



# Allen-Bradley Fiber-Optic Converter Module

(Cat. No. 1771-AF)

## Documentation Update

### Use this document with:

Product Data, publication 1771-2.90 - March, 1986

**Important:** This document supplements the data sheet listed above. Keep this update with the data sheet and make the following corrections to it.

### Corrections to 1771-2.90:

The caption in figure 1 that reads: 6500 feet max. should read: 6500 feet maximum distance with continuous 100/140 um fiber-optic cable.

The specifications section should read:

#### Module Location

- Single slot in 1771 I/O chassis

#### Operating Temperature

- 0 – 60°C
- 32 – 140° F

#### Storage Temperature

- -40 – 85° C
- -40 – 185° F

#### Humidity – (Non-condensing)

- 5 – 95%

#### Power Supply Requirement

- +5 VDC @ 600mA from backplane

#### Configurations

- Point-to-point or star

#### Maximum Fiber Distance Between Module Pairs

- 6500 ft (2km) of continuous 100/140 um fiber-optic cable

#### Maximum Distance

- 43,000 ft combination of twinaxial and 100/140 um fiber-optic cable

#### Maximum Twinaxial Distance Between Module Pairs (Twinaxial Repeater)

- 10,000 ft of twinaxial cable per module pair (30,000 ft maximum)

**Receiver Sensitivity (Optical)**

- -24dBm at the end of a 1 meter 100/140 um fiber-optic cable

**Optical Wavelength**

- 820 nm

**Fiber-optic Cable Connector Required**

- SMA-905 connector

**Recommended Connector Loss Guidelines**

- 1dB or less per connector. This value has been included in the transmitter power (optical) specification.

**Transmitter Power (Optical)**

- -21.0 dBm at the end of a 1 meter 50/125 um fiber-optic cable
- -16.1 dBm at the end of a 1 meter 62.5/125 um fiber-optic cable
- -14.1 dBm at the end of a 1 meter 85/125 um fiber-optic cable
- -12.6 dBm at the end of a 1 meter 100/140 um fiber-optic cable
- -5.6 dBm at the end of a 1 meter 200/230 um fiber-optic cable

**Minimum Fiber-optic Cable Bandwidth Required**

- 17MHz/km

## Cable Characteristics

Cable Diameter	Attenuation (dB loss/km)	Numerical Aperture (NA)	Length Guidelines (km)
50/125 um	4 dB/km	0.20 NA	0.50 km
62.5/125 um	4 dB/km	0.28 NA	1.75 km
85/125 um	4 dB/km	0.26 NA	2 km
100/140 um	5 dB/km	0.30 NA	2 km
200/230 um	6 dB/km	0.37 NA	2 km



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