Pyro MI The ultimate fire survival MI wiring cable system for versatility and ultimate fire survival performance

Pyro MI Cable Systems were installed when fire broke out in the Channel Tunnel in November 1996. Resisting extreme temperatures that destroyed concrete and welded rails, the Pyro MI Wiring Cable allowed emergency lighting to operate for the safe evacuation of passengers; proving its superior fire survival capability.
Pyro MI the only true Fire Survival Cable System - provides the ideal solution to many difficult and demanding wiring installations. Making a permanent and dependable wiring cable system for all low and medium voltage applications. Safe in hazardous installations and radio active environments. Exceeds all world wide fire performance standards. The Pyro MI Cable System is the natural choice for domestic, commercial and industrial applications.

Pyro MI Tried, tested and approved worldwide
Pyro MI Range
The standard range of Pyro MI Cable provides the ideal solution for almost all electrical circuits in the low voltage category.

Two voltage grades - 500 and 750 volts, are available with conductors from 1.0 sq.mm. to 400 sq.mm. giving current ratings up to 1000 amps. A full range of complementary accessories and tools provides a complete wiring system supplied and supported by the “Genuine Pyrotenax” component assurance.

Pyro MI Benefits
- Pyro MI survives the fire test requirements for enhanced grade cables as defined in BS 5839: part 1: 2002.
- Peace of mind from the third party (LPCB) approval for categories C, W and Z in BS 6387: 1994.
- Also attains categories C, W and Z of BS 6387: 1994 with one single cable sample.

Pyro MI Construction
With a basic inorganic construction of a copper sheath and conductors, together with a mineral insulant, the cable provides a unique combination of dependability, versatility and permanence.

This construction, with the melting points of 1083°C and 2800°C for the copper and the insulant respectively, provides the unsurpassed Fire Survival properties which enable the cable to continue to carry current at temperatures in excess of 1000°C.

Pyro MI Construction Characteristics
- Fireproof
- High Operating Temperatures
- Inherent Flameproof Barrier
- Zero Energy
- Non-Ageing
- Great Mechanical Strength
- Small Overall Diameter
- Pliable

Wiring Cable and Conduit Combined
- Competitive Installed Cost
- High Degree of Electrical Screening
- Radiation Resistant
- Integral Earth Continuity
- High Corrosion Resistance
- Waterproof

Standard colours are Orange, Red, White and Black. Other colours such as Stone, Blue, Grey etc. are also available subject to minimum order requirements.
Pyro Twist is a range of communication and signal cables for life preservation and integrated building management systems. They have been developed from the proven characteristics of Pyro MI to maintain the security of vital signals in communication and data networks, particularly in hostile conditions.

Pyro Twist Cables

Pyro Twist Additional Characteristics and Advantages

- Twisted conductor configuration with a solid copper screen.
- Pyro Twist available in red, differentiated with two grey sheath stripes for easy identification (other colours available upon request).
- Pyro Twist uses standard accessories for the equivalent Pyro MI Light Duty cable size.
- Pyro Twist can be installed and terminated by following the normal procedures for Pyro MI Cable.
- The twisted copper conductor configuration enhances the EMC noise rejection characteristics, reducing the possibility of system malfunction.
- The exceptionally low impedance of the solid copper sheath provides a superior EMC screening than other cable systems.
- Minimal smoke obscuration in the event of fire.
Pyro MI Typical Applications

The following is a very brief list of products where Pyro MI Cables have been extensively specified and installed in situations demanding circuit integrity in the most critical situations.

**Thermal Power Stations - Gas, Coal, Oil and Nuclear**

<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fawley</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Fiddler’s Ferry</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Doha West</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Nkand Mine</td>
<td>Zambia</td>
</tr>
<tr>
<td>Ap Lei Chan</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>Heysham</td>
<td>India</td>
</tr>
<tr>
<td>Kalpakam</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Tornes</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Hartlepool</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Marvikien</td>
<td>Sweden</td>
</tr>
<tr>
<td>Latina</td>
<td>Italy</td>
</tr>
<tr>
<td>Solovakia A1</td>
<td>Slovakia</td>
</tr>
<tr>
<td>Torre</td>
<td>Italy</td>
</tr>
<tr>
<td>Kalkar (FBR)</td>
<td>Germany</td>
</tr>
<tr>
<td>Dungeness (A&amp;B)</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>Rihand</td>
<td>India</td>
</tr>
<tr>
<td>Trillo (PWR)</td>
<td>Spain</td>
</tr>
<tr>
<td>Monju (FBR)</td>
<td>Japan</td>
</tr>
<tr>
<td>Sabiya</td>
<td>Kuwait</td>
</tr>
<tr>
<td>Taweelaah’B’</td>
<td>Abu Dhabi</td>
</tr>
<tr>
<td>Blackpoint</td>
<td>Hong Kong</td>
</tr>
</tbody>
</table>

**Production Platforms - Oil and Gas**

**Major Oil Companies Specifying Pyrotenax for On and Offshore Installations.**

- Kuwait Oil Company (KOC)
- Kuwait National Petroleum Co (KNPC)
- ARAMCO
- Petromin - Saudi Arabia
- National Iranian Oil Company
- Royal Dutch Shell - Netherlands
- Union Oil
- EXXON
- Abu Dhabi National Oil Company (ADNOC)
- Shell UK
- Chevron, Statoils
- Qatar General Petroleum Corporation
- BP Chemicals
- Oil & Natural Gas Company - India (ONGC).

**Reference List**

- Kuwait Oil Company (KOC)
- Kuwait National Petroleum Co (KNPC)
- ARAMCO
- Petromin - Saudi Arabia
- National Iranian Oil Company
- Royal Dutch Shell - Netherlands
- Union Oil
- EXXON
- Abu Dhabi National Oil Company (ADNOC)
- Shell UK
- Chevron, Statoils
- Qatar General Petroleum Corporation
- BP Chemicals
- Oil & Natural Gas Company - India (ONGC).
Throughout the world Pyro MI Fire Survival Wiring products are used for vital communication and power distribution.

Pyro MI Middle East Major Projects

Pyro MI Cables have been selected and approved for use in Middle East Projects by an impressive number of renowned specifiers as shown below. The list of projects where Pyro MI Cables have been installed is much longer than, those mentioned below being only a representative of the wide range of applications utilising the Pyro MI Cable System.

Project References

Dubai International Airport
Bahrain International Airport
Riyadh International Airport
Muscat International Airport
North Dome - QGPC Qatar
Gulf Hotel - Bahrain
Sheraton - Doha
Alba - Bahrain Aluminium Smelter
Dubai ‘G’ Power Station
Dubai ‘F’ Power Station
Sabiya Power Station Kuwait
ADNOC Das Island - Gas Storage
Doha East Power Station - Kuwait
Doha West Power Station - Kuwait
Etisalat Telecommunications
Building - Abu Dhabi
Mew Sub-Stations
Holiday Inn Crown Plaza - Dubai
Riyadh University Hospital
Al Zoor Power - Kuwait
Ras Abu Fontas P S Qatar
ADNOC HQ Building Abu Dhabi
Bahrain Islamic Bank
BATELCO - Bahrain
National Bank of Dubai
Al Wasl Hospital - Dubai
Chamber of Commerce
Buildings - Dubai
Hilton Apartments - Kuwait
SECO Sub-Station - Saudi Arabia
Diplomatic Area - Riyadh
Jubail Port - Saudi Arabia
Damman Port - Saudi Arabia
Jeddah Port - Saudi Arabia
Jebel Ali Port - Dubai

Road Tunnels

<table>
<thead>
<tr>
<th>Project</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kai Tak</td>
<td>Kowloon - Hong Kong</td>
</tr>
<tr>
<td>Mersey Kingsway</td>
<td>Liverpool - United Kingdom</td>
</tr>
<tr>
<td>Mersey Queensway</td>
<td>Liverpool - United Kingdom</td>
</tr>
<tr>
<td>Tyne</td>
<td>Newcastle - United Kingdom</td>
</tr>
<tr>
<td>Lewes</td>
<td>Lewes - United Kingdom</td>
</tr>
</tbody>
</table>

Rail Tunnels


Cables

Pyrotenax MI Wiring Cables are manufactured, tested and LPCB approved to BS EN 60702-1.

Pyrotenax MI Wiring Cables are LPCB approved to BS 8434-2, BS 5839-1 Clause 26.2 (Enhanced) and BS EN 50200 Class PH 120.

Quality Certification

Quality Systems Certificate No. 063 Assessed to ISO 9001

Terminations

Pyrotenax Terminations are tested in accordance with BS EN 60702: Part 2: Pyrotenax Terminations are Certified for use in potentially explosive atmospheres. Glands - Baseefa03ATEX0347X Increased Safety Seals - Baseefa02ATEX0194U

Pyrotenax cable drums, reels and termination packaging are marked with the CE mark as required by the directive, except for Terminations primarily intended for installation in potentially explosive atmospheres which are not marked, because the low voltage directive does not apply.

Other Standards and Codes of Practice Referring to MI Cables:

BS 8434- Methods of test for assessment of the fire integrity of electric cables Part1: Test for unprotected small cables for use in emergency circuits - BS EN 50200 with the addition of water spray. Part 2: Test for unprotected small cables for use in emergency circuits - BS EN 50200 with a 930°C flame and with water spray.

BS 6387- 1994 Performance Requirements for Cables Required to Maintain Circuit Integrity under Fire Conditions.

IEC 60331- Tests for Electric Cables under fire conditions.

Underwriters Laboratories- UL2196-USA, ULC-S139-Canada. Tests for fire resistant cables.


BS EN 60702-1 & 60702-2- Mineral Insulated Cables and their Terminations.

BS 7671- Requirements for Electrical Installations (IEE Wiring Regulations).

BS 5588- Fire Precautions in the design, construction and use of buildings,

BS 5266- Emergency Lighting.

BS 60079- Code of Practice for the selection, installation and maintenance of electrical apparatus for use in Potentially Explosive Atmospheres.

BS 5454- Storage and exhibition of Archival Documents.

BS 5839- Fire detection and alarm systems in Buildings.

The Institute of Petroleum Guidance for the design, Construction, Modification and Maintenance of Petrol Filling Stations. Electrical Installations.

C.I.O. Lighting and Wiring of Churches.
Fire Performance

Pyro MI easily meets and exceeds the BS 5839-1: 2002 Enhanced and Standard Grade Requirements

The new edition of BS 5839-1:2002 (Fire detection and alarm systems for buildings - Part 1: Code of practice for system design, installation, commissioning and maintenance) describes two levels of fire performance for fire rated cabling for fire alarm systems. These performance levels have now been published within a British Standard. BS 8434:2003 Parts 1 and 2 (Methods of test for the assessment of the fire integrity of electric cables).

Pyro MI easily complies with and exceeds all the requirements for Enhanced Grade and Standard Grade described within these new standards and is LPCB approved.

Pyro MI is the obvious choice for both Standard Grade and Enhanced Grade critical signal paths.

Fire Performance BS 6387: 1994 Performance Requirements for Cables Required to Maintain Circuit Integrity under Fire Conditions.

This standard details the following tests to categorise cables according to their fire withstand capabilities.

**Resistance to Fire 950°C for 3 hours - Category C**

The cable is tested by exposure to gas burner flames while passing a current at its rated voltage. Four survival categories are defined in the Performance Table below.

<table>
<thead>
<tr>
<th>Performance Table</th>
<th>Symbol</th>
<th>Pyro MI</th>
</tr>
</thead>
<tbody>
<tr>
<td>650°C for 3 hours</td>
<td>A</td>
<td>Surpasses</td>
</tr>
<tr>
<td>750°C for 3 hours</td>
<td>B</td>
<td>Surpasses</td>
</tr>
<tr>
<td>950°C for 3 hours</td>
<td>C</td>
<td>Surpasses</td>
</tr>
<tr>
<td>950°C for 20 minutes</td>
<td>S</td>
<td>Surpasses</td>
</tr>
</tbody>
</table>

**Resistance to Fire with Water Spray 650°C - Category W**

A new sample of cable is exposed to flames at 650°C for 15 minutes whilst passing a current at the rated voltage and then the spray is turned on to give exposure to both fire and water for a further 15 minutes. A single survival category is defined in the Performance Table below.

<table>
<thead>
<tr>
<th>Performance Table</th>
<th>Symbol</th>
<th>Pyro MI</th>
</tr>
</thead>
<tbody>
<tr>
<td>650°C for 3 hours</td>
<td>W</td>
<td>Surpasses</td>
</tr>
</tbody>
</table>

**Resistance to Fire with Mechanical Shock 950°C Category Z**

The final requirement is mechanical shock damage. A fresh sample of cable is mounted on a backing panel in an S-bend and is exposed to flames whilst the backing panel is struck with a solid steel bar the same diameter as the cable under test every 30 seconds for 15 minutes. Whilst the cable has been exposed to temperatures as defined in the Performance Table below.

<table>
<thead>
<tr>
<th>Performance Table</th>
<th>Symbol</th>
<th>Pyro MI</th>
</tr>
</thead>
<tbody>
<tr>
<td>650°C</td>
<td>X</td>
<td>Surpasses</td>
</tr>
<tr>
<td>750°C</td>
<td>Y</td>
<td>Surpasses</td>
</tr>
<tr>
<td>950°C</td>
<td>Z</td>
<td>Surpasses</td>
</tr>
</tbody>
</table>

“Beyond the Standard... Pyro MI Cable can easily comply and withstand the most onerous categories of C, W and Z using one single Cable Sample.”
To fully assess the Fire Survival qualities of Pyro MI Cable and in response to requests from major specifiers, more rigorous testing criteria have been devised. The aim of the tests is to extend the conditions of BS 6387 to effectively recreate a more realistic fire situation by exposing the cable to significant thermal and physical shock. In a fire environment cable has to survive not only the extremes of high temperature but also the impact from falling debris together with water exposure from fire fighting equipment. In the aftermath of a fire the cable must also withstand bending, further impact and possible water immersion during building and structural restoration.

Cable struck directly with a steel bar (at the centre of the burner) every 10 minutes during a 3 hour period in a flame at 950°C.

Cable then sprayed with water for 15 minutes whilst still being struck by the bar.

Cable then bent at the point of impact through 180°.

Further mechanical impact shock.

Finally immersed in water for 1 hour whilst energised at its rated voltage.
# Pyro MI Cable System Data and Accessory Selection

## Pyro MI Enhanced grade Fire Survival Cable

### Light Duty 500V Grade

| Cable Type | Current Rating | Volt Drop | Cable Diameter | Approx. Weight (per 100m) | Screw on Seal
|------------|----------------|-----------|----------------|---------------------------|-----------------
| 2L1        | 19.5           | 5.1       | 1.13           | 11800 kg                  |                  
| 2L1.5      | 25             | 5.7       | 1.39           | 14400 kg                  |                  
| 2L2.5      | 33             | 6.6       | 1.77           | 11100 kg                  |                  
| 3L1         | 16.5           | 5.8       | 1.13           | 11500 kg                  |                  
| 3L1.5       | 21             | 5.8       | 1.39           | 14100 kg                  |                  
| 3L2.5       | 25             | 7.3       | 1.77           | 11220 kg                  |                  
| 4L1         | 16             | 7.3       | 1.39           | 11220 kg                  |                  
| 4L1.5       | 21             | 7.3       | 1.77           | 11220 kg                  |                  
| 4L2.5       | 28             | 9.0       | 1.77           | 11220 kg                  |                  
| 7L1         | 11             | 9.3       | 1.13           | 800 kg                    | 7H1.5 25        
| 7L1.5       | 14             | 10.1      | 1.13           | 800 kg                    | 7H1.5 25        
| 7L2.5       | 19             | 11.4      | 1.13           | 800 kg                    | 7H1.5 25        

### Heavy Duty 750V Grade

| Cable Type | Current Rating | Volt Drop | Cable Diameter | Approx. Weight (per 100m) | Screw on Seal
|------------|----------------|-----------|----------------|---------------------------|-----------------
| 1H10       | 90             | 7.3       | 3.57           | 950 kg                    |                  
| 1H16       | 119            | 8.3       | 4.50           | 740 kg                    |                  
| 1H25       | 154            | 9.6       | 5.66           | 540 kg                    |                  
| 1H35       | 187            | 10.7      | 6.66           | 435 kg                    |                  
| 1H50       | 230            | 12.1      | 7.75           | 345 kg                    |                  
| 1H70       | 279            | 13.7      | 9.32           | 270 kg                    |                  
| 1H95       | 333            | 15.4      | 11.14          | 215 kg                    |                  
| 1H120      | 382            | 16.8      | 12.33          | 185 kg                    |                  
| 1H150      | 431            | 18.4      | 13.70          | 170 kg                    |                  
| 1H185      | 462            | 20.4      | 15.18          | 122 kg                    |                  
| 1H240      | 537            | 23.3      | 17.33          | 98 kg                     |                  
| 1H300      | 883            | 26.0      | 19.37          | 75 kg                     |                  
| 1H400      | 1053           | 29.0      | 22.37          | 56 kg                     |                  
| 2H1.5      | 26             | 8.6       | 1.39           | 750 kg                    |                  
| 2H2.5      | 36             | 10.4      | 1.77           | 610 kg                    |                  
| 2H4        | 47             | 11.8      | 2.25           | 480 kg                    |                  
| 2H6        | 60             | 12.9      | 2.75           | 370 kg                    |                  
| 2H10       | 82             | 14.4      | 3.57           | 280 kg                    |                  
| 2H16       | 109             | 16.4     | 4.50           | 205 kg                    |                  
| 2H25       | 142            | 18.4     | 5.66           | 150 kg                    |                  

### Values Quoted are Nominal Lengths Only. Please Contact Your Local Driver Before Confirming exact Available Lengths.
### Light Duty 500V Grade

<table>
<thead>
<tr>
<th>CABLE</th>
<th>PLAIN BRASS SCREW-ON SEAL</th>
<th>EARTH TAIL BRASS SEAL</th>
<th>GLAND</th>
<th>LSF GLAND SHROUD</th>
<th>LSF PYRO CLIP</th>
<th>LSF PYRO SADDLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>271</td>
<td>2L 1.5 20</td>
<td>2L 1.5 20</td>
<td>2L 1.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>271.5</td>
<td>2L 2.5 20</td>
<td>2L 2.5 20</td>
<td>2L 2.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>272</td>
<td>2L 3.5 20</td>
<td>2L 3.5 20</td>
<td>2L 3.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>275</td>
<td>2L 4.5 20</td>
<td>2L 4.5 20</td>
<td>2L 4.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>371</td>
<td>3L 1.5 20</td>
<td>3L 1.5 20</td>
<td>3L 1.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>372</td>
<td>3L 2.5 20</td>
<td>3L 2.5 20</td>
<td>3L 2.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>471</td>
<td>4L 1.5 20</td>
<td>4L 1.5 20</td>
<td>4L 1.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>472</td>
<td>4L 2.5 20</td>
<td>4L 2.5 20</td>
<td>4L 2.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Heavy Duty 750V Grade

<table>
<thead>
<tr>
<th>CABLE</th>
<th>PLAIN BRASS SCREW-ON SEAL</th>
<th>EARTH TAIL BRASS SEAL</th>
<th>GLAND</th>
<th>LSF GLAND SHROUD</th>
<th>LSF PYRO CLIP</th>
<th>LSF PYRO SADDLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>271</td>
<td>2L 1.5 20</td>
<td>2L 1.5 20</td>
<td>2L 1.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>271.5</td>
<td>2L 2.5 20</td>
<td>2L 2.5 20</td>
<td>2L 2.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>272</td>
<td>2L 3.5 20</td>
<td>2L 3.5 20</td>
<td>2L 3.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>275</td>
<td>2L 4.5 20</td>
<td>2L 4.5 20</td>
<td>2L 4.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>371</td>
<td>3L 1.5 20</td>
<td>3L 1.5 20</td>
<td>3L 1.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>372</td>
<td>3L 2.5 20</td>
<td>3L 2.5 20</td>
<td>3L 2.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>471</td>
<td>4L 1.5 20</td>
<td>4L 1.5 20</td>
<td>4L 1.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>472</td>
<td>4L 2.5 20</td>
<td>4L 2.5 20</td>
<td>4L 2.5 20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Colour Conductor Slewing**

Coloured slewing is available in Red, Black, Yellow and Blue for conductor sizes from 1.0mm² to 4.0mm².

**Ordering Reference Example:** For 2.5mm² Red slewing, please use reference RZP 2.5 RD

**Pyro Tag Earth Tail Washers**

For certain sizes of conductor, a Pyro Tag Earth Tail Washer can be used instead of the Earth Tail Seal (Ref: RPSL). Pyro Tags are available with 1.5mm² and 2.5mm² conductor tails.

**Ordering Reference Example:** RLT 2.5 20

---

**Current ratings and volt drop values are for 3 phase operation, single conductor cables installed horizontally spaced. All other values are for single phase operation.**

**Current ratings and volt drop values are based upon tables 4J1A & 4J1E of the latest BS 7671:16th edition of the IEE Wiring Regulations method 11 (cable on a perforated cable tray).**

**These sizes are normally supplied in 100m lengths, longer lengths are readily available on application.**

**These sizes are supplied as Pyro Reels.**

**For all served/covered cable longest lengths please refer to Tyco Thermal Controls.**

**Note:** Cables Ref 1H120 and larger, whose lengths are in excess of half of a full nominal coil, are supplied as standard on non-returnable plywood drums.
Seals and Insulators

A seal is normally required at each end of a Pyrotenax MI Cable to provide a means of electrical connection. The Standard Brass 105°C Seal is suitable for the majority of general wiring applications. However since Pyrotenax Cables are used in a wide variety of environments, a comprehensive range of seals and insulators are available to suit every need. A complete termination comprises a seal to provide a means of electrical connection and a gland to secure the cable into the appropriate apparatus. Externally threaded brass compression glands are available with ISO metric threads as standard. Other thread forms are available on request. Internally threaded 20mm ISO metric brass compression glands are available for the full range of 2, 3 and 4 conductor, 500 volt light duty cables.

**Standard Seal**

Continuous operating temperature range - 80°C to 105°C. These standard seals are suitable for all general wiring applications. Available in plain or earth tail. Typical seal references:
- e.g. Plain-RPS 2L2.5 20
- Earth Tail-RPSL2L2.5 20
- e.g. Plain-RPS 2H6 20
- Earth Tail-RPSL2H6 20

**High Temperature Glazed Insulator**

For environments up to 250°C, an glazed insulator can be constructed as follows:
1. Use the brass screw on pot from a standard seal (ref RPS).
2. Use Pyrotenax Glazing Flux (ref RMG) in place of the standard grey Pyrotenax sealing compound.
3. A cap or disc is not required.
4. Use PTFE conductor sleeving (Ref RZPT) instead of the PVC sleeving.

Please not that this insulator may not maintain a high insulation resistance (IR) at ambient temperatures.

**Increased Safety Seal**

Continuous operating temperature range -20°C to 85°C. Intended for use with type of protection “e” in potentially explosive atmospheres. Available in plain and earth tail.

Typical seal references:
- Plain-RPA2H6 20
- Earth Tail-RPAL2H6 25.

**Fire Resistant Seal**

When fire resistance is required, standard Pyrotenax 105°C seal Ref. RPS may be used provided that the standard PVC sleeving is replaced by silicon elastomer coated glass braided sleeving Ref. RZPS.

Such seals will pass a circuit integrity test, essentially as given in BS 6387 for Category C, with seals in a 950°C flame for 3 hours. For 32 and 40mm sizes call Technical Support on: Tel: 0191 419 8200.

Use this seal when radiation resistance is required, as it has been satisfactorily tested to 100 M Rad.
Terminating Procedure

Typical Pyro MI Brass Seal Assemblies

**Seal with Stub Cap Pot Closure**
- Conductor
- Sleeving
- Stub Cap
- Sealant
- Screw-on-Pot
- Cable

**Seal with Disc Pot Closure**
- Conductor
- Headed Sleeving
- Drilled Disc
- Sealant
- Screw-on-Pot
- Cable

**Earth Tail Seal with Stub Cap Pot Closure**
- Conductor
- Green/Yellow Earth Tail Sleeving
- Sleeving
- Stub Cap
- Sealant
- Screw on Pot
- Earth Tail Soldered into Pot
- Cable

Typical Pyro MI Terminating Procedures

**Preparing the Cable End**

2. Apply Pyro Stripping Tool and turn clockwise to remove sheath. Use pliers to stop at required position.
3. Using pliers or Pyro Potting Tool, screw seal pot onto cable to position shown. Remove any loose powder.
4. Completely fill the pot with compound from one side only.
5. Using Pyro Crimping Tool compress compound and secure pot closure.
6. Fit conductor sleeving.

For detailed fitting instructions consult Installation Recommendation IR 200.
Pyro MI Cable Fixings

To secure Pyro MI Cable, far fewer fixings are required in comparison with other cable types. By using Pyrotenax recommended fixing distances, savings of up to 40% can be achieved on fixing costs compared to conventional fixing distances.

Whether fixed on the surface, on a cable tray, behind plaster, in a roof space or suspended ceiling, Pyro MI Cable measures up to a real installation cost advantage.

The fixing distances shown in the table below represent a saving of up to 40% in comparison with traditional methods of installation practice, where pliable cables are fixed at an average of 225mm (9") intervals compared to the Pyrotenax recommendation of 350mm (14") centre.

### Pyrotenax Recommended Fixing Distances

<table>
<thead>
<tr>
<th>Cable Diameter</th>
<th>Fixing Distances</th>
<th>Vertical</th>
<th>Horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface</td>
<td>On Cable Tray</td>
<td>Behind Plaster</td>
<td>In Roof Space or Suspended Ceiling</td>
</tr>
<tr>
<td>Less than 9mm</td>
<td>550mm</td>
<td>800mm</td>
<td>600mm</td>
</tr>
<tr>
<td>9mm upto 20mm</td>
<td>600mm</td>
<td>1000mm</td>
<td>–</td>
</tr>
<tr>
<td>Over 20mm</td>
<td>650mm</td>
<td>1200mm</td>
<td>–</td>
</tr>
<tr>
<td>Fixing Distances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surface</td>
<td>On Cable Tray</td>
<td>Behind Plaster</td>
<td>In Roof Space or Suspended Ceiling</td>
</tr>
<tr>
<td>Less than 9mm</td>
<td>450mm</td>
<td>800mm</td>
<td>600mm</td>
</tr>
<tr>
<td>9mm upto 20mm</td>
<td>500mm</td>
<td>1000mm</td>
<td>–</td>
</tr>
<tr>
<td>Over 20mm</td>
<td>550mm</td>
<td>1200mm</td>
<td>–</td>
</tr>
</tbody>
</table>
Pyro MI Coils, Reels and Drums

Smaller Overall Diameter Gives More Compact Fixing Profile

Cables shown approximately half size.

LSF Pyro Clips and Saddles from Pyrotenax

The latest addition to the Pyrotenax range is the new range of LSF and Halogen Free Cable Clips and Saddles. In addition to mechanical strength and fire safety advantages, they are colour matched against Pyro MI Cables and fixing sizes are easily visible when using them on site.

Pyro Strap

Two types of Pyro Strap are available, pre-punched or solid copper. Both types are available either in bare copper or with an additional plastic covering (Orange, Red or White).

Reels

The popular Light Duty cable sizes are supplied as standard in 100 metre lengths on non-returnable reels as follows:

<table>
<thead>
<tr>
<th>Cable sizes</th>
<th>2L1.5</th>
<th>2L2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length metres</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Type available</td>
<td>Bare Copper or LSF Outer Covered</td>
<td></td>
</tr>
<tr>
<td>Colours available</td>
<td>Orange, Red or White</td>
<td></td>
</tr>
<tr>
<td>Reel dimensions</td>
<td>400mm dia x 190mm width</td>
<td></td>
</tr>
<tr>
<td>Reel Weight kg</td>
<td>16.9</td>
<td>22.2</td>
</tr>
</tbody>
</table>

Drums

The following cables can be supplied ex-stock on non-returnable drums.

<table>
<thead>
<tr>
<th>Cable size</th>
<th>2L1.5</th>
<th>2L2.5</th>
<th>3L1.5</th>
<th>4L1.5</th>
<th>4L2.5</th>
<th>2H1.5</th>
<th>2H2.5</th>
<th>7L1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coil Length (approx) m.</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>500</td>
<td>490</td>
<td>500</td>
<td>420</td>
<td>500</td>
</tr>
<tr>
<td>LSF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orange</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Red</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>White</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
<td>■</td>
</tr>
<tr>
<td>Drum flange dia mm.</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>1102</td>
<td>1102</td>
<td>1102</td>
<td>1102</td>
</tr>
</tbody>
</table>

NOTE:

In addition, all cable can be supplied in nominal coil lengths on free of charge non-returnable plywood drums.

For approximate lengths and weights of all cables please see pages 12 and 13. In instances where shorter lengths are required on drums an extra charge will be incurred.

Coils

With the exception of the previous reel sizes, cable is supplied in coil form as standard.

The coil diameters are either 500mm, 915mm or 1370mm dependent on the cable diameter (for actual coil diameters and coil lengths please see pages 12 & 13).
Our products satisfy the requirements of the relevant European Directives.

www.tycothermal.com

Pyrotenax, Pyro MI, Pyro FR-s and Multi-Plus are a trademark of Tyco Thermal Controls LLC and its affiliates in designated countries.

All of the information contained in this publication, including illustrations, is believed to be reliable. Users however, should independently evaluate the suitability of each product for their application. Tyco Thermal Controls makes no warranties as to the accuracy or completeness of the information and disclaims any liability regarding its use. Tyco Thermal Controls only obligations are those in the Standard Terms and Conditions of Sale for this product and in no case will Tyco Thermal Controls be liable for any incidental, indirect or consequential damages arising from the sale, resale, use or misuse of the product. Tyco Thermal Controls Specifications are subject to change without notice. In addition Tyco Thermal Controls reserves the right to make changes in materials or processing, without notification to the buyer, which do not affect compliance with any applicable cable specification.

Tyco Thermal Controls
UK Limited
3 Rutherford Road,
Stephenson Industrial Estate,
Washington, Tyne & Wear,
NE37 3HX, United Kingdom
Tel: +44 (0) 191 419 8200
Fax: +44 (0) 191 419 8201

Tyco Thermal Controls
Canada Limited
250 West Street,
Trenton, Ontario,
Canada
K8V 5S2
Tel: (1) 613-392-6571
Fax: (1) 613-392-3999

© 2004 Tyco Thermal Controls CDE-0801 Rev.2 03/05 Printed in Belgium on chlorine-free bleached paper.

NSW (02) 9790 1988
QLD (07) 3277 9400
VIC (03) 9729 2100