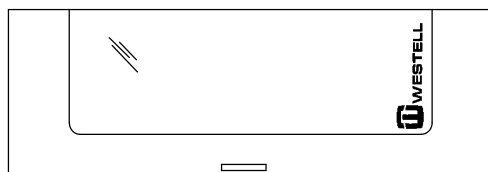


28MA32 Single-Slot Universal Network Interface Mounting

Contents

1. General	page 1
2. Inspection and Warranty	page 1
3. Installation	page 2
4. Specifications	page 4



NOTE: These mountings are for use with UL recognized telecommunication cards.

1. General

1.01 The Westell 28MA32 is a desk top or wall mount, single-slot 400-type mounting designed to house one T1 Network Interface Unit (NIU), one 2W or 4W High-Bit-Rate Digital Subscriber Line (HDSL) Remote unit, one Data Station Termination unit (DST), or one Digital Data System Network Interface Unit (DDS-NIU). The 28MA32 will also accommodate any other UL recognized plug-in conforming to the pin-out assignment of the assembly. The 28MA32 provides physical and electrical connection of the plug-in module to interface the facility and customer equipment. Facility-side connections are made to a 14-position terminal block (TB2). Customer connections can be made to either TB2 or to an 8-pin, keyed modular jack which can be custom-wired for the application.

1.02 This practice is revised to correct the RJ48S modular jack wiring connections shown in Table 2 and Figure 1. CR/DTR/R1/2W is connected to pin 1, CT/DTT/T1/2W is connected to pin 2, CT1/DRT/T is connected to pin 7, and CR1/DRR/R is connected to pin 8.

1.03 Features of the Westell 28MA32 are as follows:

- Desk-top or wall-mount metal enclosure
- Lockable cover helps deter unauthorized entry to the internal circuitry; Lead-seal wire lock provided with each unit
- Can be used with any Westell 43XX-series DCTE/NCTE, Westell 3110-series T1 NIU, or any other 400-type, UL-recognized telecommunication module conforming to the pin-out assignment of the assembly
- Equipped with a 14-position terminal block (TB2) for making the necessary facility-side and customer-side wiring connections
- Customer connections can be made to TB2 or to an 8-pin modular jack; the 8-pin jack can be configured for JM8, RJ48S or RJ48C USOC codes, as required
- Complies with UL1459 requirements

2. Inspection and Warranty

Inspection

2.01 Upon receipt of the equipment, inspect the equipment thoroughly. If the equipment has been damaged during transit, please report the damage to the transportation company and to Westell.

Warranty

2.02 Westell warrants this product to be free of defects at the time of shipment. Westell also warrants this product to be fully functional for the time period specified by the terms and conditions governing the sale of the product.

2.03 This equipment should not be field repaired. Any attempt to repair or modify the equipment by anyone other than an authorized Westell representative will void the warranty. If the equipment is suspected of being faulty, replace it with another unit, optioned identically, and retest. If the replacement unit appears to operate correctly, the original unit may be faulty and should be returned to Westell for repair or replacement.

Repair and Return

2.04 Before returning the equipment, a Return Material Authorization (RMA) number must be requested from Westell for all product being returned. In an effort to better serve you, please include a brief description of the problem, then return the equipment to:

Westell, Inc.
750 N. Commons Drive
Aurora, IL 60504-7940
ATTN: R.G.M. Department

2.05 Westell will repair or replace any defective Westell equipment without cost during the warranty period if the unit is found to be defective for any reason other than abuse, improper use or improper installation. If the equipment is found to be defective, please contact Westell regarding repair or exchange. If a replacement unit is

required, it will be shipped in the fastest manner consistent with the urgency of the situation.

2.06 Westell will continue to repair or replace faulty equipment beyond the warranty period for a nominal charge. Contact Westell or your local Westell Sales Representative for details.

Technical Assistance

2.07 If technical assistance is required, contact the Westell Technical Service Department by calling:

Customers in the USA:

Westell, Inc.
(630) 375-4999
1-800-323-6883

Customers outside the USA:

In Europe/Africa/Middle East:

Westell Europe (GMT Time Zone)
Voice: (+) 44-1223-875300 or
FAX: (+) 44-1223-875301

Other Countries:

Westell International
(+) 630-375-4999 or
FAX: (+) 630-851-5327 or
e-mail: global_support @ westell.com.

2.08 This equipment is identified by a model number and issue letter imprinted on the bottom base plate (A90-28MA32). Each time a change is made to the product which changes the form, fit or function of the product, the issue letter, indicated by the prefix letter of the assembly number (A90), is advanced. Be sure to indicate the issue level (and revision level of the unit), along with the model number when making inquiries about the equipment.

3. Installation

3.01 The 28MA32 can be placed on a desk top or can be mounted to a wall. Before installing the unit, however, please observe the following safety notes.



Risk of electric shock. Voltages up to 140 Vdc (with reference to ground) may be present on telecommunications circuits.

Safety Notes

- (1) Never install telephone wiring during a lightning storm.
- (2) Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- (3) Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- (4) Use caution when installing or modifying telephone lines.
- (5) When installed, this equipment is intended to be used behind devices that provide primary lightning protection.

Desk Top Applications

3.02 For desk-top applications, the envelope provided with this unit contains rubber feet (4) which are intended for use in desktop applications only. These rubber feet help prevent the unit from sliding on or marring the desktop surface. The rubber feet are not intended for wall-mount installation as the rubber feet cause the assembly to protrude from the wall surface. The rubber feet are installed by removing the protective backing from the rubber foot then attaching a rubber foot to each of the four corners on the base of the unit.

Wall-Mount Installation

3.03 The Installer should first locate a suitable spot for installing the assembly. The location should be in an area that provides enough room for installing the assembly. The location should also provide adequate lighting.

3.04 For wall-mount installation, the top cover of the assembly must be removed. The cover is removed by sliding the top cover in a direction that is away from the 8-pin modular jack of the unit. Once the cover is removed, locate the small envelope. This envelope contains the lead-seal locking device to lock the assembly after installation. Remove the envelope from the assembly and put it aside for later use.

Tools Required

- Screwdriver (flat-head and/or Phillips-head)
- Wood screws or drywall fasteners or cement-type wall fasteners (depending on the mounting surface)
- Awl or Drill with assorted wood or cement bits
- Hammer and Pliers or Line Cutters

3.05 Located in the bottom of the base plate are three knock-outs. Two of these knock-outs should be removed for wall-mount installations only. The mounting holes are designed such that the front opening of the assembly can face either to the left or in the upward position. Once the knock-outs are removed, the installer places the bottom portion of the assembly against the wall and uses the mounting holes as a template for marking the location for the mounting assembly to be installed. **Note:** *Mounting hardware is not included.*

3.06 If the assembly is going to face to the left, mark the location for the two top holes. If the assembly is going to face upward, mark the location of the top, right-hand mounting hole and the middle left-hand mounting hole. After marking the hole locations, remove the mounting assembly from the wall surface.

3.07 Depending on the mounting surface, drill an appropriate size hole into the wall to accommodate the wall fasteners being used. **Do not make the holes too large.**

On Hollow, Drywall Surfaces

If installing the assembly on a hollow, drywall-type surface, use the wall fastener periodically as a guide when checking the hole size. The appropriate size hole is obtained when the wall fastener fits snugly into the hole by applying light hand pressure or by lightly tapping the fastener into the hole.

After obtaining the proper hole size, install the wall fastener and turn the head of the screw of the wall fastener, clockwise, into the wall. The wall fastener is properly inserted when the head of the screw and the flat-surface portion of the wall fastener is flush against the mounting surface.

Turn the head of the screw outward (counter-clockwise) until the head of the screw is protruding from the wall approximately 1/4 inch.

Repeat these steps for the second wall fastener. Upon completion, position the mounting assembly base plate holes over the heads of the two screws. The mounting assembly will slide into proper position and hang freely.

Note: If the mounting assembly is hanging too loose, turn the screws clockwise until the assembly is snug against the wall surface. **Do not turn the screws too tight as this assembly must be able to be removed from the wall surface.**

On Solid/Wood Surfaces

If installing the assembly on a solid surface (wood, 2x4, etc.), turn the wood screw into the wall but leave the head of the screw protruding from the wall approximately 1/4 inch.

Repeat the above step for the second wood-screw. Upon completion, position the mounting assembly base plate holes over the heads of the two screws. The mounting assembly will slide into proper position and hang freely. Refer to the Note above.

Installer Connections

3.08 After installing the assembly, the installer can make the necessary wiring connections. Table 1 gives

the 4W facility-side connections to be made. Facility-side connections are made to TB2. Table 2 gives the CPE-side wiring connections to be made when using the assembly in either Analog Data/DST, 2W HDSL-T1-NIU, 4W HDSL-T1-NIU, or Analog Data DDS-NIU applications. The installer may wire the spade lugs of the 8-pin jack to TB2 to allow the customer to plug into the jack for CPE connections or the CPE connections may be wired directly to TB2. A wiring diagram is provided in Figure 1 and on a label located inside the top cover of the mounting assembly. Please refer to the wiring diagram as needed.

Table 1. Facility-Side Wiring Connections

Facility-Side Wiring Connections	TB2 Screw Terminal Position Number	56-Pin Card-Edge Connector (J1)
Facility-side Designation TR/R1/H2 Ring (to facility)	3	47
TT/T1/H2 Tip (to facility)	4	41
RR/R/H1 Ring (from facility)	11	13
RT/T/H1 Tip (from facility)	12	7
SXR ** - Simplex Receive	1*	9
SXT ** - Simplex Transmit	2*	43
*No Connection is required by the installer ** Used for NCTE applications only Shaded area denotes factory wired or spare		

Table 2. Customer-Side Wiring Connections

Customer-Side Wiring Connections	TB2 Screw Terminal Position Number	Modular Jack Wiring Connections for 4W HDSL-T1-NIU Applications RJ48C	Modular Jack Wiring Connections for Analog Data DDS-NIU Applications RJ48S	Modular Jack Wiring Connections for Analog Data/DST Applications JM8	56-Pin Card-Edge Connector (J1)
Designations CR/DTR/R1/2W (from modem)	5	4 (Red Wire)	1 (Blue Wire)	1 (Blue Wire)	49
CT/DTT/T1/2W (from modem)	6	5 (Green Wire)	2 (Orange Wire)	2 (Orange Wire)	55
CR1/DRR/R (to modem)	13	1 (Blue Wire)	8 (Slate Wire)	8 (Slate Wire)	15
CT1/DRT/T (to modem)	14	2 (Orange Wire)	7 (Brown Wire)	7 (Brown Wire)	5
TEK6/E Modem Disable/E-Lead	7	3 (Black Wire*)	3 (Black Wire)*	6 (Yellow Wire)	23
TEK5/M Modem Disable/M-Lead	8	6 (Yellow Wire*)	4 (Red Wire)*	3 (Black Wire)	21
MLBG/SG Manual Lpbk Ground	9**	7 (Brown Wire*)	5 (Green Wire*)	5 (Green Wire*)	19
MLB/SB Manual Loopback	10**	8 (Slate Wire*)	6 (Yellow Wire*)	4 (Red Wire*)	1
*No Connection/spare is required by the installer ** Used for NCTE applications only Shaded area denotes factory wired or spare					

Power

3.09 Power can be provided via the 6024-05 power transformer (optional equipment) or can be provided via the simplex path.

3.10 When using the 6024-05, power connections are made to TB3. Power and ground connections are internally made to the 56-pin card-edge connector, J1.

Table 3. Power Connections

Power Connections	TB3 Screw Terminal Position Number	56-Pin Card-Edge Connector (J1)
RG*	1	46
-V/AC1 - Power Input	2	35
+V /AC2- Power Ground	3	17
*Used only for NCTE applications (DLL or FX)		



Equipment Grounding

3.11 To ensure proper grounding and the safety of personnel, this mounting assembly must be grounded as shown in Figure 2, unless local codes state otherwise. Westell recommends the use of 14 AWG (minimum) for the purpose of grounding this assembly. However, grounding cable must be a minimum of 22 AWG, and the gauge size must be equal to or heavier than the gauge of the power supply cables to conform to UL1459 requirements.

Unit Installation

3.12 After making the necessary wiring connections, the installer can install the plug-in module. The unit makes electrical connection when inserted into, and is properly seated in, the 56-pin card-edge connector.

NOTE: *If the unit being installed contains switch options, please refer to the appropriate module practice for information on setting the option switches.*

3.13 After installing the module, perform the necessary tests on the module housed inside the assembly. If module performance is good, the installer may, at this time, position and re-install the top cover of the assembly

onto the base plate, and install the lead-seal lock contained in the small envelope.

Troubleshooting

3.14 If trouble is encountered, verify proper voltage at the power supply source or, if provided, at the simplex power supply source. Verify all installer connections (see Tables 1 and 2). Also verify, the module is properly optioned and is making a good connection with the card-edge connector of the mounting assembly.

3.15 If technical assistance is required, please contact Westell's Technical Service Department by calling 1-800-323-6883.

4. Specifications

- **Operating Temperature:** -18°C to +55°C
- **Storage Temperature:** -20°C to +66°C
- **Unit Dimensions:** 5.84 in. wide; 9.0 in. long; 2.0 in. high
- **Mounting Capacity:** Houses one of the following unit types:
DCTE/NCTE unit,
T1-NIU unit,
2W HDSL Remote Unit,
4W HDSL Remote Unit,
DDS-NIU, or
any 400-type equivalent plug in meeting the pin-out assignments of the assembly
- **Unit Weight:** Approx. 2 lbs. (without module);
- **Operating Power:**
Operates from a 24 Vac power transformer (model 6024-05 - optional) or from Simplex power; Unit provides internal voltage doubler to provide proper voltage (-48 Vdc) to card housed inside assembly
- **Output Voltage:** -48 Vdc
- **Maximum Load Capacity:** 200mA at -48 Vdc

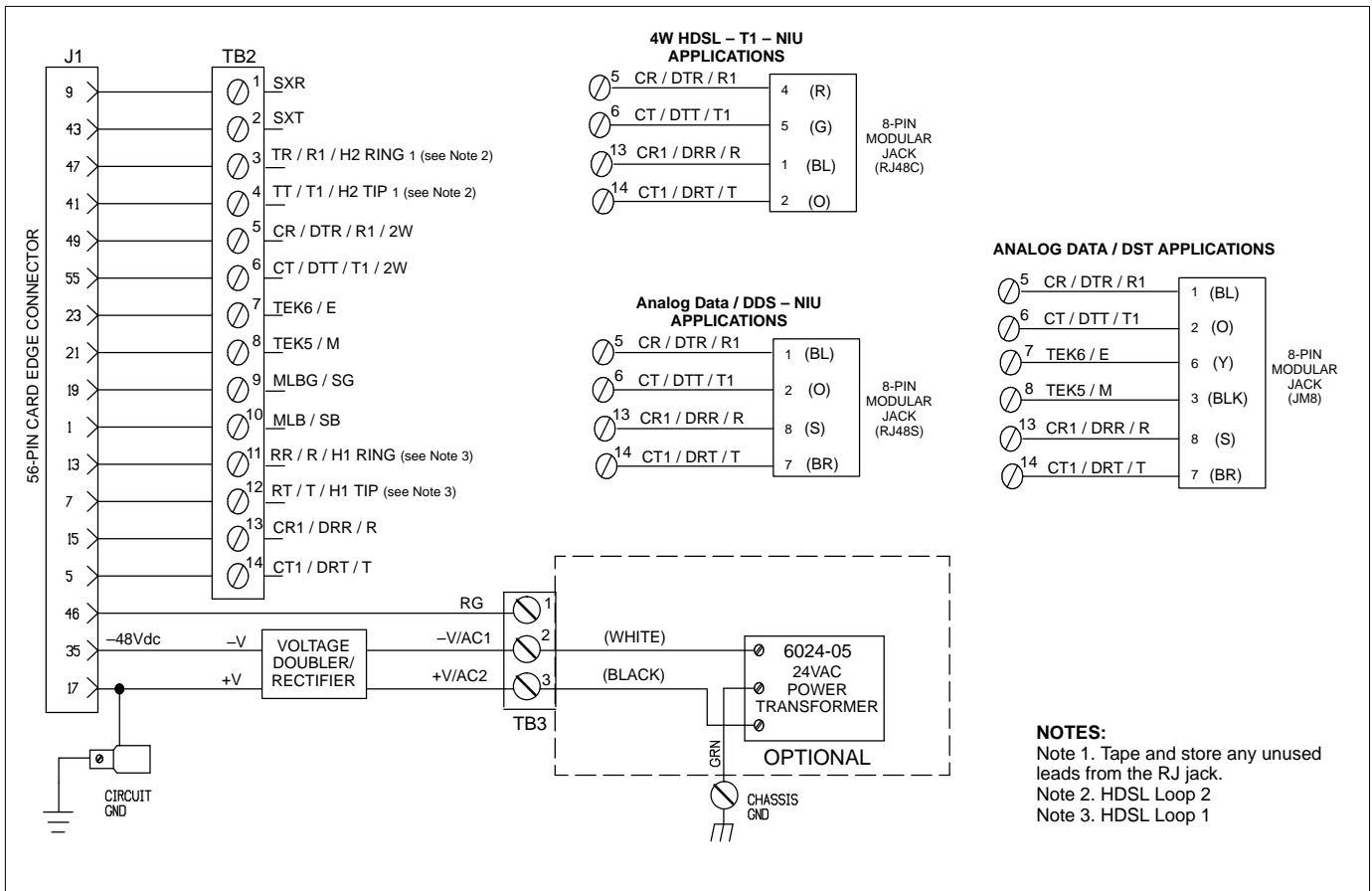


Figure 1. 28MA32 Block and Wiring Diagram

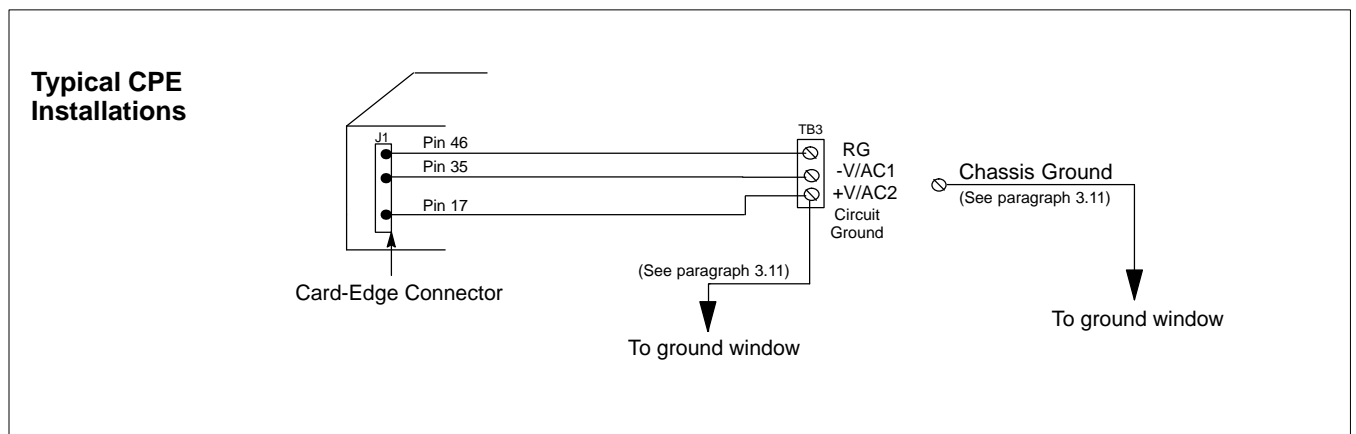


Figure 2. Typical Equipment Grounding Diagram