

Trusted Communications Cables

Product Overview

This document provides detailed information for the types of Trusted® Communications Cables currently available. These are listed in Table 1 below.

Cable Type	Description
TC-301-02-xmx	Local Expansion Cable From Expander Interface Adapter (T8312) to Expander Processor (T8310)
TC-301-03-xmx	Local Expansion Cable (UL) From Expander Interface Adapter (T8312) to Expander Processor (T8310)
TC-302-02-xmx	Remote Expansion Cable From Expander Interface Adapter (T8312) to Fibre TX/RX unit (T8314)
TC-302-03-xmx	Remote Expansion Cable (UL) From Expander Interface Adapter (T8312) to Fibre TX/RX unit (T8314)
TC-303-02-xmx	Remote Expansion Cable From Fibre TX/RX unit (T8314) to Expander Processor (T8310)
TC-303-03-xmx	Remote Expansion Cable (UL) From Fibre TX/RX unit (T8314) to Expander Processor (T8310)
TC-304-01	Maintenance Cable
TC-305-01	Communications Cable Assembly From Communication Interface (T8151) to flying leads
TC-306-02	Input Smart Slot Jumper Cable
TC-306-03	Input Smart Slot Jumper Cable (UL)
TC-308-02	Output Smart Slot Jumper Cable
TC-308-03	Output Smart Slot Jumper Cable (UL)
TC-310-02	Output Smart Slot Jumper Cable from Digital Output Module (T8472)

Cable Type	Description
TC-310-03	Output Smart Slot Jumper Cable from Digital Output Module (T8472) (UL)
TC-311-02	Local Expansion Cable Assembly, 1 way From Expander Interface Module (T8311) to Triple Modular Redundant (TMR) Expander Processor (T8310)
TC-311-03	Local Expansion Cable Assembly, 1 way (UL) From Expander Interface Module (T8311) to Triple Modular Redundant (TMR) Expander Processor (T8310)
TC-312-02-xmx	Local Expansion Cable Assembly, 2 way From Expander Interface Module (T8311) to Triple Modular Redundant (TMR) Expander Processor (T8310)
TC-312-03-xmx	Local Expansion Cable Assembly, 2 way (UL) From Expander Interface Module (T8311) to Triple Modular Redundant (TMR) Expander Processor (T8310)
TC-313-02-xmx	Local Expansion Cable Assembly, 3 way From Expander Interface Module (T8311) to Triple Modular Redundant (TMR) Expander Processor (T8310)
TC-313-03-xmx	Local Expansion Cable Assembly, 3 way (UL) From Expander Interface Module (T8311) to Triple Modular Redundant (TMR) Expander Processor (T8310)
TC-314-02-xmx	Expander Electrical Extension Cable From Processor Interface Adapter (T8312) to TMR Expander Processor (T8310)
TC-314-03-xmx	Expander Electrical Extension Cable (UL) From Processor Interface Adapter (T8312) to TMR Expander Processor (T8310)

Table 1 Trusted Communications Cables

The -01 / -02 / -03 suffix of the cable part number dictates the properties of the cable:

- 01 suffix cables are PVC.
- 02 suffix cables are cables which are Halogen free, i.e. low smoke zero halogen, flame retardant to IEC 60332-3 Cat A.
- 03 suffix cables are UL Certified.

The cables are manufactured to standard integration requirements, only the type of cable insulation must be specified. For non-standard lengths, length must be specified to the nearest 0.5 m in the format xmx, e.g. 2m0 for a cable length of 2.0 m. This detail must be added to the end of the part number. The maintenance cables are supplied with PVC sheathed cables only. When ordering cables, it is recommended that the user supplies the details as shown in Table 1.

6. Communications Cable Type TC-305-01

This type of Communications Cable is shown in Figure 5 below.

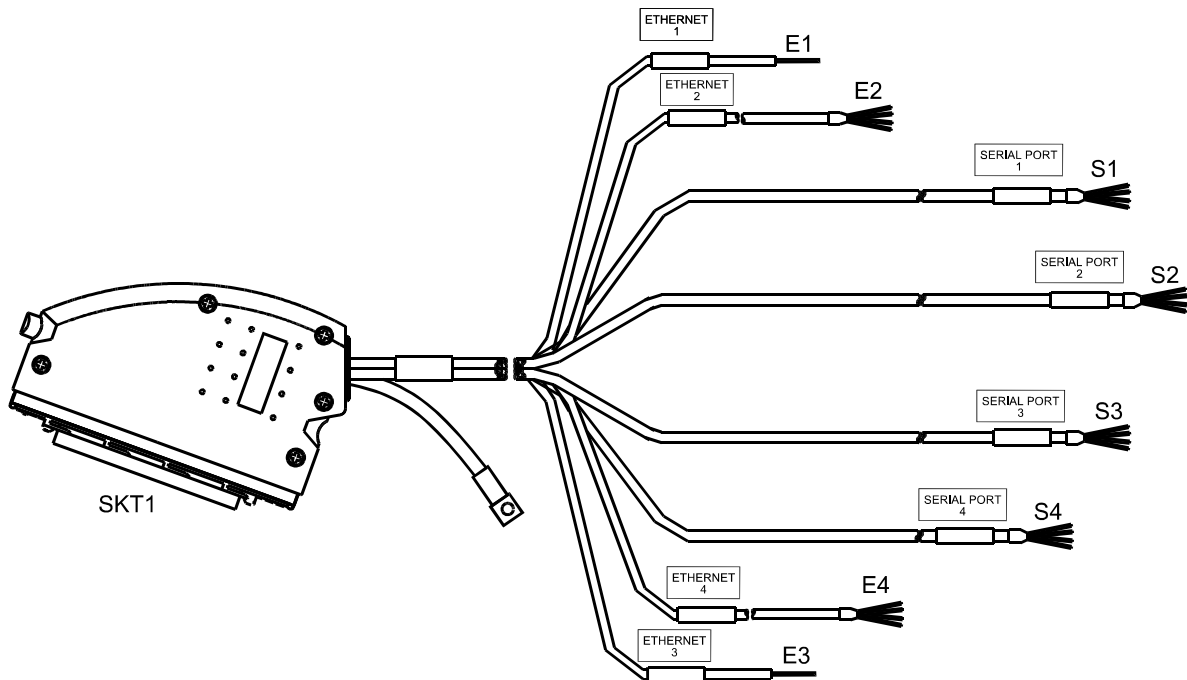


Figure 5 Communications Cable Type TC-305-01

This type of Trusted Communications Cable is designed to provide connection to the communications ports available at the Trusted Communications Interface T8151 via flying leads.

The Communications Interface end of the cable (SKT1) is fitted with a 78+2-way type 'M' connector housed in a single-width hood. The hood is fitted with an earth braid. The other ends of the cable (8-off) are left free. Connectors conforming to user requirements are fitted. Only one, or other type of the Ethernet ports may be used, not both simultaneously.

The cable assembly consists of a Cat 5, screened PVC sheath.

The flying lead end of the sheathing is covered in heatshrink and heated to help prevent fraying. 50 Ω coaxial cables is supplied for Ethernets E1 and E3.

Refer to Table 2 for details of pin connections, including screening.

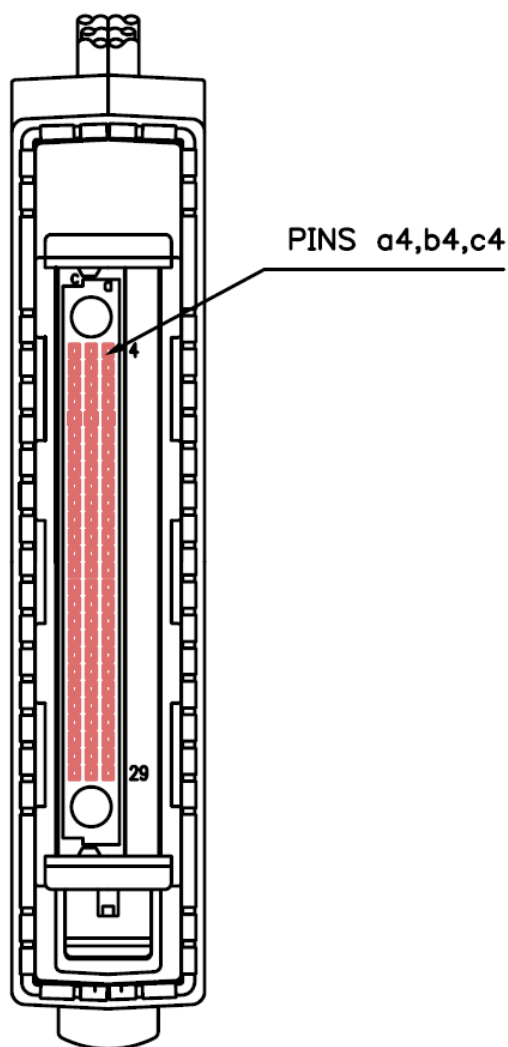


Figure 6 TC-305 Pin arrangement (view of outside of plug)

Connection Type	SK1 Pin	Function	Core Colour
E1 Ethernet 1 10 Base 2	S1	50 Ω CO-AX	INNER CORE
	S1	GND	OUTER SCREEN
E2 Ethernet 2 10 Base T	21a	TD+1	WH/OG
	21b	TD-1	OG
	22a	RD+1	WH/GN
	22b	RD-1	GN
			SCREEN

Connection Type	SK1 Pin	Function	Core Colour
E3 Ethernet 3 10 Base 2	S2	50 Ω CO-AX	INNER CORE
	S2	GND	OUTER SCREEN
E4 Ethernet 4 10 Base T	25a	TD+2	WH/OG
	25b	TD-2	OG
	26a	RD+2	WH/BU
	26b	RD-2	BU
			SCREEN
S1 Serial Port 1 RS232 RS422/485	5a	TXD1 RS232	WH/OG
	6a	RTS1 RS232	WH/BN
	6b	DTR1 RS232	WH/BU
	6c	RXD1 RS232	OG
	7a	CTS1 RS232	BN
	7b	DSR1 RS232	BU
	8a	RXB1 RS422/485	BN
	8b	RXA1 RS422/485	WH/BN
	9a	TXB1 RS422	WH/BU
	9b	TXAO RS422	BU
	9c	GND 0 RS232	SCREEN
	4c to 29a	LINK RS232	
S2 Serial Port 2 RS232 RS422/485	11a	TXD2 RS232	WH/OG
	11c	RXD2 RS232	OG
	12a	RXB2 RS422/485	BN
	12b	RXA2 RS422/485	WH/BN
	13a	TXB2 RS422	WH/BU

Connection Type	SK1 Pin	Function	Core Colour
	13b	TXA2 RS422	BU
	13c	GND 2	SCREEN
S3 Serial Port 3 RS422/485	15a	RXB3 RS422/485	WH/OG
	15b	RXA3 RS422/485	OG
	16a	TXB3 RS422	WH/BU
	16b	TXA3 RS422	BU
	16c	GND 3	SCREEN
S4 Serial Port 4 RS232 RS422/485	18a	RXB4 RS422/485	WH/OG
	18b	RXA4 RS422/485	OG
	19a	TXB4 RS422	WH/BU
	19b	TXA4 RS422	BU
	19c	GND4	SCREEN

Table 2 TC-305-01 Pin Connections