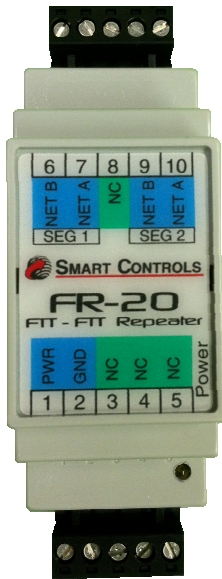


FR-20

Physical Layer Repeater



DESCRIPTION

The Smart Controls FR-20 is a two (2) channel physical layer repeater that can cost effectively extend the limits of a free topology LONWORKS® network.

The FR-20 provides electrical isolation between LON network channels to extend the maximum length of the channel and to increase the maximum number nodes on that channel. The FR-20 requires no software configuration and there are no jumpers to be set.

DIN Rail mounting and screw plugs allow fast and easy installation in to existing or new LonWorks® networks. A nominal 24 Volt AC/DC power source is used to power the FR-20.

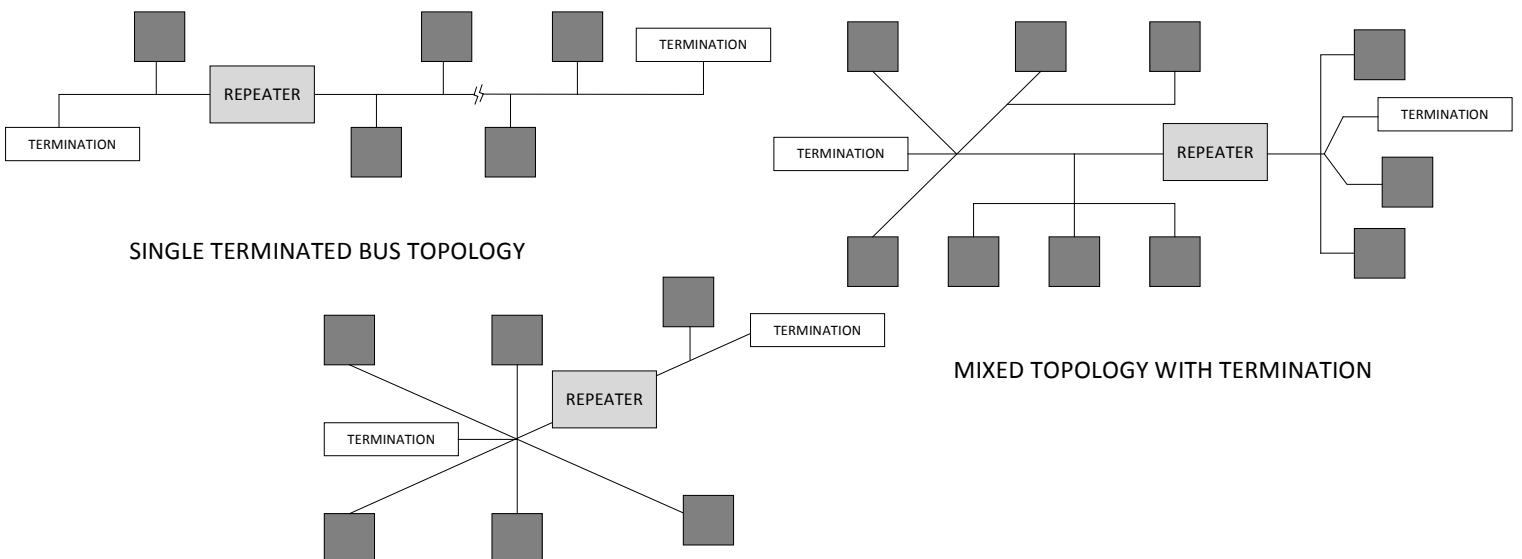
Best configuration results occur with proper Lon Networks terminated topology.

Free Topology LON networks must have proper impedance load termination. Use the Smart Controls S-Term-F to properly provide single and double ended termination on each segment of a Free Topology LON network channel connected by a FR-20 Repeater.

FEATURES

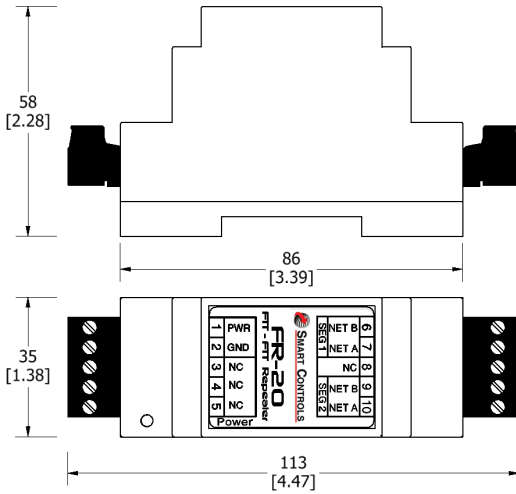
- Two (2) channel physical layer repeater
- Connect FTT to FTT LONWORKS® channels
- Fast and easy installation into a network
- Extend a network segment beyond maximum length
- Increase total number of nodes on a network channel
- DIN-rail mounting
- Power Status Indicator

NETWORK



STAR AND SINGLE TERMINATED BUS TOPOLOGY

DIMENSIONS



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SPECIFICATIONS

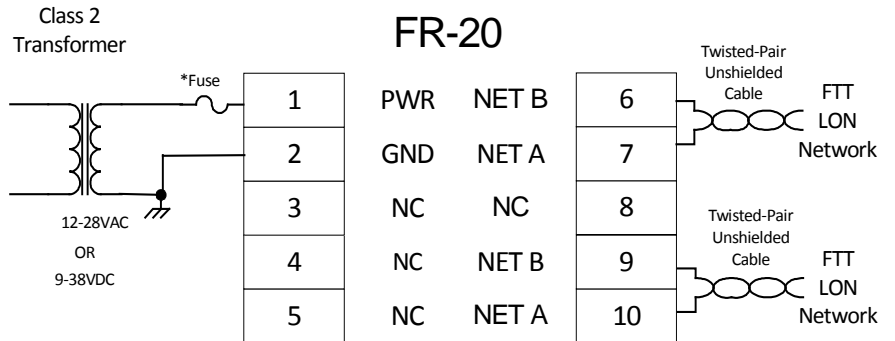
Communications:	Echelon® FTT-10A
Voltage Input:	12-28 VAC or 9-38 VDC
Power Consumption:	maximum 2.0 VA
Operating Temperature:	-20 to 70°C (-4 to 158 °F)
Humidity:	5 to 95% R.H. (non-condensing)
Physical Dimensions:	L 35mm x W 113mm x H 58mm (1.38" x 4.44" x 2.28") with plugs connected
Weight:	57 grams (2 oz.)
Wire Type:	AWG 22 to AWG 16 (copper conductors only)
Mounting:	35mm DIN-rail

WIRING

A free topology architecture allows the user to wire the FR-20 with virtually no topology restrictions.

IMPORTANT WIRING INFORMATION

- 1) Secondary of Class 2 Transformer should always be earth grounded to provide reliable communication and sensor readings.
- 2) *External fuse not supplied. Size fuse according to application load and not to exceed 5 Amps.



* NC stands for "No Connection"