FIBER-OPTIC ASYNCHRONOUS MODEM TELEM-FO11-485

The modem is used for point-to-point communication, for secure transmission over long distances between different units. Since the fiber-optic cable is fully immune to external interference, it is ideal for exposed environments. Fiber-optic cable is also ideal when a high level of security is required, since it is difficult to tap.

1. Technical data

Transmission	Asynchronous, full duplex or simplex
Interface 1	EIA RS-232-C/CCITT V.24/V.18 – 9-pin female D-sub and RJ12, EIA RS-422/485 – 9-pin female D-sub
Interface 2	Simplex (single-fiber cable), duplex (two-fiber cable) 2 ST connectors, 820 nm fiber-optic cable 50/125, 62,5/125, 100/140, 200 PCS or plastic optical fiber Versatile Link
Transmission speed	Speeds up to 115,2 kbit/s, for RS-422/485 the speed is limited to 38,4 kbit/s
Power supply	10...72 V DC
Power consumption	1 W (current draw max 100 mA)
Temp/humidity	Temp: -25…70 °C, ambient temperature/Humidity: 0-95% RH, without condensation
Dimensions, mm	55 x75 x 110
LEDs	Power, TX, RX
Weight, kg	0,2

| Fiber	50/125	62,5/125	200 PCS
Power budget	3,7 db	7,5 db	18 db

2. Communication distance

To calculate the distance, which a fiber-optic cable can manage, the power budget for the system must be checked. All losses in the connection, i.e. due to joints and attenuation are deducted from the power budget.

Losses in fiber-optical cable		Losses in connectors	Losses in splices	
Fiber	Attenuation			
50/125	3,0 dB/km	0,2 - 0,4 db	Fusion	0,1 db
62,5/125	3,5 dB/km		Mechanical	0,2 db
200 PCS	6,0 dB/km			

Plastic Versatile Link attenuation 0,15-0,18 dB/m communication distance 30m (40 kbd)

3. Data connector

DB9 F pin	RJ 12	Signal	Signal name
2	3	RX	RS-232 transmitted data
3	4	TX	RS-232 received data
5	2,5	GND	Ground
6		TX-	RS-422/485 transmitted data -
7		TX+	RS-422/485 transmitted data +
8		RX-	RS-422/485 received data -
9		RX+	RS-422/485 received data +
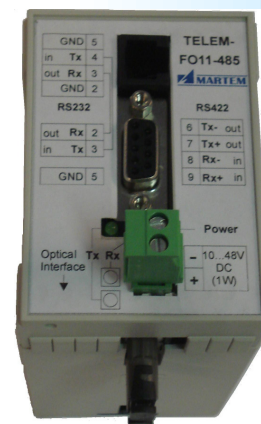
4. Dip switch positions

S1
1 – Not in use
2 – Optical inversion (OFF=light on)
3 – 2/4 wire (OFF=4 wire connection)[1]
4 – 2/4 wire (OFF=4 wire connection)[1]
[1]S1.3 and S1.4 are used simultaneously

S2
1 – Echo
2 – RS-422/485 (OFF=RS-485)[2]
3 – Suppress Echo
4 – RS-422/485 (OFF=RS-485)[2]
5 – RS-422/485 baud rate[3]
6 – RS-422/485 baud rate[3]
[2]S2.2 and S2.4 are used simultaneously
[3]S2.5 and S2.6 OFF – 9600, S2.5 ON and S2.6 OFF – 19200, S2.5 and S2.6 ON – 38400

5. Notes

- If not stated otherwise on the individual pages of this document, AS Martem reserves the right to make modifications.
- Although the contents of this publication have been checked for conformity with the hardware and software described, we cannot guarantee complete conformity since errors cannot be excluded.
- The information provided in this manual is checked at regular intervals and any corrections that might become necessary are included in the next releases.
- Any suggestions for improvement are welcome.
- The contents of this manual are subject to change without prior notice.