

# ErgoN'

## Amphenol Ergonomic Industrial Connectors



### Applications :

- Electric Cars Batteries
- Electric Trucks & Buses
- Power plants :
  - \* Traditionnal
  - \* Windmills
  - \* Solar farms
- Heavy Equipment

## Description

Because you can assemble and connect our connectors daily, Amphenol has designed this new range taking into account **Ergonomics**. As a result, this new range is very easy to assemble and to connect with a patented push-lock mechanism.

**High Power** applications require specific features in connectors design. For example, the development of fleet of rental **Electric Vehicles** which run exclusively on rechargeable/replaceable batteries generates significant new demands on connectors.

**Common requirements on these battery connectors have been identified :**

- High current capabilities
- Safe for the user and the electronics
- Easy to assemble and connect
- Robust & sealed
- High mating cycles

**Our new ErgoN' series has been designed following these requirements.**

Up to 350 A current (Radsok Technology)

Interlock contacts, already shunted & assembled in factory

IP2X unmated & IP68 mated

Easy and secure Push & Lock Mating mechanism

Mechanical coding molded on shells (keys)








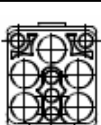
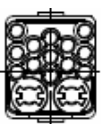
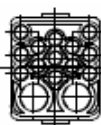
Possibility to have male or female insert on each shell

3 colours available (Red, Black, Blue)

High mating cycles (3000) and low insertion forces (Railway proven technology)

Possibility to have a double locking (optional)

# Shells and Inserts P/N

		Description	Part Number
Receptacle Shell		Receptacle Black, B coding	Ergon LR BK
		Receptacle Red, A coding	Ergon LR RD
		Receptacle Blue, A coding	Ergon LR BU
Cap for Receptacle		Rubber Cap for Receptacle	Ergon LR CAP
Plug Shell		Plug Black, B coding	Ergon LP BK
		Plug Red, A coding	Ergon LP RD
		Plug Blue, A coding	Ergon LP BU
Plug Shell Large section		Plug Large section Black, B coding	Ergon LLP BK
		Plug Large section Red, A coding	Ergon LLP RD
Inserts		PW1 insert 1xD10mm female contact cavity 2x D1,5mm female contacts cavities Operating voltage : up to 2500VAC	Ergon LI PW1 S
		PW1 Insert 1xD10mm male contact cavity 2x interlock male contacts shunted Operating voltage : up to 2500VAC	Ergon LI PW1 P
		PW2 Insert 5xD3,5mm female contacts cavities 3xD1,5mm male contacts cavities 2x D1,5mm female contacts cavities Operating voltage : up to 750VAC	Ergon LI PW2 S
		PW2 Insert 5xD3,5mm male contacts cavities 3xD1,5mm female contacts cavities 2x interlock male contacts shunted Operating voltage : up to 750VAC	Ergon LI PW2 P
		BMS Insert ( <i>Battery Mgt System</i> ) 2x D3,5mm female contacts cavities 13x D1,5mm female cavities Operating voltage : up to 1200VAC	Ergon LI BMS S
		BMS Insert ( <i>Battery Mgt System</i> ) 2x D3,5mm male contacts cavities 11x D1,5mm male cavities 2x interlock male contacts shunted Operating voltage : up to 1200VAC	Ergon LI BMS P

\* Shielding solution on request

## Contacts P/N

	Description	Cable section	P/N
<b>D10mm Contacts (Radsok Technology)</b>	Male IP2X (350A) contact	Cable section 50mm <sup>2</sup>	<b>30 003</b>
	Male IP2X (350A) contact	Cable section 70mm <sup>2</sup>	<b>30 051</b>
	Male IP2X (350A) contact	Cable section 120mm <sup>2</sup>	<b>30 138</b>
	Male IP2X (350A) contact	Male contact for lug <i>(to be used only with receptacle)</i>	<b>30 142</b>
	Female IP2X (350A)	Cable section 50mm <sup>2</sup>	<b>30 006</b>
	Female IP2X (350A) contact	Cable section 70mm <sup>2</sup>	<b>30 052</b>
	Female IP2X (350A) contact	Cable section 120mm <sup>2</sup>	<b>30 118</b>
	Female IP2X (350A) contact	Female contact for lug <i>(to be used only with receptacle)</i>	<b>30 140</b>
<b>D3,5mm Contacts</b>	Male IP2X (60A) contact	Cable section 4 to 10mm <sup>2</sup>	<b>30 018</b>
	Male (60A) contact	Cable section 4 to 10mm <sup>2</sup>	<b>30 046</b>
	Female (60A) contact	Cable section 4 to 10mm <sup>2</sup>	<b>30 071</b>
	Reducer	Cable section 2,5mm <sup>2</sup>	<b>30 112GO</b>
<b>D1,5mm Contacts</b>	Male signal contact (8A)	Cable section 0,34 to 1,5mm <sup>2</sup>	<b>30 526</b>
	Female signal contact (8A)	Cable section 0,34 to 1,5mm <sup>2</sup>	<b>30 521</b>

## Tooling

	Description	Part Number
<b>Crimping tool for D10mm contact</b>	Manual hydraulic Plier	<b>177-809947-00 or Dubuis D31</b>
	Electric Plier	<b>Dubuis D31 ELEC</b>
	Dies 50mm <sup>2</sup>	<b>177-030033-00 or Dubuis 77464</b>
<b>Crimping tool for D3,5mm contact</b>	Plier 60 A	<b>177-030246-00 or COJACK TGV 515 or OCETA M 317</b>
	Locator 60 A	<b>177-030248-00 or COJACK TGV 503 or OCETA TP 805</b>
<b>Crimping tool for D1,5mm contact</b>	Plier 8 A	<b>177-030245-00 or COJACK TGV 101 or OCETA FT.8</b>
	Locator 8 A	<b>177-030247-00 or COJACK TGV 202 or OCETA SH 463</b>
<b>Insertion &amp; extraction tools for D10mm</b>	Insertion 350 A	<b>No tool, by hand</b>
	Extraction 350 A	<b>177-030029-91</b>
<b>Insertion &amp; extraction tools for D3,5mm</b>	Insertion 60 A	<b>177-030038-00</b>
	Extraction 60 A	<b>177-030037-00</b>
<b>Insertion &amp; extraction tools for D1,5mm</b>	Insertion 8 A	<b>177-030035-00</b>
	Extraction 8 A	<b>177-030036-00</b>
<b>Extraction tools - Inserts</b>	Inserts insertion	<b>No tool, by hand</b>
	Inserts extraction	<b>177-030034-91</b>

# Key Characteristics

## Environnement :

Sealing : IP68 per EN 60529 (CEI 529)  
 User safety : IP2X per EN 60529 (CEI 529)  
 Flame resistance : UL 94 V0  
 Thermal shock : 5 cycles of 2 h -40°C / +85°C  
 Operating Temperature : - 30°C / +85°C

## Mechanical :

3000 mating / unmating cycles  
 Vibrations : per ISO 16750 Road vehicles. Environmental conditions and testing for electrical and electronic equipment

## Current & Temperature rise (\*)

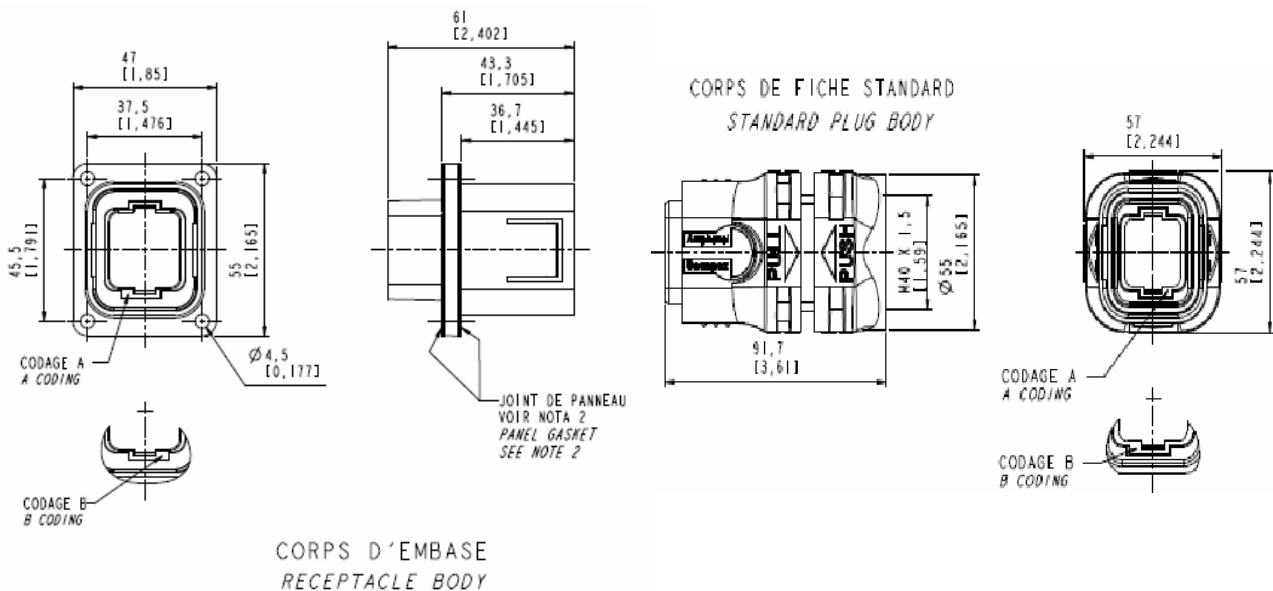
For insert PW1  
 Max temp. rise @ 350 A : 25°C  
 Max temp. rise @ 500 A : 50°C (5s peak)  
 (\*) with cable section 50 mm<sup>2</sup>

**Custom current profile can be analysed, consult us.**

## Material

Connector shells : Thermoplastic  
 Contacts : machined Brass Alloy  
 Orings : Silicone & Neoprene  
 Panel gasket : Silicone

# Overall dimensions



# Amphenol

The information given in this document are as a **guideline only**.  
 We reserve the right to **modify our products** in any way we deem necessary.  
 Any duplication is **prohibited**, unless approved in writing.

Your local Contact:

