

TUNNEL APPLICATIONS



THORNE &
DERRICK
INTERNATIONAL

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ELECTRICAL INDUSTRIAL CONNECTORS
& BOXES

MARECHAL® technology: Faster. Safer. Easier.

MARECHAL ELECTRIC offers a range of products suited to your applications.

MARECHAL ELECTRIC is now a market leader in the field of electrical connections for tunnels. Thanks to unique technology and materials specifically developed to suit these harsh environments and to offer quick disconnection of electrical installations, MARECHAL® equipment complies with the industry current standards and is certified by the quality accreditation bodies, thus guaranteeing optimum safety. MARECHAL ELECTRIC is constantly innovating in order to meet the needs of the various operators and facilitate maintenance work. MARECHAL® boxes are C.S.T.B and IMQ certified. The connectors and DECONTACTOR™ plugs comply with the European standard EN 60309-1, the French ministerial order issued on 20/12/2011 pertaining to the rules governing removable electrical equipment and to its connection and usage standards as well as to the Low Voltage Directive.

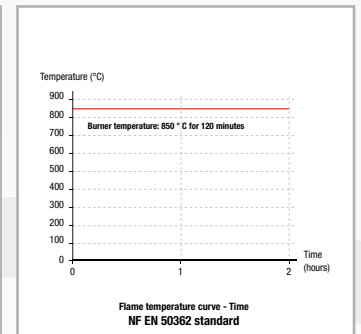
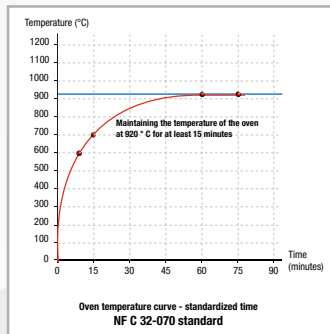
Standards & Certifications

Supply circuits for emergency lighting installed in tunnels must meet the following requirements:

- EN 50362 European standard,
- French government Directive No. 2000-63 of 25 August 2000 on safety in tunnels and national road network,
- NF C 32-070 French standard,
- Guides CETU defining the fire behaviour of road tunnels.

To meet these requirements, MARECHAL® equipment is among the only on the market to have been tested and certified by:

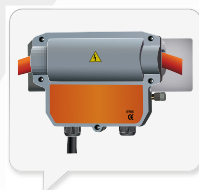
- C.S.T.B France - Centre Scientifique et Technique du Bâtiment.
- IMQ laboratory in Italy.



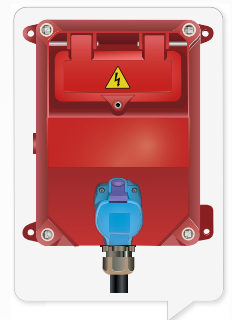
APPLICATION EXAMPLES



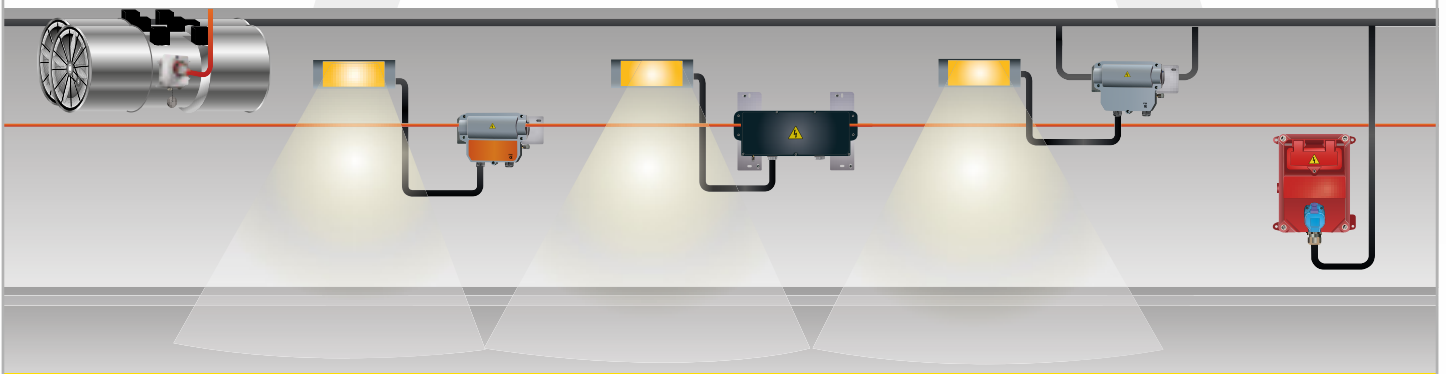
F400
PLUG & SOCKET-OUTLET
FOR JET FANS



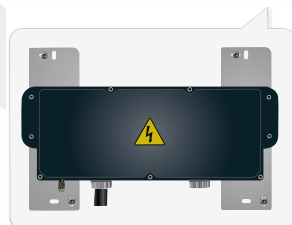
EXPRESS® FIRE BOX
BOXES FOR EMERGENCY
LIGHTING



BF
FIRE SERVICE BOX



EXPRESS® FIRE BOX
BOXES FOR EMERGENCY
LIGHTING

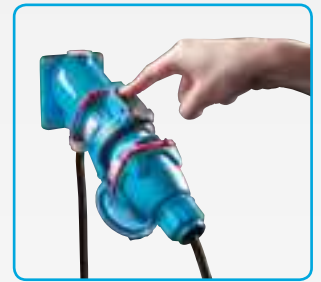


EXPRESS® BOX
BOXES FOR
STANDARD
LIGHTING

Products that meet your needs

DECONTACTOR™ technology: tested safety

- A socket with built-in switch in a compact unit
- Simply pressing the button once cuts off the current and eliminates all risk of electrical arcing.
- The plugs then eject automatically and the appliance is off-load.
- The safety of users is guaranteed at all times.



Watertightness

All boxes and connectors are watertight and withstand the use of high-pressure washing during tunnel maintenance.

Connection quality and life expectancy

MARECHAL® products are fitted with spring-loaded contacts providing a permanent and durable contact. The silver-nickel tips at the end of the contacts provide exceptional connection quality and excellent resistance in wet and corrosive environments, even after years of use.

Suited materials

In order to guarantee maximum safety, the materials used in the making of MARECHAL®'s boxes and connectors are corrosion- and shockproof (IK09). In the event of a fire, these materials do not produce any halogen gases or smoke.

MAIN ACHIEVEMENTS

HINDHEAD TUNNEL United-Kingdom

Tunnel

Supply emergency lighting and jet fan connectors.

F400 wall mounting socket-outlet for jet fans.

- Saves time during maintenance.
- Resistance to high temperature and maintain of the installations in operation.
- Ingress Protection IP55 against moisture and dust.



A89 EST BALBIGNY – SALVIGNY TOWER France

Tunnels : Bussière (1000m) , Violay (3900m) and Chalosset (700m)

Supply of standard and emergency lighting.

EXPRESS® FIRE BOX

- Reliability of equipment over time.
- On site advice about customer's needs and specifications.
- Certification and fire resistance warranty.



FORLÌ italy

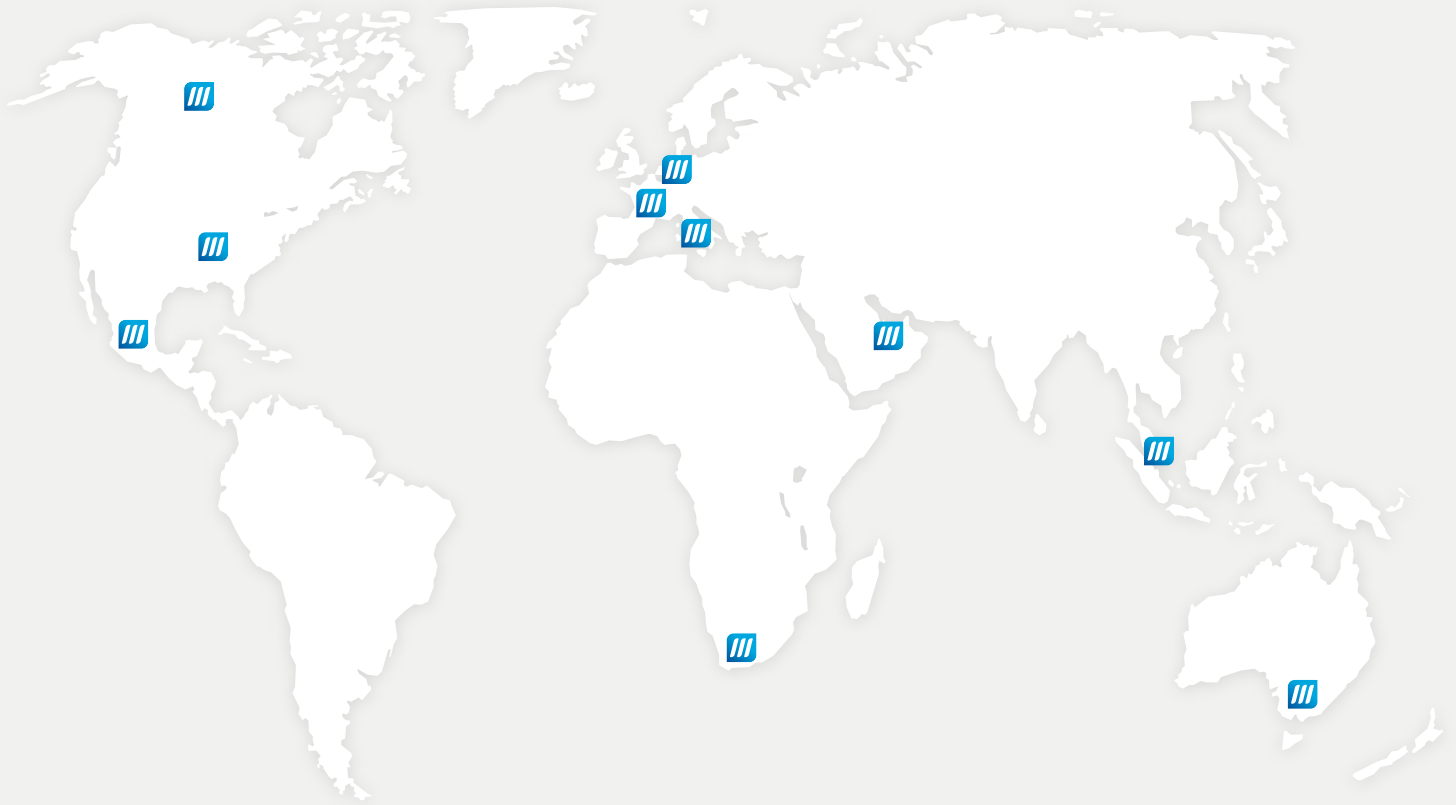
Tunnel

Supply of standard and emergency lighting.

EXPRESS® BOX and **EXPRESS® FIRE BOX** with **PNC** connectors.

- Compact, lightweight, easy to assemble product.
- Ideal When it is planned to use multipole cables for power distribution to lighting.
- Save time and money on installation.





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