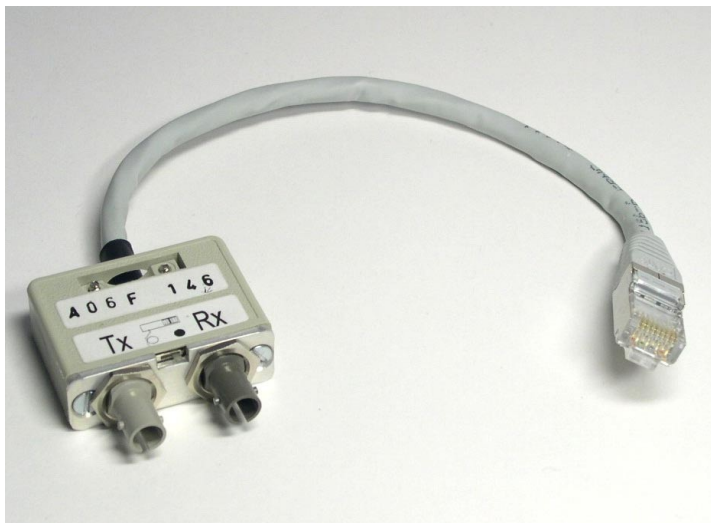


SIEMENS

SICAM 1703

CM-0827

Fibre-Optic Interface (V28/V.11 ↔ Multimode-FO)



The module, without microprocessor onboard, serves for the conversion of an electrical signal (V.28, V.11, SMI) to optical fibre and vice versa.

Application and General Description

The CM-0827 module is used in AK 1703 Ax, AK 1703 ACP, TM 1703 ACP and BC 1703 ACP systems and constitutes a bi-directional converter between a V.28- or V.11-interface and glass fibre optic (Multimode-FO).

The module is used

- For connecting AM 1703 and BC 1703 to AK 1703 via fibre optic (field bus acc. to IEC 60870-5-101),
- For connecting protective devices to AK 1703 via fibre optic
- For designing point-to-point connections via V.28- or V.11-interfaces, detached via fibre optic (IEC 60870-5-103)
- Supports SK 1703 compatible operation via the SMI bus

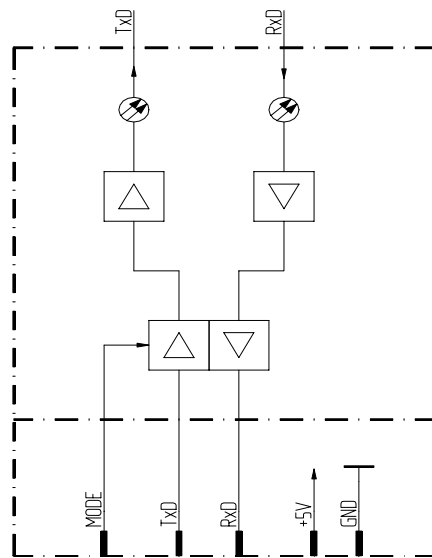
The module has:

- one optical interface
 - Directly suited for interfacing protective devices (optical glass fibre 62.5/125µm, 50/125µm)
 - For distances up to 1500m (when using a fibre of type 62.5/125µm) in combination with module CM-1822
 - Optical line-idle state can be set ("light on" or "light off"; GA0-827-A or higher revision)
- one electrical interface (V.28 or V.11)
 - Transmit and receive lines available via cable with RJ45 connector
 - Patch plugs are used to set the electrical characteristics of the interface (V.28 or V.11)

Configuration Hints


System	Submodul	Patch Plug	Converter	Transmitting Medium
AK 1703	SM-X551	CM-2860	CM-0827	Glass fibre optic
AK 1703 ACP	SM-X551	CM-2860	CM-0827	
TM 1703 ACP	SM-X551	CM-2860	CM-0827	
BC 1703 ACP	SM-X551	CM-2860	CM-0827	

Block Diagram



(V.28)

Control Elements

Element	Meaning
	Switch for setting the optical line-idle state ○ = Light on ● = Light off

Connector(s) for the Serial Interface

The connector's pin assignment is described in the following table. For the signals of the various pins, abbreviations were used that is explained below:

Interface	Types, Values, Ranges, Settings
RJ45	+5V = +5 VDC GND = Ground MODE = 0 operating mode 1 = 1 operating mode 2, 3
Optical interface	TXD = Transmit Data RXD = Receive Data

Technical Specifications

Interfaces

Interface	Types, Values, Ranges, Settings
Electrical interface	According to V.28 and V.11, respectively
Optical interface (multimode fibre optic)	<ul style="list-style-type: none"> <li data-bbox="826 622 1366 853">• Transmitter (820nm): Power intercoupled in the fibre: 50/125µ fibre: max: -14dBm typ: -16dBm min: -19dBm 62.5/125µ fibre: max: -11dBm typ: -13dBm min: -16dBm <li data-bbox="826 880 1366 1003">• Receiver (820nm): Received power: min: -25.4dBm max: -9.2dBm Data rate: max: 5MBit/s <li data-bbox="826 1025 1366 1115">• Line lengths (3dB system reserve): 50/125µ fibre (3dB/km): 0 .. 0.5km 62.5/125µ fibre (3dB/km): 0 .. 1.5km

Power Supply

Supply Voltage	Types, Values, Ranges, Settings	
Operating voltage	+5V \pm 5%	max. 150mA

Mechanical Design

Mechanics	Types, Values, Ranges, Settings	
Mechanical design	Case	30 x 40 x 13mm
	Cable length	230mm
Electrical connector	Cable with RJ45	
Optical connector	ST compatible	
Weight	34g	