

TC-613 DIGITAL DECODER/DRIVER BACKPLANE FUNCTIONAL DESCRIPTION

REV 1.00 07/01/90 WJS

The TC-613 Backplane Adapter card is suitable for mounting in a three rack-unit card frame and provides interconnection between two TC-3161C medium-current Digital Decoder/Output cards and the back panel or a terminal breakout strip.

One or two TC-3161C cards can plug into the TC-613 Backplane, and up to four TC-613 backplane adapters may be fitted into a 19" card frame. A standard 22/44 edge connector is provided for each output card on the front of the backplane adapter.

A 40 pin (20x2) .1" male IDC header connector is provided for the digital channel outputs for each channel, along with the + and - driver voltage references for hand-off-auto controls or testing. An IDC header and ribbon cable may be used to terminate to either a DB-37F IDC connector, or to a mating header connector with terminal strip outputs on a TC-637 Breakout card. Other breakout systems, such as those from Phoenix Technologies may also be used.

Two 6 pin molex .01 KK series connectors are provided on the rear of the TC-613 for connection of the serial data from a TC-636 Processor Backplane to each of the driver cards.

An independent three pin molex 03 series .093 male connector is provided for the 12-24 VDC solenoid or valve power for each of the 16 channel output cards. The + voltage is bussed to independent output pins for each channel on the header connector, while the common reference is bussed to each channels' common reference pin on the free edge connector for the TC-3161C Driver card. The traces have been designed to handle a total current of eight amps at 24 VDC with all channels active, or .5 amp per channel. For most installations, each **card** should be fused at a nominal four amps on the positive side (at 24 VDC) unless higher currents are required by the output channels. Each current sink output on the TC-3161C is individually fused at 3/4 amp.

Five volt logic power is bussed on pins A and 1, while logic ground is bussed on pins Z and 22.

In a Triad card frame system, the digital and analog grounds become common at the backplane power terminals, and any common reference should be avoided at any other point in order to reduce noise or ground loops between the analog and digital grounds or signals. *It is essential that there is a common reference between the logic (+5 VDC) and driver output voltage (+12-24 VDC) grounds.*

Physical Dimensions:

2.00" x 4.375" printed circuit board assembly

Power Requirements:

+5VDC for logic power, +12-24 VDC for output channels

Related Documents:

TC613.ASM	Assembly diagram (N/A)
SC-7.12	Standard I/O Pin Assignment Connections
SC-7.13	Cable Harness/Assemblies

PIN ASSIGNMENTS

40 PIN (20x2) DUAL .1 IDC MALE OUTPUT HEADER

+V	1	2	OUTPUT 1
+V	3	4	OUTPUT 2
+V	5	6	OUTPUT 3
+V	7	8	OUTPUT 4
+V	9	10	OUTPUT 5
+V	11	12	OUTPUT 6
+V	13	14	OUTPUT 7
+V	15	16	OUTPUT 8
+V	17	18	OUTPUT 9
+V	19	20	OUTPUT 10
+V	21	22	OUTPUT 11
+V	23	24	OUTPUT 12
+V	25	26	OUTPUT 13
+V	27	28	OUTPUT 14
+V	29	30	OUTPUT 15
+V	31	32	OUTPUT 16
-V	33	34	+V CONSTANT
-V	35	36	+V CONSTANT
-V	37	38	+V CONSTANT
-V	39	40	

3 PIN MOLEX SERIES 3 .093 POWER CONNECTOR

1	F	+V	12-24 VDC @ up to 8 AMP
2	F	+V	TIED TO PIN 1
3	M	-V	POWER COMMON

6 PIN .1 KK MALE MOLEX DATA CONNECTOR

1	WH	+5 VDC from data source (opto isolator)
2		
3	BK	Common to data source
4		
5	GN	Data TTL input
6	RD	Strobe TTL input