

SIEMENS

ACP 1703 Ax 1703

CM-0842

Bus Interface Ax-PE 4x optical



Bus interface Ax 1703 peripheral bus

- 3 RJ45 connectors to access the TTL-level Ax 1703 peripheral bus provided by a (redundant) higher-level basic system element or CM-0843
- 4 TOSLINK connectors for providing the electrical Ax 1703 peripheral bus to PE-6401, PE-6402, or CM-1831
- Transmission rate 16 Mbps or 4 Mbps
- Up to 4 CM-0842 can be attached side by side
- RJ45 patch cable can be used (up to 3m long)
- Optical fibres can be used (up to 200m long)
- Power supply: 18 .. 78 VDC

Application

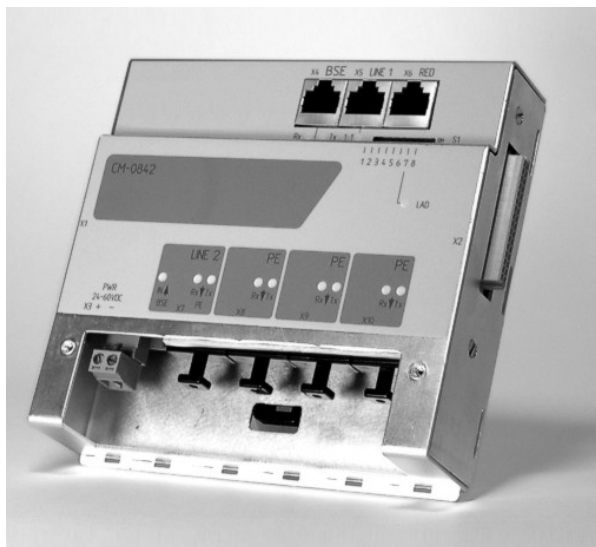
CM-0842 is used to connect

- up to four
 - PE-6401 or PE-6402 peripheral control modules (with its belonging I/O modules), and/or
 - CM-1831 bus interfaces (with its belonging peripheral elements)
- by means of optical fibres (each with a maximum length of 200m) to a
 - basic system element, based on
 - CP-2010
 - CP-2012
 - CP-6003
 - by means of RJ45 patch cables (each with a maximum length of 3m)

Features

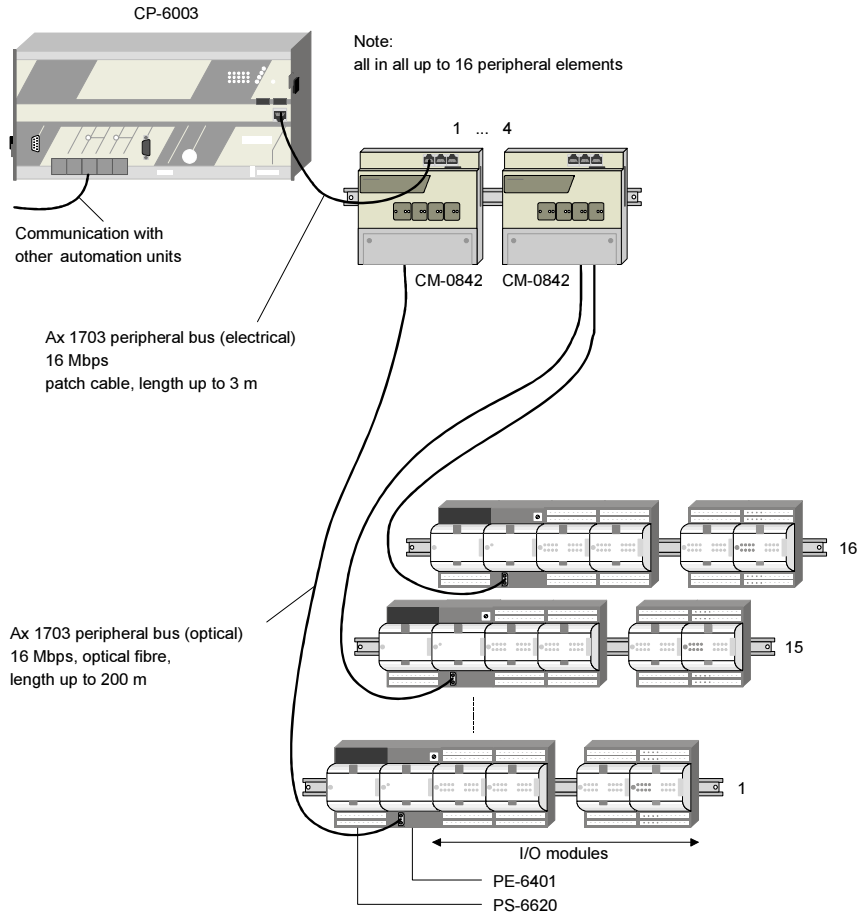
- up to 4 CM-0842 can be attached side by side
- all DIN rails of all CM-0842 must have the same ground potential
- supports redundant basic system elements
- can be configured "redundant"
- LINE 1 and LINE 2 configurable via DIP switch
- 16 Mbps or 4 Mbps configurable via DIP switch

View

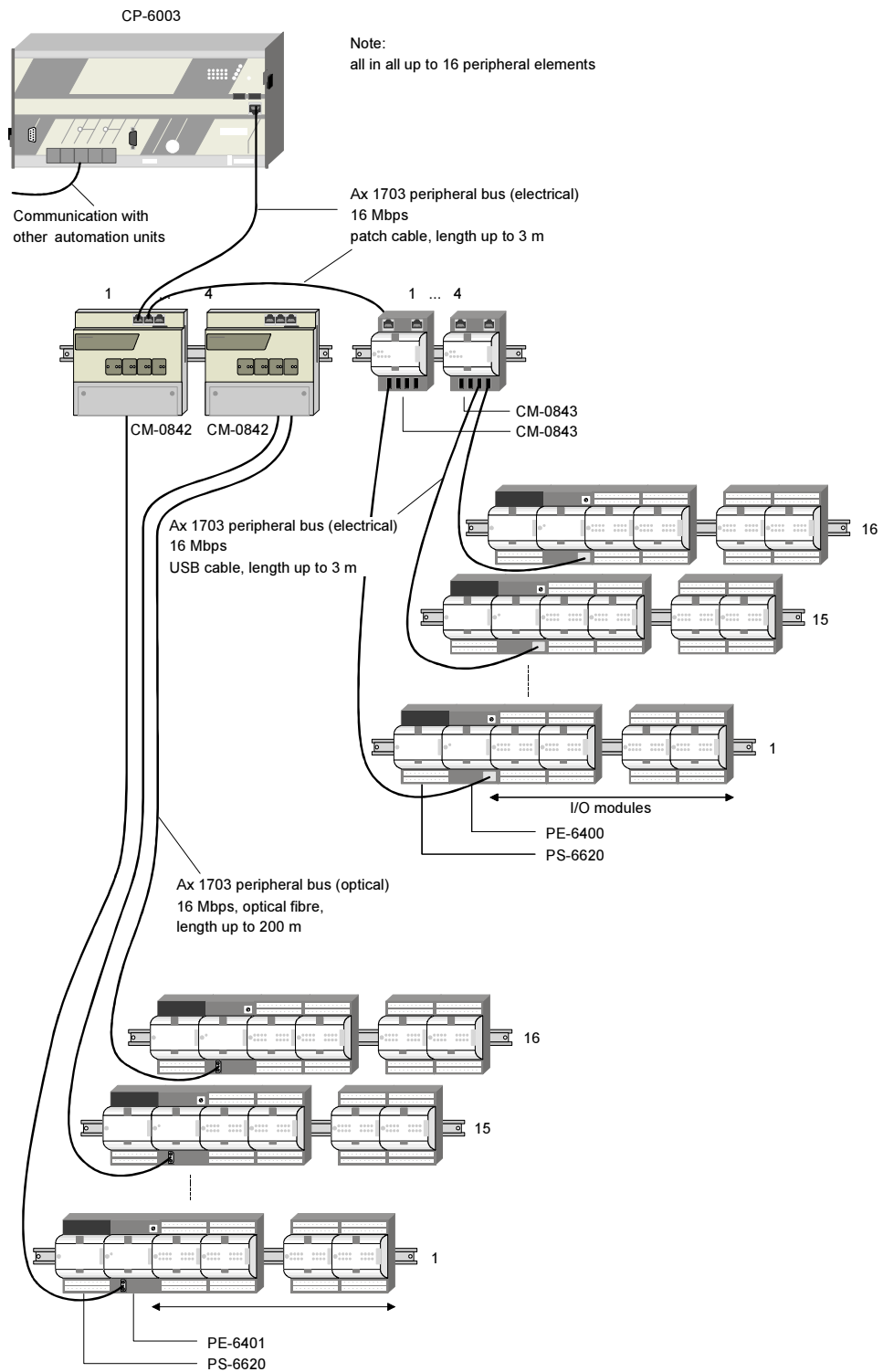


Configuration (Examples)

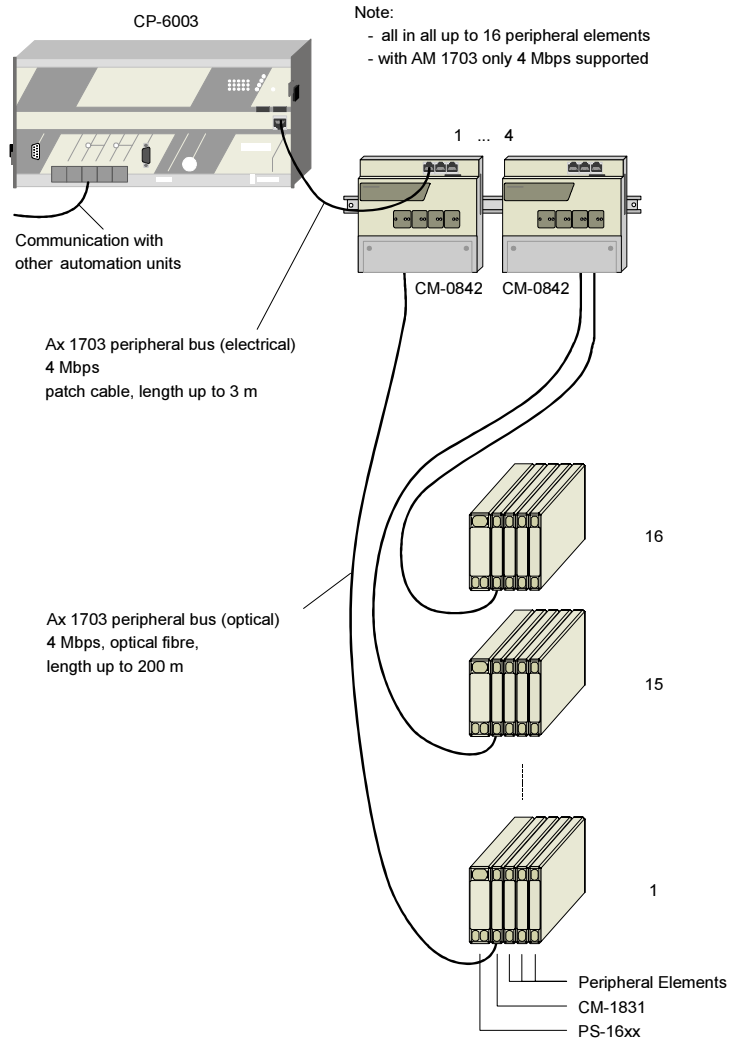
16 Peripheral Elements TM 1703 ACP, optically connected



16 Peripheral Elements TM 1703 ACP, electrically and optically connected



16 Peripheral Elements AM 1703, optically connected



Technical Specification

Interfaces																																				
2 interfaces to the BSE (Ax 1703 peripheral bus, electrical, full duplex) (BSE/X4, RED/X6)	<ul style="list-style-type: none"> TTL Transmission rate 16Mbps or 4Mbps Securing of data, hamming distance D=4 For connecting patch cables (RJ45 connector), 3m maximum length 																																			
1 interface to CM-0842 or CM-0843 (Ax 1703 peripheral bus, electrical, full duplex) (LINE 1/X5)	<ul style="list-style-type: none"> TTL Transmission rate 16Mbps or 4Mbps Securing of data, hamming distance D=4 For connecting patch cables (RJ45 connector), 3m maximum length 																																			
1 interface to the BSE or to the peripheral control module (Ax 1703 peripheral bus, electrical, half duplex) (LINE 2/X7)	<ul style="list-style-type: none"> Optical interface Transmission rate 16Mbps or 4Mbps Securing of data, hamming distance D=4 Specification see below 																																			
3 interfaces to peripheral control modules (Ax 1703 peripheral bus, electrical, half duplex) (PE/X8, PE/X9, PE/X10)	<ul style="list-style-type: none"> Optical interface Transmission rate 16Mbps or 4Mbps Securing of data, hamming distance D=4 Specification see below 																																			
Optical interface (duplex plastic optical fibre)	<ul style="list-style-type: none"> Type TODX295 (Toshiba TOSLINK™) Optical fibre: <table border="0"> <tr> <td>(1) Standard plastic</td> <td>(0.25dB/m)</td> <td>4Mbps</td> </tr> <tr> <td>(2) Special plastic</td> <td>(0.18dB/m)</td> <td>4Mbps</td> </tr> <tr> <td>(3) Special plastic</td> <td>(0.15dB/m)</td> <td>4Mbps</td> </tr> <tr> <td>(4) Glass fibre (PCF fibre)</td> <td>(10dB/km)</td> <td>16Mbps, 4Mbps</td> </tr> </table> Transmitter (660nm): <table border="0"> <tr> <td>Power launched into the fibre</td> <td>max</td> <td>min</td> </tr> <tr> <td>(1), (2), (3)</td> <td>-9dBm</td> <td>-15dBm</td> </tr> <tr> <td>(4)</td> <td>-14dBm</td> <td>-20dBm</td> </tr> </table> Receiver (660nm): <table border="0"> <tr> <td>Received power:</td> <td>max</td> <td>min</td> </tr> <tr> <td></td> <td>-9dBm</td> <td>-28dBm</td> </tr> </table> Line lengths (3dB system reserve): <table border="0"> <tr> <td>(1)</td> <td>0 .. 40m</td> </tr> <tr> <td>(2)</td> <td>0 .. 55m</td> </tr> <tr> <td>(3)</td> <td>0 .. 60m</td> </tr> <tr> <td>(4)</td> <td>0 .. 200m</td> </tr> </table> 	(1) Standard plastic	(0.25dB/m)	4Mbps	(2) Special plastic	(0.18dB/m)	4Mbps	(3) Special plastic	(0.15dB/m)	4Mbps	(4) Glass fibre (PCF fibre)	(10dB/km)	16Mbps, 4Mbps	Power launched into the fibre	max	min	(1), (2), (3)	-9dBm	-15dBm	(4)	-14dBm	-20dBm	Received power:	max	min		-9dBm	-28dBm	(1)	0 .. 40m	(2)	0 .. 55m	(3)	0 .. 60m	(4)	0 .. 200m
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Power Supply	
Operating voltage	18 .. 78 VDC, typ. 120mA at 24V The voltage is supplied via terminals
Mechanics and Connectors	
Ax 1703 Peripheral Bus (BSE/X4, LINE 1/X5, RED/X6)	RJ45
Ax 1703 peripheral bus (LINE 2/X7, PE/X8, PE/X9, PE/X10)	JIS-F07 compatible Plastic optical fibre (1),(2),(3) TOCP200 (Toshiba TOSLINK™) Glass fibre (4) TOCP201 (Toshiba TOSLINK™) CF-2071 (Sumitomo Electric)
Dimensions	133.5 x 141 x 43 mm (H x W x D, dimensions w/o DIN rail)
Weight	Approx. 420 g

Literature

Folder TM 1703 ACP	MC6-003-2
System Data Sheet TM 1703 ACP	MC6-007-2

