Purpose

The NTRL02 Term nat on Un t (TU) prov des NR 002 Remote /O (R O) Modu es and f e d equ pment w th a remote commun cat on inter face v a a 1 Megab t/second f ber opt c data nk The NTRL02 s des gned for po nt to po nt commun cat on and a ow s for a max mum cab e d stance between a master and s ave RIO of 10,000 feet (3000 meters) Th s d stance can be dou bled by us ng two TUs w th JP1 jumpered for repeater mode, and a remote +24 V dc power suppy Th s TU a so supports commun ca t on to D g ta Contro and D g ta nd cator Stat on

Description

The NTRL02 Term nat on Un t, s shown n F gure 1 requ res +24 V dc /O power to dr ve ts c rcu try and has a max mum current consumpt on of 170 mA A 25 Amp fuse (F1) prov des np ut protect on and a 5 Amp fuse (F1) prov des np ut protect on and a 5 Amp fuse (F2) s fused to the D g ta Stat ons

The fo ow ng steps must be performed before the NTRL01, NTRL02, or NTRL03 Term nat on Un ts are put nto operat on

Handling

Special Handling

The NTRL01, NTRL02 and NTRL03 TUs use E ec trostat c Sens t ve (ESC) dev ces Fo ow these hand ng procedures

1. Keep the TU n the spec a ant stat c bag unt you are ready to nsta t n the system Save the bag for future use

2. Ground the ant stat c bag before open ng

3. Ver fy that a dev ces connected to the TU are proper y grounded before us ng t

4. Avo d touch ng the c rcu try when hand ng the TU

NOTE: Ground ng straps (f e d stat c k ts) must be used when nsta ng of remov ng the TU to conf gure or change jumper sett ings

General Handling

1. Exam ne the TU mmed ate y to ver fy that no damage has occurred n trans t

### TABLE 1  NTRL02 Application Summary

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<th>APPLICATION</th>
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NTRL02

2. Not fly the nearest Bayley Control Sales/Service office of any damage

3. Fabricate a manner for any damage with the transporter company that handled the shipment

4. Use the original packing material and/or container to store the TU

5. Store the TU in an environment of good air quality, and free from temperature and moisture extremes

Installation

The NTRL02 TU can mount on a field Termination Unit (PCU), remote to the NTRL02 and NR002. 200 feet (60 meters) Please refer to the Termination Unit and Cabinet train on page 8 of the manual for complete instructions or other information as necessary

Cable Connection

An NKLM01 cable connects between P1 on the TU and P3 on the ROF. An opto-cable connects two TUs via TX and RX

Exercise caution when connecting fiber optic cables. Pay strict attention to the bend radius specifications. Since using tensile strength during a test on normal system operation, Terminals on the fiber optic cable with SMA type connectors must be performed by qualified personnel

Fiber Optic Budget

The fiber optic has a minimum of 15 decibels (dB) of power that can be expended in a system. This is referred to as the Power Budget. The 15 dB of power is guaranteed when 62.5/125 m multimode fiber is used.

FIGURE 1   NTRL02 Termination Unit
The Power Budget determines the maximum distance over which the nk can operate. The losses in a system measured relative to the fiber lengths are due to fiber losses specified dB/km and losses due to connectors or spaces in the system. The 62.5/125 fiber s available n 2 km max mum lengths w th the max mum oss rates at 3.3 dB/km

Example

For 3 km of cable, the insertion loss due to the fiber is

3.3 dB/km x 3 km = 9.9 dB

Connector losses, when properly applied, amount to an average of 1 dB per connector.

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FIGURE 2  Cable Connections for NTRL02  Normal Mode
*If the remote power is removed for any reason, the communication will stop operating.

**FIGURE 3** Cable Connections for NTRL02 Repeater Mode