



TAC Xenta REPEATER-U8

OFL-4152-000

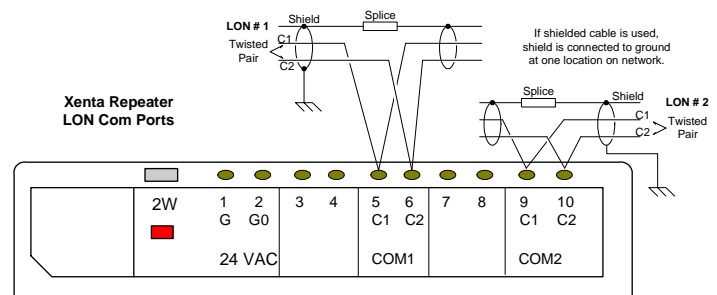
Smoke Control Installation Datasheet



opposite network. The Repeater will isolate a network failure such as a short from affecting the opposite side.

Controller Network Communications

The Xenta Repeater communicates with the various controllers on each of the two communications ports using a common network, LonWorks TP/FT-10, 78Kbps LON (Local Operating Network). The LON communications is power limited. When being used to transport smoke control commands, the communications through the Repeater to the distant nodes is supervised from the FSCS controller. Maximum individual network segment cable length is 8850ft/2700m (when using bus configuration and specified 16AWG cable) See smoke control system manual for table of cable and distance specifications.



The Xenta REPEATER-U8 is UL Listed (UL864) for application in a TAC Smoke Control System. This data sheet provides information, instructions and restrictions pertaining to the proper application of this specific product in a smoke control system. This data sheet takes precedence over other general product installation and application information for the Xenta Repeater and must be used in conjunction with the "Xenta - Smoke Control Systems Manual" (0-004-7897-0). The manual provides a system level view of the smoke control application and provides additional information regarding the various products that can be interconnected to form a system.

If no Router is present, up to three Repeaters may be used to extend the network channels range. If Routers are used, a maximum of one Repeater is allowed between any two Routers.

General Application

The TAC Xenta Repeater has three primary purposes:

- 1) Extend the distance of the network cable past the limits allowed for a single cable segment;
- 2) Expand the number of network devices/controllers beyond that permitted on a single cable segment
- 3) To isolate and protect the smoke control network from the connection of LON nodes that are not part of the UL864 system listing.

The Repeater offers an identical set of terminations on each side. You may connect to either side for power or connection of LON 1 or 2.

LON Network Integrity

In smoke control applications, the LON network communications cable may only interconnect with products that are UL864 listed. The smoke control system manual identifies the other TAC and 3rd party products that may be interconnected in the smoke control system on the LON with the Xenta Repeater.

The Repeater connects two LON network segments together. By connecting two network segments with a Repeater the physical range of the network is increased. The Repeater will receive data from one side and boosts the signal to full strength before passing it on to the

Communications integrity through the Xenta Repeater to the controllers on the opposite side in the smoke control system should be supervised by the FSCS controller. The FSCS should be configured to enunciate any communications faults detected in the connectivity with the controllers used in the smoke control application.

Cable Segment Lengths

The following table describes the maximum distances supported for various types of cable. These length specifications are applied to each of the two LON segments on each of the two sides of the Repeater individually.

Cable	Max. bus length, doubly terminated bus topology	Max. node to node distance, singly terminated free topology	Max. total cable length, singly terminated free topology
Belden 85102, single twisted pair	2700m	500m	500m
Belden 8471, single twisted pair	2700m	400m	500m
UL Level IV 22awg, twisted pair	1400m	400m	500m
Siemens J-Y(st)Y 2x2x0.8, 4-wire helical twist, solid, shielded	900m	320m	500m
TIA568A Cat.5 24awg, twisted pair	900m	250m	450m

Note: Remember to terminate each new cable segment.

Enclosure

The Xenta Repeater is housed within a plastic enclosure and must be plugged into an Xenta 400 mounting base (Part # 074-0902-x) ordered separately. To simplify installation, the mounting base can be pre-mounted using mounting holes in the base, or snapped onto standard TS 35mm DIN rail (EN50022) and should be installed within one of the ENCL-.. series enclosures designated in the smoke control system manual.

Operating Environment

Operating Temperature: 32 to 122°F (0 to 50°C)
 Storage Temperature: -4 to 167°F (-20 to 75°C)
 Humidity: max. 90% RH non-condensing

Power

The Xenta Repeater controller is powered with 24VAC from one of the XFMR.... Series transformers designated in the smoke control system manual.

Power Input: 24VAC +-10%
 60Hz @ 2VA Max

Input and output signals are power limited.

