

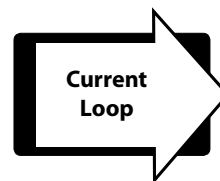


**MERIDIAN**  
TECHNOLOGIES

**NT/NR-1I-SFP**

**DigiCool™**

**Digitally Encoded One Simplex  
4-20mA Current Loop Channel  
using Small Form Pluggable (SFP)  
Optical Device**



#### **FEATURES:**

- One Simplex channel of 0-10 VDC Analog Signal or Current Loop transmission
- Excellent Signal Isolation
- Prevent Ground Loops and Computer Noise Effects on Your Analog Signals
- Transfers Analog Signals on distances up to 50 km
- Linearity: better than +/-0.05%
- High Signal to Noise Ratio: 72 dB
- Input Signal Up to +10V@DC-5KHz or 4-20mA@DC-5KHz
- Low Power Consumption
- High Efficiency, Isolated Power Supply
- Wide Optical Dynamic Range
- Multimode, Single-mode and CWDM fiber options via SFP modules
- Local LED Status Indicators to Monitor Critical System Parameters
- LC, SC Optical Connector (SFP dependent)
- Screw Terminal Connector for Analog Signals

#### **DESCRIPTION:**

These NTNR-1I-SFP modules incorporate all-digital encoding technology which transmit one unidirectional 0-10VDC analog or a 4-20mA Current Loop signal over one multimode or single-mode fiber.

The user may configure the Analog input or Output for 0 Volt to +10 Volt or 4 to 20 mA with jumpers.

Having both, Current and Voltage input capability, this system allows the user to convert from one format to the other for wide range of industrial applications.

This product incorporates the industry standard Small Form Pluggable (SFP) optical modules. This SFP gives you the option for either single-mode, multimode or CWDM wavelength selections by simply plugging in the appropriate SFP module.

This module belongs to new DigiCool™ series which features very Low Power Consumption and an Isolated High Efficiency Power Supply.

Standard 5-pin terminal blocks are used for input/output connections.

#### **CONFIGURATIONS:**

The NTNR-1I-SFP products are available in small stand-alone modules for easy mounting on walls, shelves and other convenient flat surfaces.

#### **MARKETS:**

- √ Remote sensors
- √ Security and surveillance
- √ Access Control

## SPECIFICATIONS:

### Analog Signal / Current Loop

Analog Input Range	0-10 VDC or 4-20 mA
Output Voltage Range	0-10 VDC or 4-20 mA
Nonlinearity Error	+/-0.05% @ 0-10 VDC range
Noise	Better than 1mVRMS
Input Impedance	100 KOhms
Analog Bandwidth	DC-5 KHz
Resolution	16 Bit

### Optical

Fiber Data Rate	100 Mb/s
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### Connectors

Optical	LC, SC - SFP dependent
Power (module)	2-pin Screw Terminal
Current Loop	5-pin Screw Terminal

### Power \*\*

Input Power	12-24VAC / DC
Power Consumption	2.8 W

### Indicators

1 - Green	Power On
1 - Bi-color	Tx Laser driver Normal / Error
1 - Bi-color	Rx Optical signal Present / Error
1 - Bi-color	Tx Signal Present (Green), Out of range (Red)
1 - Bi-color	Rx Signal Present (Green), Out of range (Red)

### Physical

Dimensions (Module)	117 mm (H), 61 mm (W) 25.5 mm (D) (4.6 x 2.4 x 1.1 inch) with flanges
Weight (Module)	150 gms (0.34 lb)

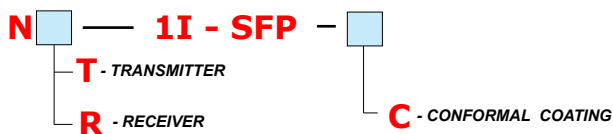
### Environmental

Operating Temperature	-40°C to +74°C
Storage Temperature	-55°C to +85°C
Relative Humidity	0 to 95% Non-condensing

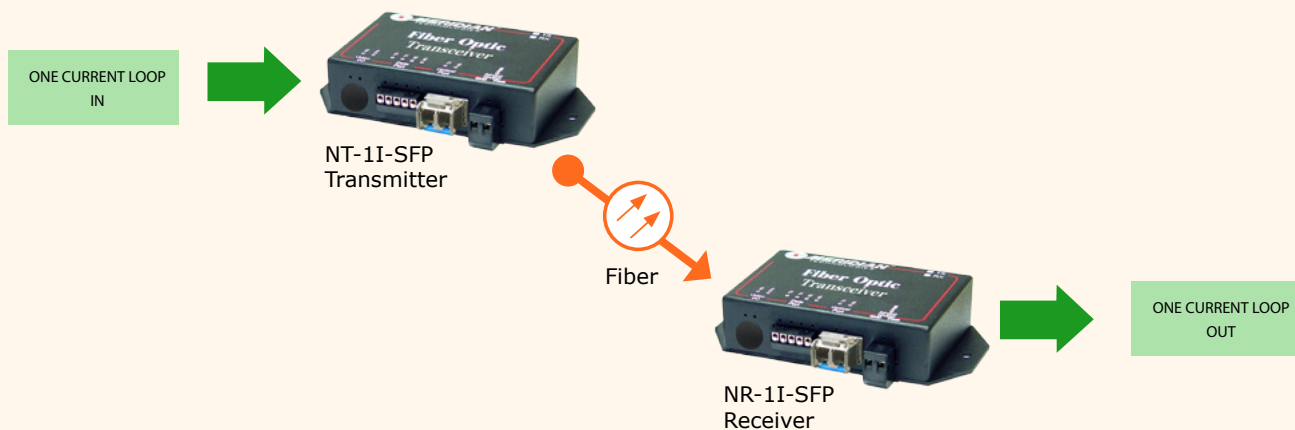
### Quality

MTBF	>170,000 hours @ Ground Fix 35°C per MIL217F
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### Part Numbers:



\* measured @ max. optical budget    \*\* Due to variations of drivers and diagnostic options, power shown @ max value



## SFP OPTIONS:

The SFP series products are available for both single-mode and multimode fiber applications and either one or two fiber versions. Recommended optical speed for this product is 155 Mb/s.

For more specifications on a SFP optical devices go to [SFP data sheet](#) or go to:

**WWW.MERIDIAN-TECH.COM -> PRODUCTS -> ACCESSORIES -> SFP OPTICAL DEVICES**

Common SFP modules			
Part #	Fiber type	Connector	# of Fibers
MM1313F2	Multimode	LC	1
SM1313F20	Single-mode	LC	1