channel for un normal input level detection. Fault indication also disconnects FLT relay output and separates fault input from other to prevent from data blocking.

Integrated LED's indicate specific operating module status to the user. Module designed for Din rail mounting that let to use device in wide area of industrial environment. It is possible to use the ConMod 7FO/RS module with the FiberMod Modbus-1/2/4, FiberMod 8/16RO, I/O Mod, to monitor/control the signals from any SCADA system or WCC100.

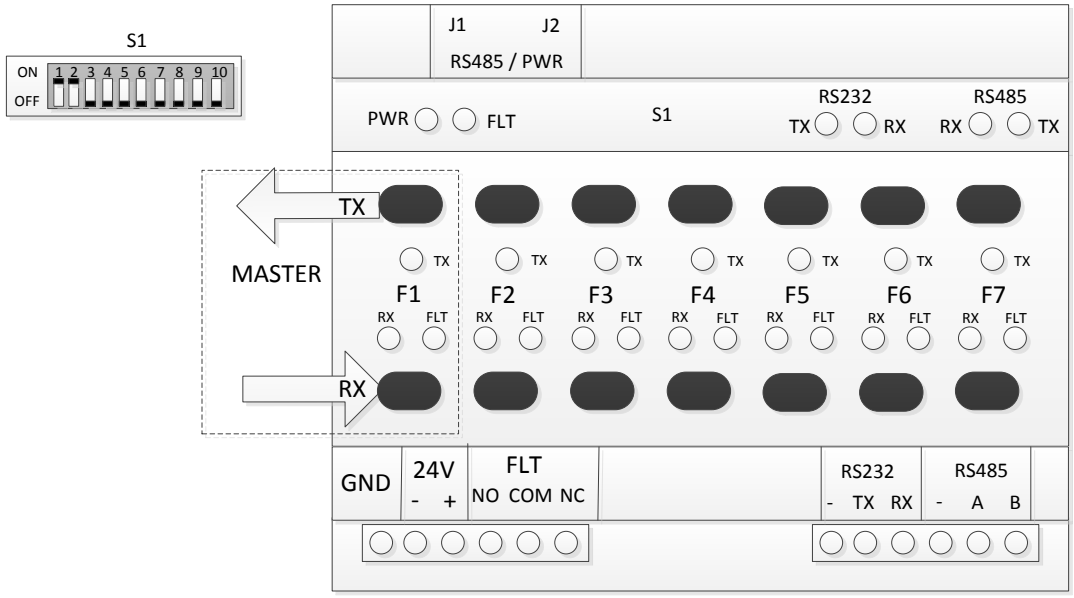
Specifications

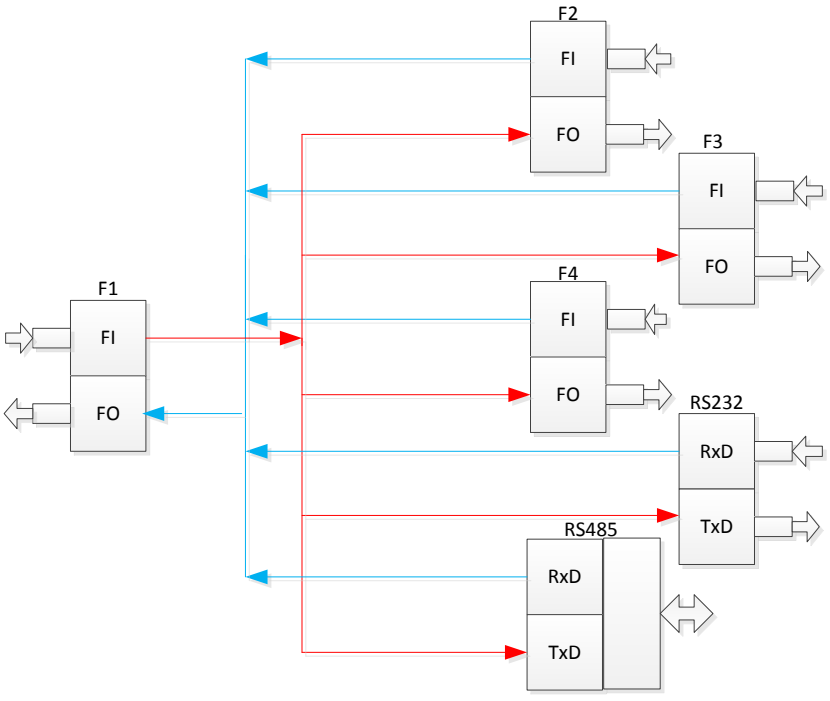
Inputs channels	
Number of FO channels	4/7
RS232	1
RS485	1
MBd Link	
Optical Power Budget	9,6 dB with 50/125 µm
Optical Power Budget	15 dB with 62,5/125 µm
Connect type	ST
Wavelength	820 nm
Link distance	2 km
Power requirements	
System power	+24 V, 0.13A, (7-35) VDC, 400 mA max
Power consumption	< 3.5 W
Mechanical	
Dimensions	67 (H) x 90 (W) x 103,75 (L), mm
Mounting	Din rail
Material	Plastic
Link Distance	
RS232	150 m
RS485	1500 m
Environmental	
RS232	Driver EIA/TIA-232 (ITU-T v.28)
RS485	Driver EIA/TIA-485 (ISO/IEC8284)
Forwarding Rate	Auto baud rate: 300 bps – 230 kbps
Operating temperature	-5 ~ 60^0C
Storage temperature	-40 ~ 80^0C
Warranty	2 year

Configuration

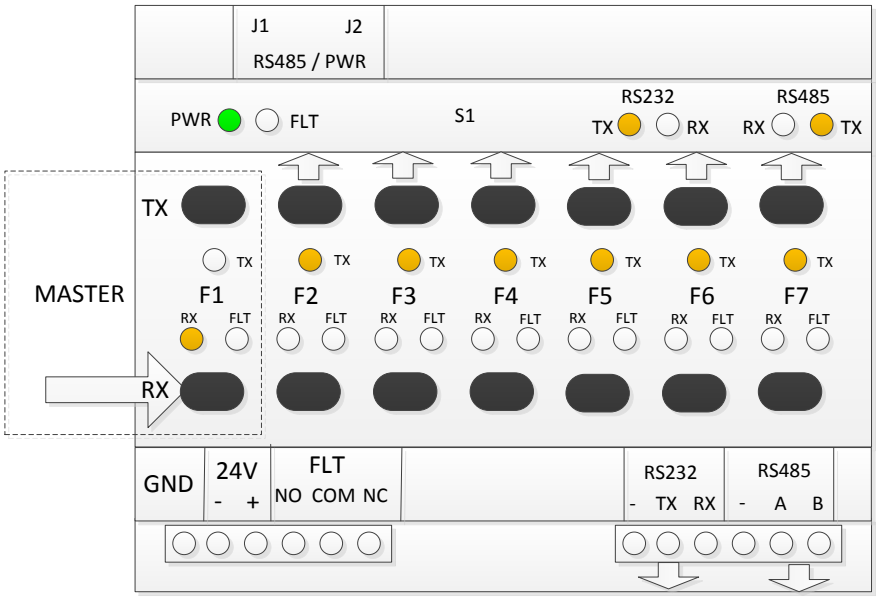
DIP switch S1		
1, 2	ON, ON	F1 master
1, 2	ON, OFF	RS485 master
1, 2	OFF, ON	RS232 master
1, 2	OFF, OFF	N/A
3		N/A
4, 5, 6, 7, 8, 9, 10	OFF/ON	F1 – F7 Light OFF/ON mode

1. F1 as a master

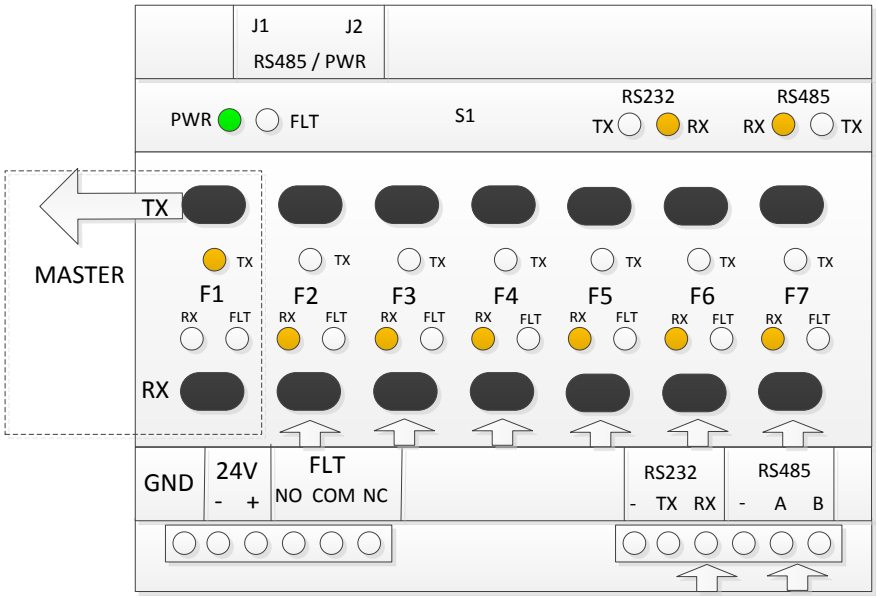




Flow diagram

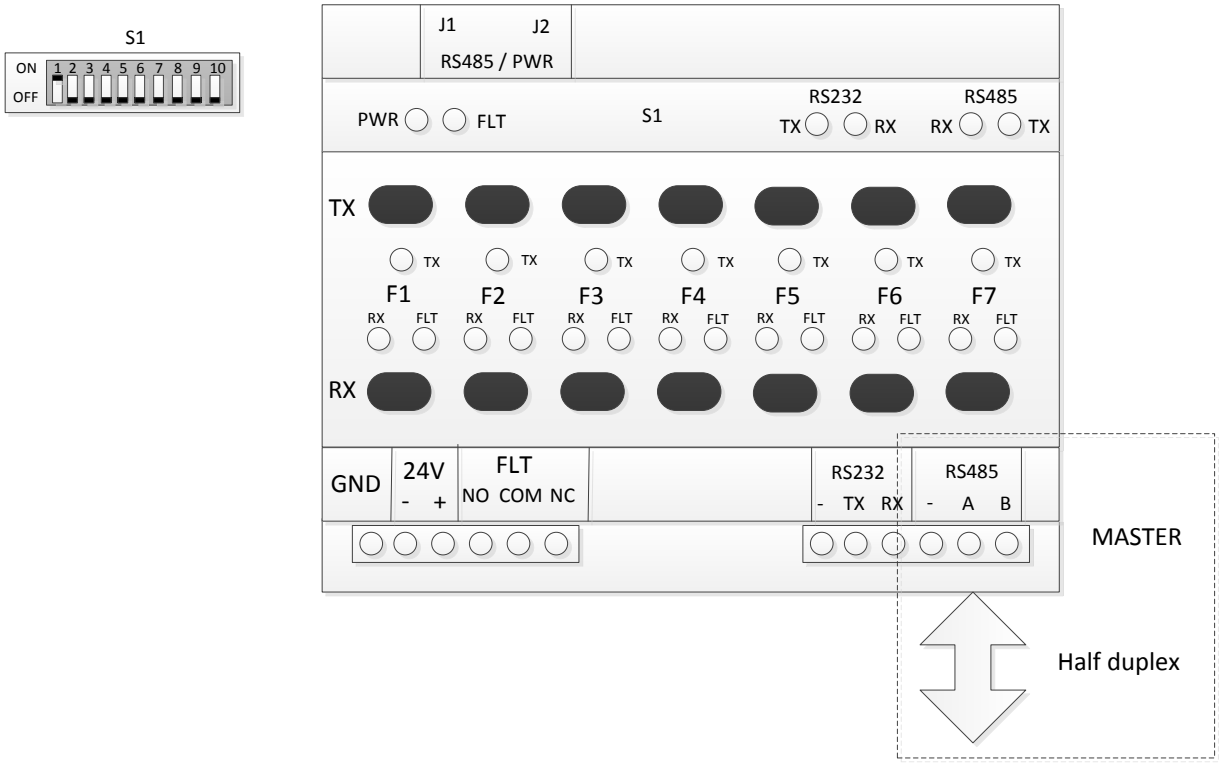


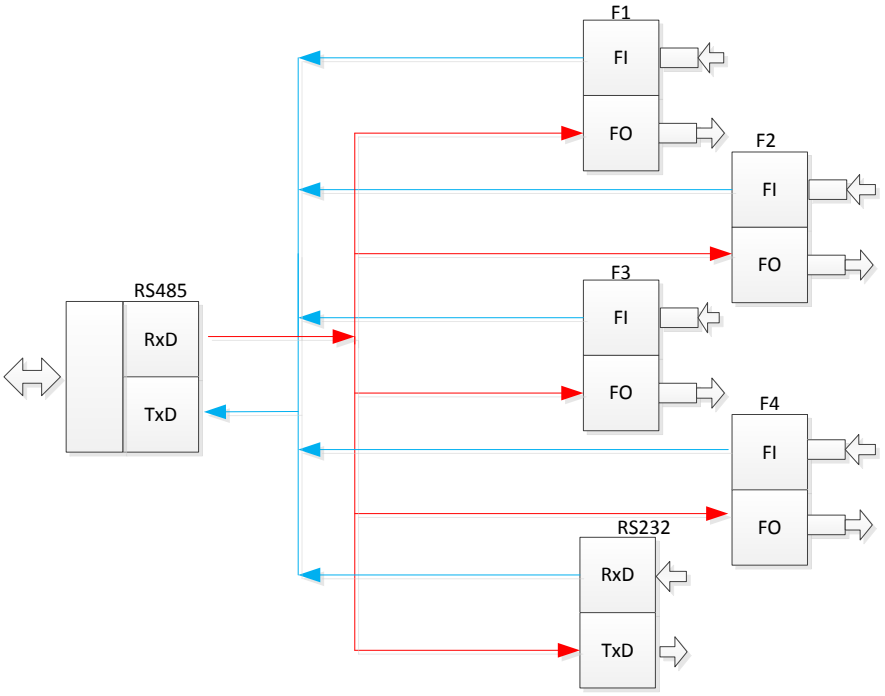
Transmitted data flow indication



Received data flow indication

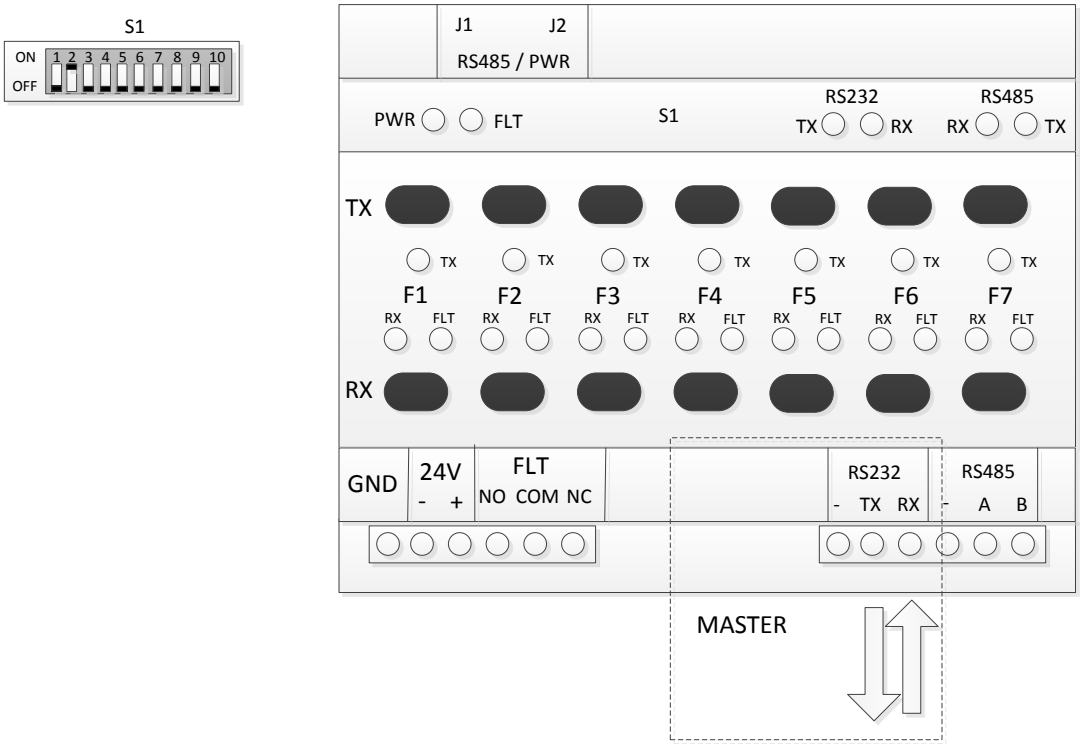
2. RS485 as a master

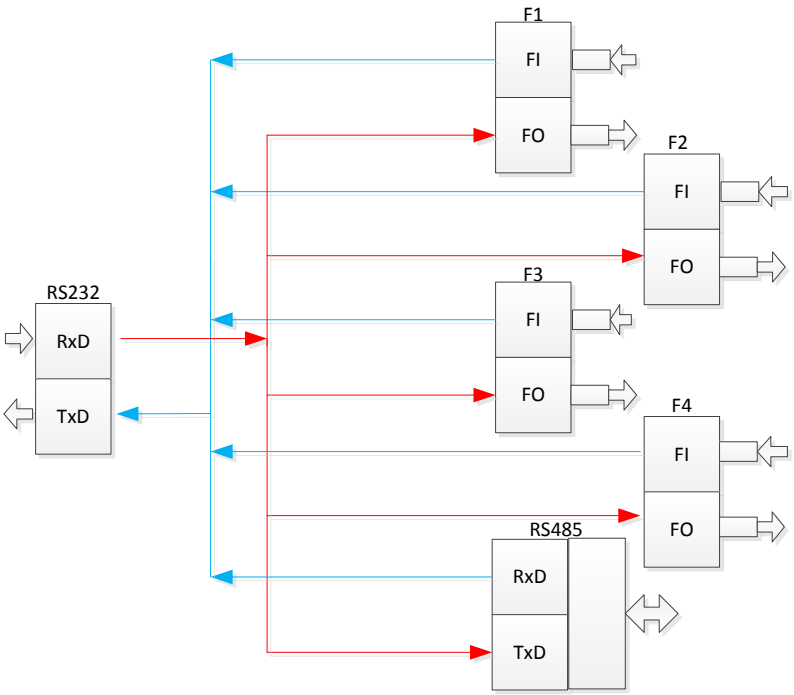




Flow diagram

3. RS232 as a master

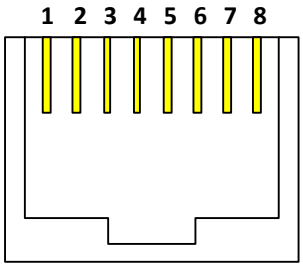




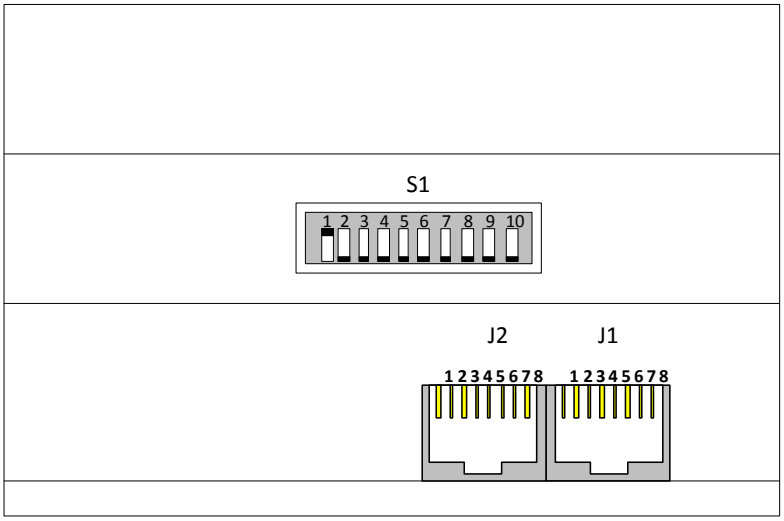
Flow diagram

Stacking over RJ45 J1 and J2

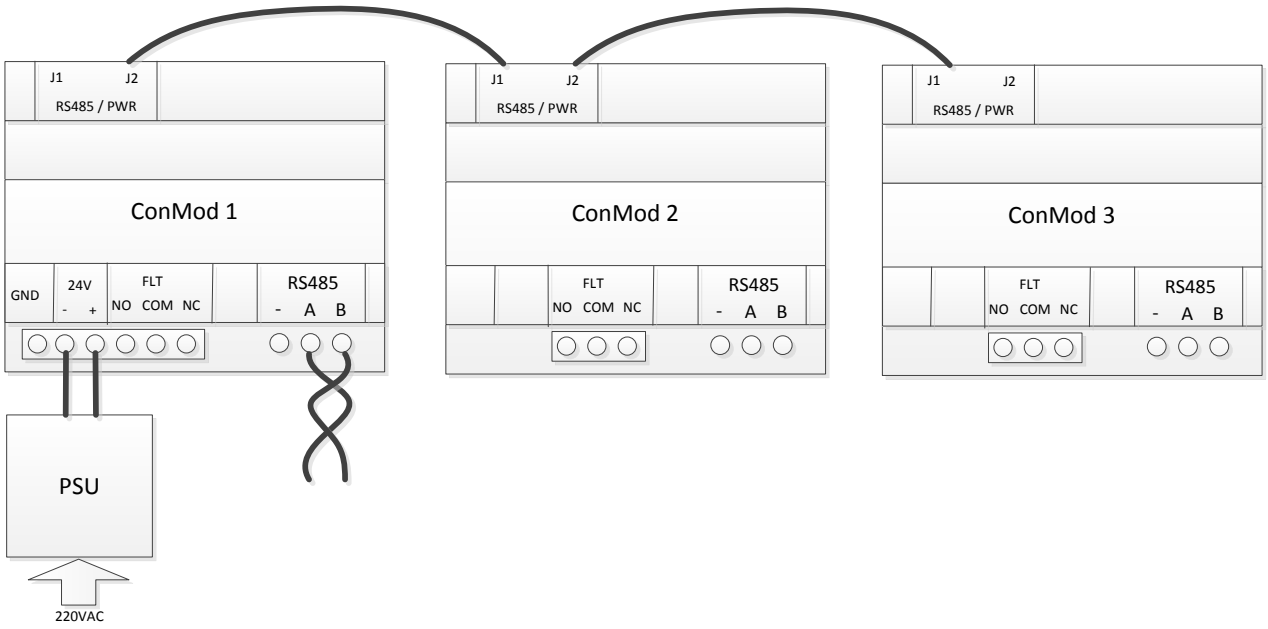
Pin	definition
1	RS485 channel A
2	RS485 channel B
3	N/A
4	+24V Power supply (1.2A max)
5	+24V
6	RS485 Common
7	- Power supply
8	-



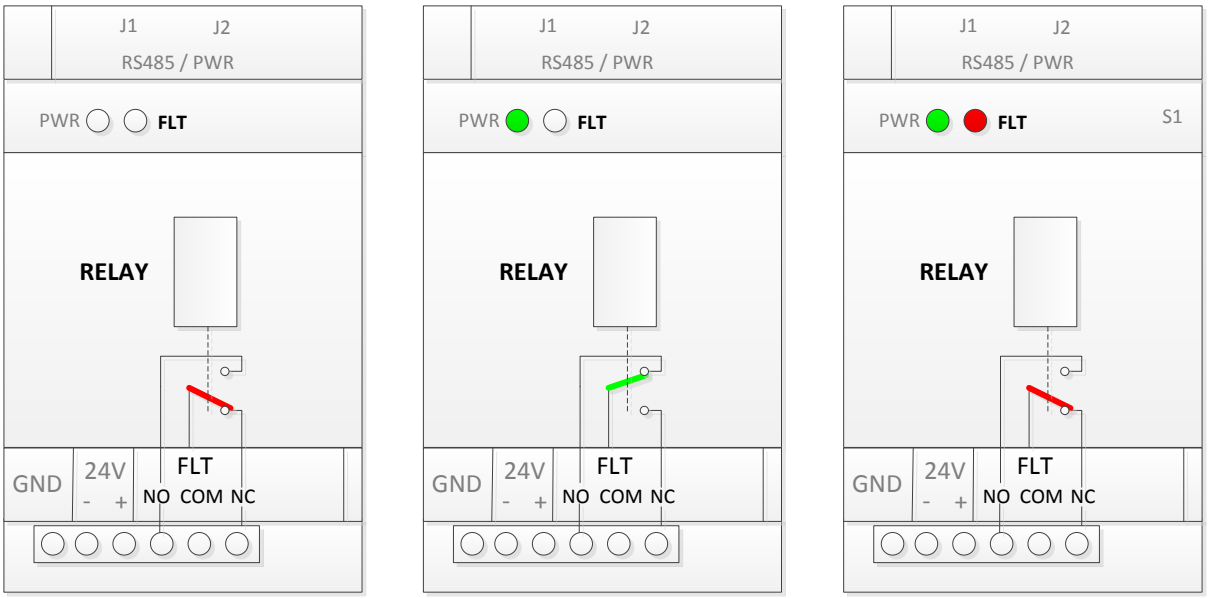
RJ45 jack pins



Back side view

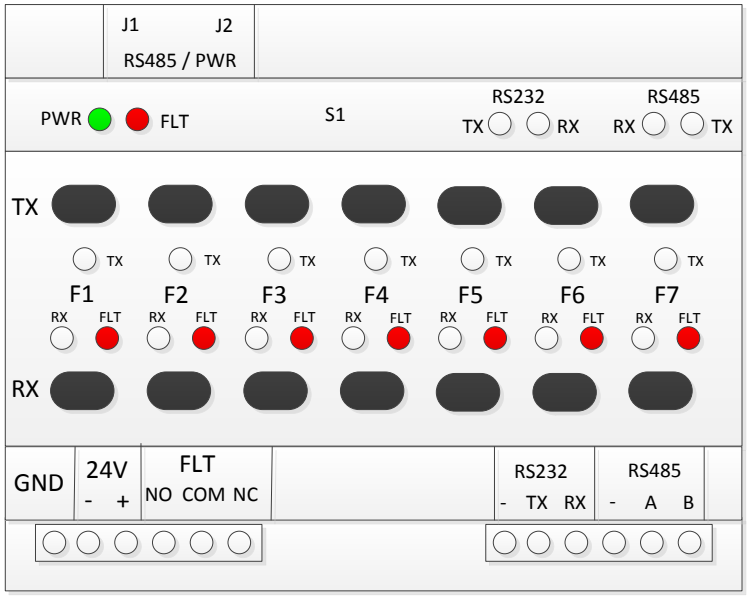


FLT – fault relay and indication



No power supply Good power supply Fault detected

Also fault can be detected in data receive inputs, when signal level in not normal condition. Incorrect level detection in 1 second period.



Incorrect working channel will be blocked to prevent distortions to other channels.

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Certificates accredited to the Company
ISO 9001:2000
ISO 14001
OHSAS 18001

DECLARATION OF CONFORMITY

According to ISO/IEC Guide 22 and EN 45014

Manufacturer's Name: UAB "AEDILIS"
Manufacturer's Address: L. Zamenhofo g. 5, LT, Vilnius, Lithuania

Declares that this product:
Product Name: ConMod 4FO/RS, ConMod 7FO/RS

CONFORMS TO THE FOLLOWING STANDARDS:

EMC:
EN 55022 Emission Test (Class B)
1. Radiated Emissions (30-1000MHz)
2. Conducted Emissions (0.15-30MHz)
EN 50082-1 Immunity Test
1. IEC 801-3: Radio Frequency Electromagnetic Field
2. IEC 801-2: Electrostatic Discharge
3. IEC 801-4: Fast Transients, Power Ports and Signal cables

SUPPLEMENTARY INFORMATION:

"The product complies with the requirements of the Low Voltage Directive 73/23/EEC and EMC Directive 89/336/EEC."

Device assembly meets Restriction of Hazardous Substances ROHS Directive.

MANUFACTURER'S CONTACT:

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UAB "AEDILIS"
Location: L. Zamenhofo g. 5, LT 06332, Vilnius, Lithuania
Telephone: +370 5 2742707
E-mail: support@elseta.com

Ordering Information

Order Code	Name of device
CM4FO/RS-MM	ConMod 4FO/RS - Star Coupler with 4 Fiber optical and RS232/485 (Multi mode)
CM7FO/RS-MM	ConMod 7FO/RS - Star Coupler with 7 Fiber optical and RS232/485 (Multi mode)