TM5000 Series plug-in interface

Tektronix TM5000 mainframes provide power supplies and signal connections for TM5000 plug-ins.

Mechanically, the main interface is a direct card-edge connector with 28 contacts on either side (numbered from 1 at the bottom to 28 on the top) at 5/32" (~0.156" or 3.96 mm) spacing. The connector can be keyed in several places, the plug-in boards have matching cuts between contacts (see below). An additional 20-contact card edge connector carries the GPIB signals.

There are two dedicated, floating 25 V_{AC} transformer windings per slot, as well as several AC and DC buses shared by all slots.
For each slot, two uncommitted transistors (one NPN and one PNP) are mounted in the mainframe. These are available for the module's power regulation circuits.

Whereas TM500 mainframes supply filtered, unregulated DC voltages, in TM5000 units a switch-mode power supply feeds the DC rails and provides regulated voltages. These voltages are lower than the ones specified for TM500 mainframes, but the lowest specified supply voltages coincide, ensuring full backwards compatibility of TM500 plugins when operated in TM5000 mainframes.

The signal pin connections depend on the individual modules. For details, please see the TM 500 Rear Interface Data Book.

	B side	A side
Pin	**Function**	**Function**
28..14	Signals	Signals
13	25 V_{AC} winding #1	25 V_{AC} winding #1
12	+26 V_{DC} ±2.3 V	+26 V_{DC} ±2.3 V
11	Collector lead of PNP series pass	Base lead of PNP series pass
10	Transformer shield lead	Emitter lead of PNP series pass
9	Ground	Ground
8	−26 V_{DC} ±2.3 V	−26 V_{DC} ±2.3 V
7	Collector lead of NPN series pass	Emitter lead of NPN series pass
6	PWR	Base lead of NPN series pass
5	17.5 V_{AC} winding	17.5 V_{AC} winding
4	Ground	Ground
3	Ground	Ground
2	+8 V_{DC} +0.5/-0.4 V	+8 V_{DC} +0.5/-0.4 V
1	25 V_{AC} winding #2	25 V_{AC} winding #2

Interface connections viewed from rear of power module. Pins 14 through 28 are used for signal connections.

Pin group function legend

DC power and ground
AC power
Signals
Uncommitted transistors

Used in

- TM5000 system
- TM5000 plug-ins

See also

- TM500 Series plug-in interface
- Tektronix TM 500 Series Rear Interface Data Book (PDF)
- Tektronix TM 500 Series Rear Interface Data Book (OCR, PDF) (http://w140.com/smb/TM5X_RIB_FREE.pdf)

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This page was last edited on 7 December 2020, at 17:57.