1. Companion Slot Cable Types and Selection Guides

The types of Trusted I/O Companion Slot Cables currently available are listed in Table 1 below:

Cable Type	Description
TC-201-02-xmx	I/O Companion Slot, Internal, 40 Channel Input to FTA
TC-201-03-xmx	I/O Companion Slot, Internal, 40 Channel Input to FTA (UL)
TC-202-02-xmx	I/O Companion Slot, Internal, 40 Channel Input to Flying Lead / Free Wire
TC-202-03-xmx	I/O Companion Slot, Internal, 40 Channel Input to Flying Lead / Free Wire (UL)
TC-203-02-xmx	I/O Companion Slot, External, 40 Channel Input to FTA
TC-203-03-xmx	I/O Companion Slot, External, 40 Channel Input to FTA (UL)
TC-204-02-xmx	I/O Companion Slot, External, 40 Channel Input to Flying Lead / Free Wire
TC-204-03-xmx	I/O Companion Slot, External, 40 Channel Input to Flying Lead / Free Wire (UL)
TC-205-02-xmx	I/O Companion Slot, Internal, 40 Channel Output to FTA
TC-205-03-xmx	I/O Companion Slot, Internal, 40 Channel Output to FTA (UL)
TC-206-02-xmx	I/O Companion Slot, Internal, 40 Channel Output to Flying Lead / Free Wire
TC-206-03-xmx	I/O Companion Slot, Internal, 40 Channel Output to Flying Lead / Free Wire (UL)
TC-207-02-xmx	I/O Companion Slot, External, 40 Channel Output to FTA
TC-207-03-xmx	I/O Companion Slot, External, 40 Channel Output to FTA (UL)
TC-208-02-xmx	I/O Companion Slot, External, 40 Channel Output to Flying Lead / Free Wire
TC-208-03-xmx	I/O Companion Slot, External, 40 Channel Output to Flying Lead / Free Wire (UL)
TC-209-02-xmx	I/O Companion Slot, Internal, 40 Channel Output to VFTA
TC-209-03-xmx	I/O Companion Slot, Internal, 40 Channel Output to VFTA (UL)
TC-210-02-xmx	I/O Companion Slot, External, 40 Channel Output to VFTA
TC-210-03-xmx	I/O Companion Slot, External, 40 Channel Output to VFTA (UL)
TC-211-02-xmx	I/O Companion Slot, Internal, 40 Channel Input to VFTA

INTERNAL	SMARTSLOT	INPUT		FTA	TC-501-
				VFTA	TC-511-
				Flying Lead	TC-502-
		OUTPUT		FTA	TC-505-
				VFTA	TC-509-
				Flying Lead	TC-506-
			Integral Power	Flying Lead	TC-516-
	COMPANION SLOT	INPUT		FTA	TC-201-
				VFTA	TC-211-
				Flying Lead	TC-202-
		OUTPUT		FTA	TC-205-
				VFTA	TC-209-
				Flying Lead	TC-206-
			Integral Power	FTA	TC-215-
				Flying Lead	TC-216-
EXTERNAL	SMARTSLOT	INPUT		FTA	TC-503-
				VFTA	TC-512-
				Flying Lead	TC-504-
		OUTPUT		FTA	TC-507-
				VFTA	TC-510-
				Flying Lead	TC-508-
			Integral Power	FTA	TC-517-
				Flying Lead	TC-518-
	COMPANION SLOT	INPUT		FTA	TC-203-
				VFTA	TC-212-
				Flying Lead	TC-204-
		OUTPUT		FTA	TC-207-
				VFTA	TC-210-
				Flying Lead	TC-208-
			Integral Power	Flying Lead	TC-218-

Table 2 TMR 40 Channel Standard Cable Selection Guide

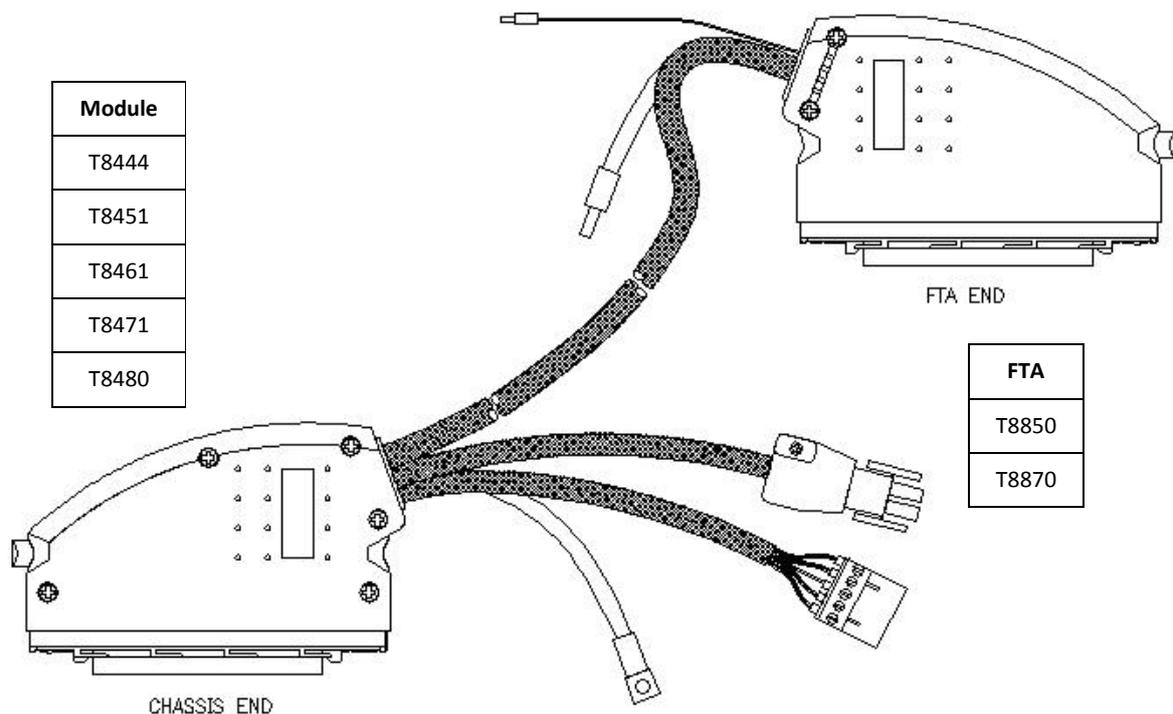|				
INTERNAL	SMARTSLOT	INPUT	FTA	TC-601-
	COMPANION SLOT	INPUT	FTA	TC-701-

Table 3 Dual 60 Channel Standard Cable Selection Guide

The various types of I/O Companion Slot Cables, i.e. TC-201, TC-202 etc. are described in the following sections.

6. I/O Companion Slot Cable Type TC-205

This type of cable, and the modules/field termination assemblies it is used with, is shown in Figure 5 below.

Module
T8444
T8451
T8461
T8471
T8480

FTA
T8850
T8870

FTA END

CHASSIS END

Figure 5 I/O Companion Slot Cable Type TC-205

This type of Trusted I/O Companion Slot Cable is designed for use with digital 24 V/120 Vdc or analogue output modules and is suitable for connecting output signals from the module to an internal FTA.

Three multi-core cables are used for this application. The chassis end of multi-core 1 is fitted with two 96-way type 'C' connectors housed in a double-width hood. The non-chassis end of multi-core 1 is fitted with a 96-way type 'R' connector housed in a single-width hood enabling connection to an FTA. The non-chassis end of multi-core 2 is fitted with a 5-way BLZF 3.5 series connector enabling the cable to be terminated at a T8290 Output Power Distribution Unit. This cable is used for field power return. The non-chassis end of multi-core 3 is fitted with a 6-way AMP plug used to connect power to the field from a T8290 or T8297 and is made up of five individual 2.5 mm wires contained within Rilgain sleeving.

The 0 V connection at the chassis end allows a module reference so that it can measure its output voltage, this must be connected to the field 0 Volts.

The FTA contains isolated power group field 0 Volts which connect to field 0 V supply. Commoning of the reference is obtained by a connection between this field supply and the T8290 Output Power Distribution Unit (TB1 pins 1 and 2).

Multi-core 1 is stripped back 1.5 m at both ends. Multi-cores 1, 2 and 3 are shrouded in nylon Rilgain sheathing. The ends of the sheathing are heated, or over sleeved as required to help prevent fraying.

At both the chassis and remote end, a sheathed braid allows the connector hood to be wired to safety earth. At the remote end, the multi-core screen drain is wired to a green wire to allow connection to screen earth.