

# System 1850 Twisted Pair

## 2-Hour Fire-Rated, Mineral Insulated, Copper-Sheathed, Fire Alarm And Voice Comm. Cable

**Description** Mineral insulated (MI) wiring cable for critical fire alarm circuit protection when survival throughout a fire is essential Pyrotenax System 1850 fire alarm and voice communication MI cable is FM Specification Tested and classified by Underwriters Laboratories as 2-hour fire resistive. When installed in accordance with Pentair Thermal Management installation procedures, it meets the survivability requirements of NFPA 72 and Article 760 of the National Electrical Code (NEC).

System 1850 fire alarm and voice communication cables are manufactured using only inorganic materials, copper and magnesium oxide, and arrive on the job site with a UL fire-resistive classification that does not require additional conduit or fireproofing.

System 1850 fire alarm cable is CSA certified as FAS, FAS 90 and FAS 105 cable. Applications include the main trunk or “backbone” of multiplex alarm systems in high-rise buildings and institutions. System 1850 fire alarm and voice communication cable connects between the data-gathering panels throughout the building and the main fire alarm panel.

System 1850 Twisted Pair MI cable terminations are typically field installed. Factory terminated cable sets are also available. For details on terminated cable sets, contact Pentair Thermal Management.

- Applications**
- High-rise buildings – for fire alarm and voice communication systems
  - Hospitals and other institutions where mobility is limited, for emergency communication systems
  - Historic buildings where it can be installed unobtrusively, as well as to assure preservation of fire-fighting systems
  - Tunnels and subways for the emergency voice communication system, where its zero smoke properties make it unique
  - Airports, stadiums, hotels, banks, etc.

**Sheath/Shield** Seamless soft-drawn copper  
**Insulation** Highly compressed magnesium oxide (MgO)  
**Conductor** Copper  
**Insulation Voltage Rating** 300 V  
**Jacket (optional)** Polymer – Do not use for fire-rated applications  
**Continuous Exposure Temperature** 250°C (482°F)  
 90°C (194°F) with optional jacket  
**Maximum Exposure Temperature** 1010°C (1850°F)



Cable Reference Number	Cond. Size (AWG)	Nominal Coil Length ft (m)	Nominal Weight (lbs/1000 ft)	Gland Size (NPT)	Twisted Frequency (per ft)	Nominal Conductor-to-Conductor Capacitance (pF/ft) @ 1 kHz	Nominal Conductor-to-Shield Capacitance (pF/ft) (one wire to shield)	Velocity of Propagation (%)	Nominal Conductor Resistance (ohms/1000 ft)	Nominal sheath/shield resistance (ohms/1000 ft)	Nominal diameter of outer sheath (in)	Nominal diameter of shield (in)
2/18-215T	18	3060 (933)	77	1/2"	4-6	47	77	30-35	6.5	0.8	0.215	-
2/16-246T	16	2084 (635)	90	1/2"	4-6	53	88	30-35	4.09	0.6	0.246	-
2/18-324TS	18	1404 (428)	200	3/4"	4-6	52	82	30-35	6.5	0.3/1.0	0.324	0.198
2/16-364TS	16	1107 (338)	254	3/4"	4-6	57	92	30-35	4.09	0.1/0.8	0.364	0.23

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