

TR ISDN

CLEI: DDRPMLT1__ (L4)
CLEI: DDR1AAAA__ (L5)



Note: This Job Aid supports both the L4 and L5 units.

STATUS LEDs

- NT1 I/F**
 - RED Indicates a loss of signal from or loss of synchronization with the 2B1Q BRI interface towards customer's NT1
 - * FLASHING Once per second indicates receipt of a Near End Block Error from the 2B1Q BRI interface
- TRI I/F**
 - RED Indicates a loss of signal or synchronization with the TRI-C (Total Reach ISDN CO) unit
 - * FLASHING Once per second indicates receipt of a Near End Block Error from the TRI-C unit
- LOOPBACK**
 - YELLOW 2B+D loopback
 - * FLASHING 1/sec = B1 loopback
 - * FLASHING 2/sec = B2 loopback
- ACT**
 - GREEN Indicates the terminal equipment has exchanged ACT bits with the ISDN switch
 - * FLASHING Once per second indicates that the ACT bit is being sent from only the terminal equipment (CPE)

OPTIONS

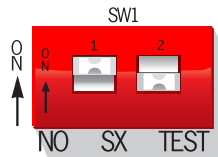
Provision DIP switch SW1 prior to card insertion.

SW1-1 SX

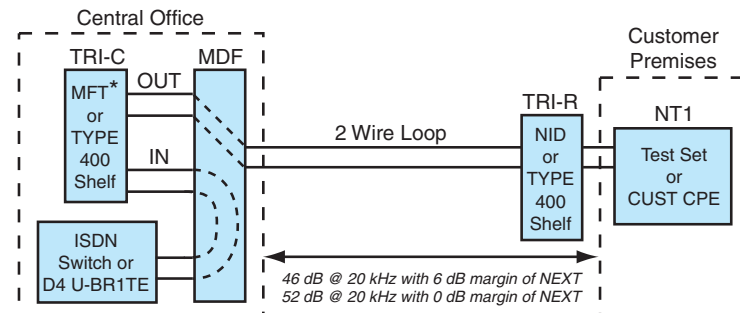
- ON Default and normal position. Provides between 4 to 10 mA of sealing current towards the customer's NT1/TA.
- OFF Disables sealing current to the customer's NT1/TA.

SW1-2 TEST

- ON Used for factory test only.
- OFF Default and operational mode.



CONNECTIVITY



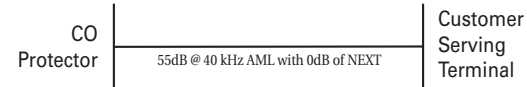
* Where approved

T400 Edge Connector Pin Assignments

55	TIP, U-Interface	To Customer
49	RING, U-Interface	To Customer
47	RING, Total Reach Interface	From CO
41	TIP, Total Reach Interface	From CO
27	Frame Ground	
17	Frame Ground (Digital Ground on L5)	
11	Frame Ground (No Connection on L5)	

Note: ISDN connections are not polarity sensitive.

DEPLOYMENT GUIDELINES



TOTAL REACH SC PAM SIDE

- Maximum Loop Loss52 dB @ 20 kHz using a 135Ω termination or 61 dB @ 40 kHz
- Maximum DC Resistance2000Ω
- Maximum Single Bridged Tap2 kft
- Maximum Total Bridged Tap6 kft
- Maximum # of Bridged Taps3

Note: Bridged Tap length must be included as part of the total loop length

U-INTERFACE SIDE

- Maximum Loop Loss42 dB @ 40 kHz using a 135Ω termination
- Maximum Noise33 dBrn using a 135Ω termination with a 50 kB filter
- Maximum DC Resistance1300Ω
- Maximum Single Bridged Tap2 kft
- Maximum Total Bridged Tap6 kft
- Maximum # of Bridged Taps3
- Voltage-48 VDC from TIP (GND) to RING (-48v)



TURNUP

1. Set dipswitches on both units according to circuit design and local practices.
2. Install both TRI-C and TRI-R using standard procedures.
 - TRI-C inserts in T400 shelf, or MFT bay with MFT adapter.
 - TRI-R inserts in standard non powered T200 or T400 NCTE mounting for indoor installations, or mounts to a wall for outdoor NID installations.
3. When inserted in an active housing the two units go through a synchronization and activation process during which all LEDs undergo an on/off sequence. Refer to *STATUS LEDs* for LED descriptions.
4. After synchronization, which may take up to 90 seconds, the following LED indication will show:
 - ACT LED - ON
 - All other LEDs will be OFF until network occurrences cause illumination.
5. If LEDs in step 4 are as noted, proceed with loopback and BERT testing per DDS specifications.
6. If LEDs in step 4 are in any other configuration, refer to *Troubleshooting*.
7. The TR ISDN system will be qualified at the 20 kHz frequency.

TROUBLESHOOTING

No power at the TR DDS-R

- Ensure TRI-C is supplying voltage to power the TRI-R. Measure T/R voltage at the frame (tip to ground and tip to ring = -125 to -130 VDC, ring to ground = 0).
- Measure T/R voltage at the TRI-R.
- If voltage not present at the TRI-R, check continuity of cable pair.
- If voltage is present a faulty TRI-R is indicated.
- The TRI-R does not place a measurable short between tip and ring. Cable resistance must be taken toward a manually applied short.

Power, but no Synchronization on TRI I/F

- Check cable for load coils.
- Check for excessive bridged taps.
- Verify other deployment guidelines adhered to.

Excessive Errors on Loop

- Compare resistance of individual conductors. If these are different, high-resistance or intermittent opens may be indicated.
- Check for excessive bridged taps.
- Verify other deployment guidelines adhered to.

TESTING

Testing may be accomplished from the switch, an ISDN element between the switch and TRISDN, or from the TRI-C front panel with a DS0 test set.

1. Connect the DS0 digital test set (TPI 108/109 or equivalent) to the 8-pin modular test jack on the TRI-C. Configure the test set for NEAR logic and 64 kbps.
2. Initialize the desired loopback address using the rotary switch; clockwise for the B1 channels and counter-clockwise for the B2 channels. ADR 1 is the TRI-C and ADR 2 is the TRI-R.
3. The TEST LED will illuminate or blink if the loopback is successful. It will not illuminate if the loopback failed.
4. Send and receive a 2047 test pattern to the established loopback and observe the DS0 test set for bit error count.

COMPLIANCE REQUIREMENTS

This product is intended to be installed in products providing a Type “B” or “E” enclosure, and in a Restricted Access Location.

Code	Input	Output
Power Code (PC)	F	C
Telecommunication Code (TC)	–	X
Installation Code (IC)	A	–

WARRANTY

Warranty for Carrier Networks products manufactured by ADTRAN and supplied under Buyer’s order for use in the U.S. is ten (10) years. For a complete faxback copy of ADTRAN’s *U.S. and Canada Carrier Networks Equipment Warranty*: (877) 457-5007, Document #414.