

# CUSTOMIZED SOLUTIONS



MARECHAL® offers a wide range of distribution boxes for all industrial applications and a large choice of products designed specifically for power-supply in tunnels.

FIND ALL INFORMATION  
ON OUR WEBSITE:



[marechal.com](http://marechal.com)



Dimensions  
and certificates



**BG** 144

### LIQUEFIED GAS TRANSFER BOXES

- Carrier safety
- 30 mA protection
- Guaranteed lorry grounding



**CD** 146

### DISTRIBUTION BOX

- From 16 A up to 63 A
- RCD protection
- Inspection trap
- For MARECHAL® DECONTACTOR™ socket outlets
- Range of protection levels available



**TUNNELS** P. 152

### BOXES AND CONNECTORS

- No cable cutting
- Fire-resistant boxes
- Wall mounting socket-outlet for smoke accelerators
- Fire brigade boxes



**CUSTOM** P. 158

### BOXES, EXTENSIONS AND CABLE REEL

- Distribution boxes
- Portable power distribution
- Cable assembly
- Construction case

# BG

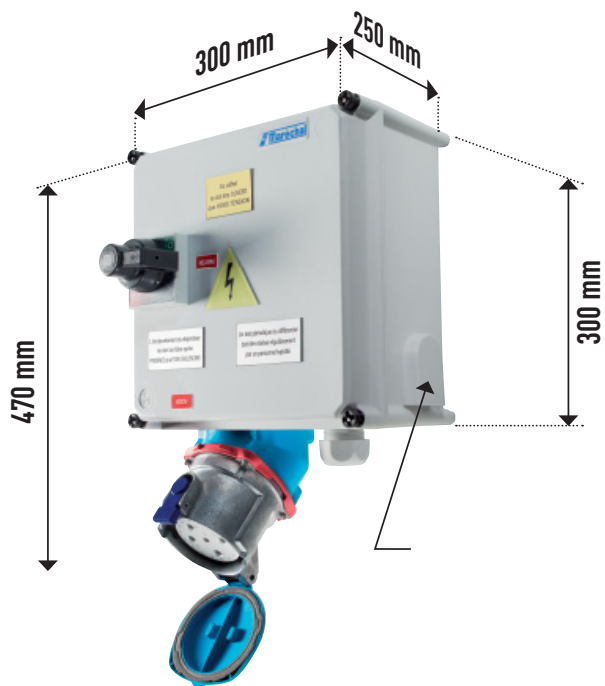


## LIQUEFIED GAS TRANSFER BOXES



- ▶ Carrier safety
- ▶ 30 mA protection
- ▶ Guaranteed lorry grounding

Safe connection box for loading and unloading liquefied gas from vehicles



<b>DN6</b>	80 A	400 V	3P + E + switch	Azote
<b>DN6</b>	63 A	400 V	3P + E + switch	Azote
<b>DN1</b>	16 A	400 V	3P + E	

1

2

3

<b>DN6</b>	1---9 0670 A	25 kA
<b>DN6</b>	1964033C2416	25 kA
<b>DN1</b>	1914013*	/

1968033Z0078	+	555P0D45
1968033Z0078	+	555P0D45
1918013270**	+	513P0D30

1964033Z0172	+	595C3M32
1964033Z0172	+	595C3M32
1914013	+	593B2M25

# CD



## DISTRIBUTION BOX



**16 A/32 A/63 A**

- ▶ IP66/IP69 water-and dust-tight
- ▶ RCD protection
- ▶ For MARECHAL® DECONTACTOR™ socket outlets
- ▶ Complies with IEC/EN 61439-1 and IEC/EN 61439-3,
- ▶ Composed of two parts fixed on hinges
- ▶ Pre-wired ready for installation
- ▶ UV protected

**MAIN FEATURES**

	CD
Material	Impact-resistant thermoplastic (IK09)
Fastenings	Captive stainless steel screws
Protection mode	IP66/IP69 - IP44 with domestic sockets
Rated current	From 16 to 63 A
Wiring capacity	2 x 1,5 mm <sup>2</sup> to 5 x 35 mm <sup>2</sup>
Cable entries	M50 max.
Housing dimensions (WxHxD) in mm	345 x 225 x 156
Assembly	10 modules max.



**Ready wired for installation.**



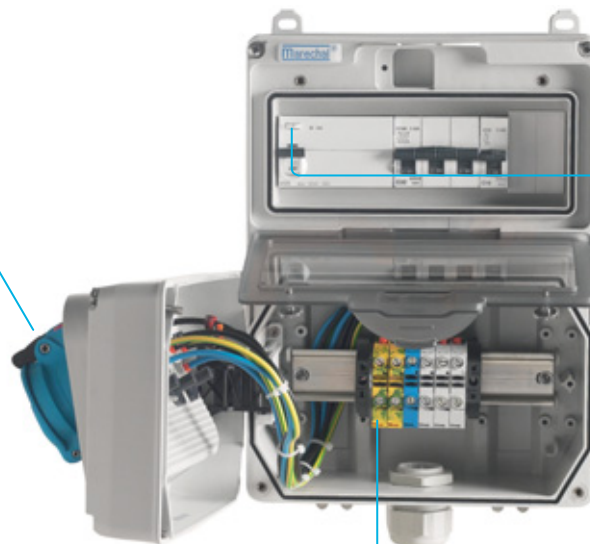
**DECONTACTOR™ DSN1**

16 A - 1P+N+E  
220-250 V



**DECONTACTOR™ DSN3**

32 A - 3P+N+E  
220-250 V/380-440 V



**Protection**

- Main switch with RCD 30 mA  
1x40A 3P+N
- Circuit breaker PC1 :  
1x16 A 1P+N
- Circuit breaker PC2 :  
1x32 A 3P+N

**Terminal**  
3P+N+E 16 mm<sup>2</sup>

**Cable gland**  
M32 Poly (14-25 mm)

**COMPOSITION**

**INSIDE box**

Box	Main switch with RCD 30mA	Circuit breaker Socket 1	Circuit breaker Socket 2	Terminal	Cable gland mm
CD1		1x16 A 1P+N 30mA		1P+N+E 16 mm <sup>2</sup>	M25 POLY (9-18)
CD2	1x25 A 1P+N	1x16 A 1P+N	1x16 A 1P+N	1P+N+E 16 mm <sup>2</sup>	M25 POLY (9-18)
CD3		1x16 A 3P+N 30mA		3P+N+E 16 mm <sup>2</sup>	M25 POLY (9-18)
CD4		1x16 A 3P 30mA		3P+E 16 mm <sup>2</sup>	M25 POLY (9-18)
CD5	1x25 A 3P+N	1x16 A 3P+N	1x16 A 3P+N	3P+N+E 16 mm <sup>2</sup>	M25 POLY (9-18)
CD6*		+ 2 fuses 6 A Gg		1P+N+E 16 mm <sup>2</sup>	M25 POLY (9-18)
CD7	1x25 A 1P+N	1x16 A 1P+N	1x16 A 1P+N	1P+N+E 16 mm <sup>2</sup>	M25 POLY (9-18)
CD8		1x32 A 1P+N 30mA		1P+N+E 16 mm <sup>2</sup>	M32 POLY (14-25)
CD9	1x40 A 1P+N	1x32 A 1P+N	1x32 A 1P+N	3P+N+E 16 mm <sup>2</sup>	M32 POLY (14-25)
CD10		1x32 A 3P+N 30mA		3P+N+E 16 mm <sup>2</sup>	M32 POLY (14-25)
CD11	1x40 A 3P+N	1x32 A 3P+N	1x32 A 3P+N	3P+N+E 16 mm <sup>2</sup>	M32 POLY (14-25)
CD12	1x40 A 3P+N	1x16 A 1P+N	1x32 A 3P+N	3P+N+E 16 mm <sup>2</sup>	M32 POLY (14-25)
CD13	1x40 A 3P+N	1x16 A 1P+N	1x32 A 3P+N	3P+N+E 35 mm <sup>2</sup>	M40 POLY (18-32)
CD14	1x40 A 3P+N	1x16 A 1P+N	1x32 A 3P+N	3P+N+E 16 mm <sup>2</sup>	M32 POLY (14-25)
CD15		1x63 A 3P+N 30mA		3P+N+E 16 mm <sup>2</sup>	M40 POLY (18-32)
CD16*	1x25 A 3P+N	+ 2 fuses 6 A Gg	1x16 A 3P+N	3P+N+E 16 mm <sup>2</sup>	M32 POLY (14-25)

\* CD6 and CD16 boxes are equipped with a 160 VA 230 V/24 V transformer. Maximum operating temperature: 40 ° C

Type	French standard socket 16 A - 230 V	16 A socket		16 A socket		32 A socket		63 A socket		MARECHAL® Deconnector™ associated*	
		24 V	220-250 V	380-440 V	220-250 V	220-250 V	220-250 V	380-440 V	380-440 V		
Box	2P+E	2P	1P+N+E	3P+E	3P+N+E	1P+N+E	3P+N+E	3P+N+E	3P+N+E	DSN range	DS range
CD1			1							6114015CD1	3114015CD1
CD2			2							6114015CD2	3114015CD2
CD3					1					6114017CD3	3114017CD3
CD4				1						6114013CD4	3114013CD4
CD5					2					6114017CD5	3114017CD5
CD6		1								611408ACD6	311408ACD6
CD7	1		1							6114015CD7	3114015CD7
CD8						1				6134015CD8	3134015CD8
CD9						2				6134015CD9	3134015CD9
CD10								1		6134017CD10	3134017CD10
CD11								2		6134017CD11	3134017CD11
CD12			1					1		6134017CD12	3134017CD12
CD13			1					1		6134017CD13	3134017CD13
CD14	1							1		6134017CD14	3134017CD14
CD15									1	6164017CD15	
CD16		1 [PN range]			1					6114017CD16	3114017CD16

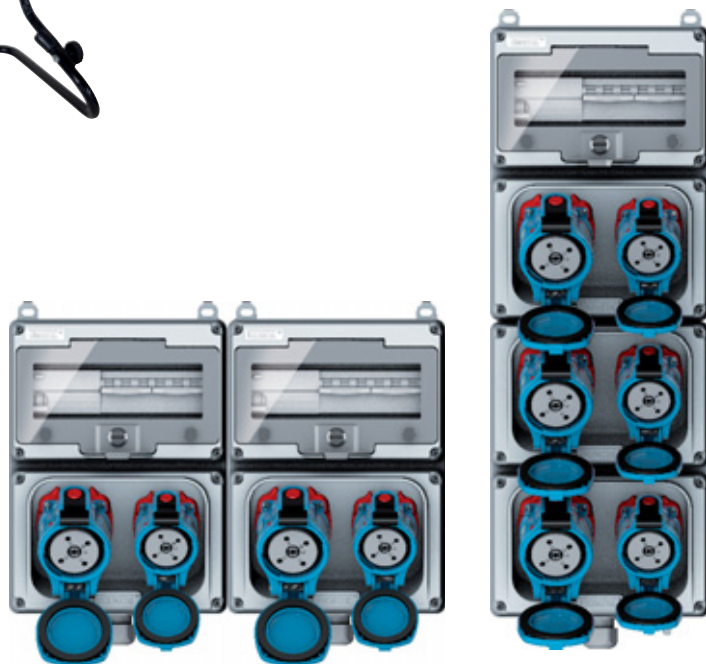
\* CD6 and CD16 boxes are equipped with a 160 VA 230V/24V transformer. Maximum operating temperature: 40 °C.

INFOS +

The CD box can be mounted on a support.  
Frame ref. : 9CHAS-CD



Other configurations on request.  
Assembly possible (factory) for your needs greater than 2 outlets. Please contact us for references.







# CRIC



## CONNECTION TERMINALS



- ▶ From 2 x 1.5 to 2 x 120 mm<sup>2</sup>
- ▶ Vibration-resistant
- ▶ Thermal cycling-resistant and anti-shearing terminals

**CRIC - TERMINALS FROM 2 X 1.5 TO 2 X 120 mm<sup>2</sup>**

The CRIC terminals are characterised by:

- perfectly tight: no tool required,
- a spring placed inside the terminal head compensates for strand settlement and copper yield.
- Spring-assisted tightening (even after copper yield)
- Vibration-resistant, thermal cycling-resistant and anti-shearing terminals
- Comply with the NFC 20-110 standard



Terminal	Wiring	insulated with fixing part	insulated + screw with rear part	Earth with treaded hole	Earth + screw with rear part	Earth + screw with treaded hole	insulated without fixing part	Protecting cap
<b>T6</b>	2 x 1,5 mm <sup>2</sup> to 2 x 6 mm <sup>2</sup>	6 TA 6	6 TB 6	6 TD 6	6 TE 6	6 TF 6	6 TV 6	-
<b>T16</b>	2 x 4 mm <sup>2</sup> to 2 x 16 mm <sup>2</sup>	6 TA 16	6 TB 16	6 TD 16	6 TE 16	6 TF 16	6 TV 16	-
<b>T35</b>	2 x 6 mm <sup>2</sup> to 2 x 35 mm <sup>2</sup>	6 TA 35	6 TB 35	6 TD 35	6 TE 35	6 TF 35	6 TV 35	-
<b>B70</b>	2 x 25 mm <sup>2</sup> to 2 x 70 mm <sup>2</sup>	6 BA 70	6 BB 70*	6 BD 70	6 BE 70	6 BF 70	-	6 C 70
<b>B120</b>	2 x 50 mm <sup>2</sup> to 2 x 120 mm <sup>2</sup>	6 BA 120	6 BB 120*	6 BD 120	6 BE 120	6 BF 120	-	6 C 120

\* Rod non insulated.

# TUNNELS



## BOXES AND CONNECTORS



**MARECHAL ELECTRIC** is now a leading company in the electric connection for tunnels. Based on technology specially intended for such difficult environments and quick light disconnection, **MARECHAL ELECTRIC** has already equipped more than 700 km of underground roads, railroads and inland waterways...

Always with the same objective: provide user safety, optimise maintenance and make the work of emergency services easier.

**PRODUCTS SUITED FOR SPECIAL TUNNEL ENVIRONMENTS**

Very often in a tunnel, there is dust, stone projections, smoke, gas, moisture, water streaming and, of course, pollution. Electric connections in tunnels are subjected to extremely corrosive conditions. Designed to withstand such conditions, MARECHAL® boxes equipped with connectors or deconnectors provide safe solutions for tunnel maintenance.

**WATERTIGHTNESS**

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

**CORROSION AND IMPACT RESISTANCE  
HALOGENE AND SMOKE FREE**

For optimum safety, the materials used for making Marechal® boxes and connectors are resistant to corrosion and impact (resistance IK09). In case of fire, these materials emit no smoke or dangerous product.

**QUALITY CONNECTION AND EASY DISCONNECTION:  
USE OF BUTT-CONTACT**

Easy disconnection = easy maintenance: thanks to the MARECHAL® silver-nickel butt-contact technology, the contacts are never welded. Therefore, the connection quality remains absolutely stable, and the disconnection can be done any time, even after several years.

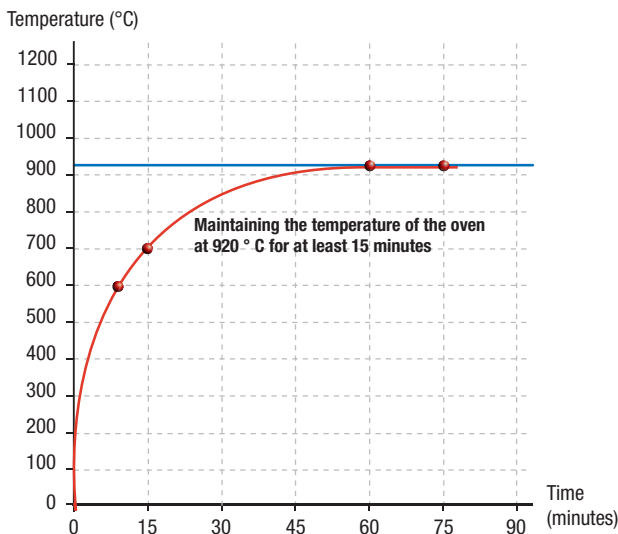
**STANDARDS AND CERTIFICATIONS**

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

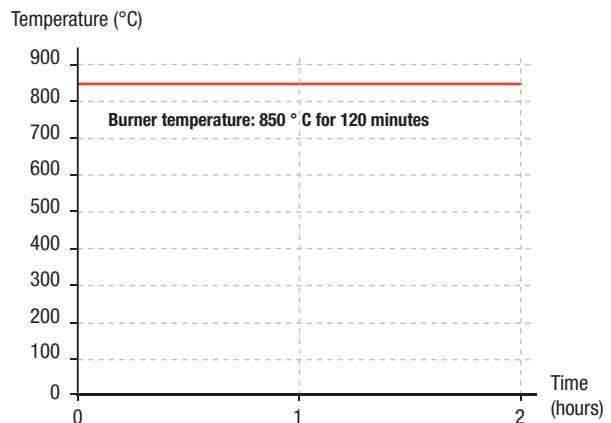
- EN 50362 European standard.
- French government Directive No. 2000-63 of 25 August 2000 on safety in tunnels and national road network.
- NF C 32-070 French standards.
- Guides CETU defining the fire behavior of road tunnels.

To meet these requirements, MARECHAL® equipments are 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 Ital.



**Oven temperature curve - standardized time  
NF C 32-070 standard**



**Flame temperature curve - Time  
NF EN 50362 standard**



Consult us

### MAIN FEATURES

	POLY BOXES
Service terminals	2 to 5 insulation-piercing.
Service protection	By circuit breaker fitted to DIN rail
Cables accepted	Armoured and unarmoured cables, stranded or flexible, from 2,5 mm <sup>2</sup> to 35 mm <sup>2</sup> (for conductors above 25 mm <sup>2</sup> , the main cable must be cut).
Internal and external Earth point	Inside and outside the enclosure
Ingress Protection	IP66 according to NF EN 60529
Shock resistance	IK09 according to NF EN 50102
Fire smoke class	M1F0
Self extinguishing material	UL94-V0
Modularity box Options Other equipment	<ul style="list-style-type: none"> <li>• Supply of service leads fitted with MARECHAL® coupler sockets</li> <li>• Accessories for fixing box to cable tray or ladder.</li> <li>• "Power On" signal light</li> <li>• Alternative non-piercing terminals</li> <li>• Alternative Protection: single phase circuit breaker</li> <li>• Plate for external fixing</li> </ul>

### DERIVATION BOXES WITHOUT CUTTING MAIN CABLE - STANDARD LIGHTING.

Made from halogen free fiberglass reinforced polyester compound or thermoplastic, these boxes allow a service tap-off from the main through cable without the need to strip or cut the main cable. "Snail" type gasket allow the immediate positioning of cables with a maximum diameter of 28 mm whilst creating an IP67 seal. The box lid, fitted with a retaining cord, is fixed to the box by means of captive stainless steel screws.



**EXPRESS®** box made from halogen free fiberglass reinforced polyester compound

Type	H x L x P en mm	Distribution
91150	268 x 272 x 111	Maximum 2 tap-offs using 2 sockets Maximum 4 tap-offs using glands



**EXPRESS®** Box made from halogen free thermoplastic

Type	H x L x P en mm	Distribution
93036	190 x 522 x 121	Maximum 2 tap-offs using 2 sockets Maximum 4 tap-offs using glands

# TUNNELS

DISTRIBUTION BOXES FIRE RESISTANT



Consult us

## MAIN FEATURES

	POLY BOXES	STAINLESS STEEL 316 L BOXES
<b>Fire resistance</b>	Electrical continuity of the main cable guaranteed: <ul style="list-style-type: none"> <li>• NF C 32-070 : oven temp. 920°C - temperature increases.</li> <li>• NF EN 50362 : oven temp. 850°C - temperature increases.*</li> </ul>	Electrical continuity of the main cable guaranteed to oven temp. 920°C - temperature increases according to NFC 32-070 standard.
<b>Service terminals</b>	<ul style="list-style-type: none"> <li>• 2 to 5 insulation-piercing, stainless steel connectors, fitted into a ceramic base. The whole arrangement is fitted to the wall by means of a stainless steel plate.</li> <li>• 2 to 5 insulation-piercing only under EN 50362</li> </ul>	2 to 5 insulation-piercing, stainless steel connectors, fitted into a ceramic base.
<b>Service protection</b>	By fuse or circuit breaker fitted to DIN rail	By fuse or circuit breaker mounted on ceramic base.
<b>Cables accepted</b>	Armoured and unarmoured cables, stranded or flexible, from 4 mm <sup>2</sup> to 25 mm <sup>2</sup> . (For conductors above 25 mm <sup>2</sup> , the main cable must be cut.)	Cables up to 185 mm <sup>2</sup> .
<b>Internal and external Earth point</b>		Inside and outside the enclosure
<b>Ingress Protection</b>		IP66 according to NF EN 60529
<b>Shock resistance</b>		IK09 according to NF EN 50102
<b>Fire smoke class</b>	M1F0	
<b>Self extinguishing material</b>	UL94-V0	
<b>Modularity box Options Other equipment</b>	<ul style="list-style-type: none"> <li>• Supply of service leads fitted with MARECHAL® coupler sockets</li> <li>• Accessories for fixing box to cable tray or ladder.</li> <li>• "Power On" signal light</li> <li>• Alternative non-piercing terminals</li> <li>• Alternative Protection: single phase circuit breaker</li> <li>• Plate for external fixing</li> </ul>	<ul style="list-style-type: none"> <li>• Supply of service leads fitted with MARECHAL® coupler sockets</li> <li>• Alternative Protection: single phase circuit breaker</li> </ul>

\* Only for EXPRESS® BOX Part no. 91151

## DISTRIBUTION BOXES FIRE RESISTANT - EMERGENCY LIGHTING, SIGNALLING, SIGNPOSTING

### Poly boxes

Made from halogen free fiberglass reinforced polyester compound, these boxes allow a service tap-off from the main through cable without the need to strip or cut the main cable, known as type CR1-C1, conforms to NF C 32-070 or type FTG10(O) M1 0.6 KV conforms to EN 50362. "Snail" type gasket allow the immediate positioning of cables with a maximum diameter of 28mm whilst creating an IP67 seal. The box lid, fitted with a retaining cord, is fixed to the box by means of captive stainless steel screws.

### Stainless steel boxes

Made from AISI 316 L, these boxes allow a service tap-off from the main through cable. Known as type CR1-C1, it conforms to NF C 32-070. The main cable through the box through the cable glands and is connected to stainless steel terminals mounted on ceramic base. The box lid is fixed to the box by means of captive stainless steel screws.



**EXPRESS®** box made from halogen free fiberglass reinforced polyester compound

Type	CSTB Certificate	IMQ Certificate	H x L x P in mm	Distribution
91151	RS10-083	AC.00646	268 x 272 x 111	Maximum 2 tap-offs using 2 sockets. Maximum 4 tap-offs using glands.



**STAINLESS** steel 316 L box

Type	CSTB Certificate	H x L x P en mm	Distribution
91141	RS15-077 RS15-124	140x200x130 500x500x160	Cable gland cable diameter greater than 25mm <sup>2</sup>

# FIRE BOXES

FIRE DEPARTMENT BOX - SECURITY RECESS



Consult us

## MAIN FEATURES

Service protection	Differential circuit breaker 30 mA.
Internal and external Earth point	Inside and outside the enclosure
Ingress Protection	IP55 (metal) IP66/69K (thermoplastique) according to NF EN 60529
Shock resistance	IK09 according to NF EN 50102

## ALUMINIUM BOX

Especially developed in collaboration with emergency services who specialise in tunnel rescue, this box is installed in a security recess. Completely made of aluminium, this box is composed of a back box, an inclined cover with an inspection window. The power of this kit is carried by cables 5G16 mm<sup>2</sup> max. The box lid is fixed to the box by means of captive stainless steel screws.



### ALUMINIUM box

Type	H x L x P in mm	Distribution
91277	345 x 280 x 125	One or two MARECHAL® decontactor (DS or DN) can be fit on the inclined cover.

## THERMOPLASTIC BOX

Natural evolution of the aluminum version, this cabinet fulfills the same functions by adding an IP66 waterproof or even IP69 (high cleaning pressure). And resistance to corrosion due to salting.

This box is composed of two parts fixed on hinges:

- a protection part, with a transparent window (locking key in option),
- a terminal part for a quick access to the connection.

The assembly is in captive stainless steel screws.



### THERMOPLASTIC box

Type	H x L x P in mm	Distribution
3134017CDxx	342 x 225 x 156	One to two MARECHAL® sockets of type DS or DSN can be mounted





# CUSTOM



**BOXES,  
EXTENSIONS  
AND CABLE REEL**



In direct connection with its production of industrial electrical socket-outlets, MARECHAL ELECTRIC has the internal skills to offer you complete customized solutions. From cable assembly to the power distribution box.

Contact us.

**EXAMPLE OF SOLUTIONS'**



Portable rubber box



Automatic cable reel



Equipped cable reel



Boxes of all sizes and materials, GRP, sheet metal or stainless steel.



Cable assembly



Portable service box