www.ebusbar.net

www.worldproducts.com
(707) 996-5201

Ebusbar®
巴斯巴

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WORLD PRODUCTS INC.® is the Exclusive Agent in North America for Ebusbar® HV Relays for EV.

CONTACT PRODUCT

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Ebusbar established in 2010 with a registered capital of 53 million. It focus on the core components of EV, new energy research and development, production and sales of the national high-tech enterprises. Its products including laminate busbar, EV & PHEV charging connectors, high-voltage electric vehicle connection system, Charging equipment and operation solutions, EV battery Box Solutions, MCU and multi-in-one integrated solutions, HV relays, Depend on a strong R & D and experimental capabilities, advanced and highly efficient manufacturing capabilities. Ebusbar will have to continue to provide our customers professional and innovative solutions, fast and flexible service and high quality products.

1

Charging Connector

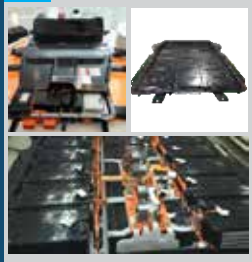
2

HV Connector

3

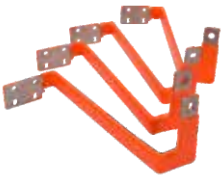
HV Relay

4

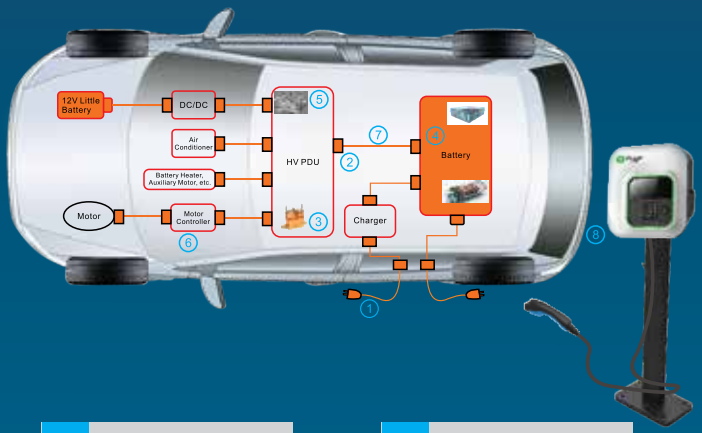


Power Battery Box

5



Flexibar



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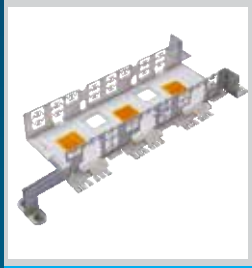

Laminated busbar

7

HV Power Distribution Products

8

Motor Driver and Integrated Products

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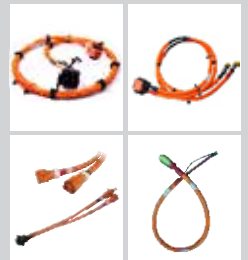

Vehicle HV Wire Harness Products

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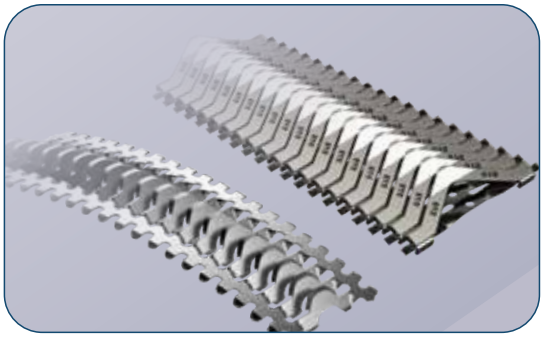
Electric Vehicle Charging Products

CONTENTS

High current contact

Bas-Cy™ contact



Bas-Lc™ contact

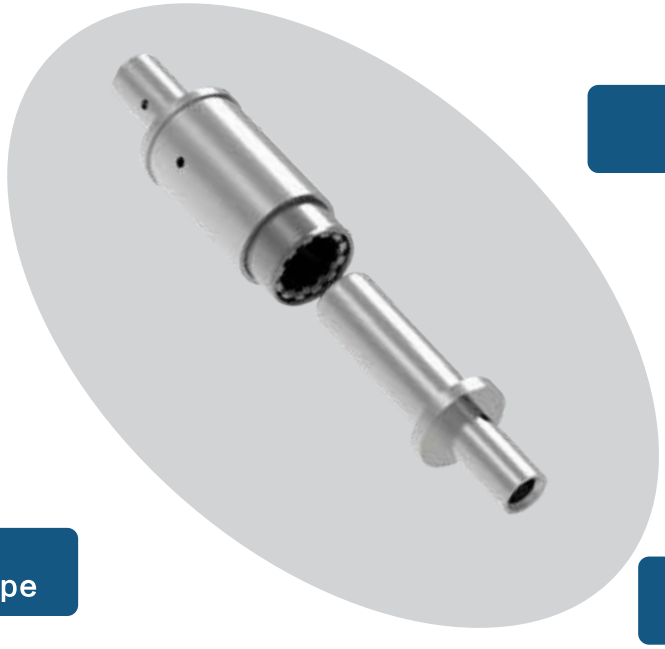
Terminal it is the medium of transmiting the electrical signal from one circuit to the other circuit. Therefore, to ensure that the terminal has a good electrical conductivity, is the standard of determining terminal performance .

Important parameters of terminal contact performance

低接触电阻
Low contact resistance

低电压降
Low voltage drop

紧凑设计
Compact design



低插拔力
Low insertion force

成本低
Low cost

高电流密度
High current transfer density

易安装
Easy to install

连接类型
Connection type

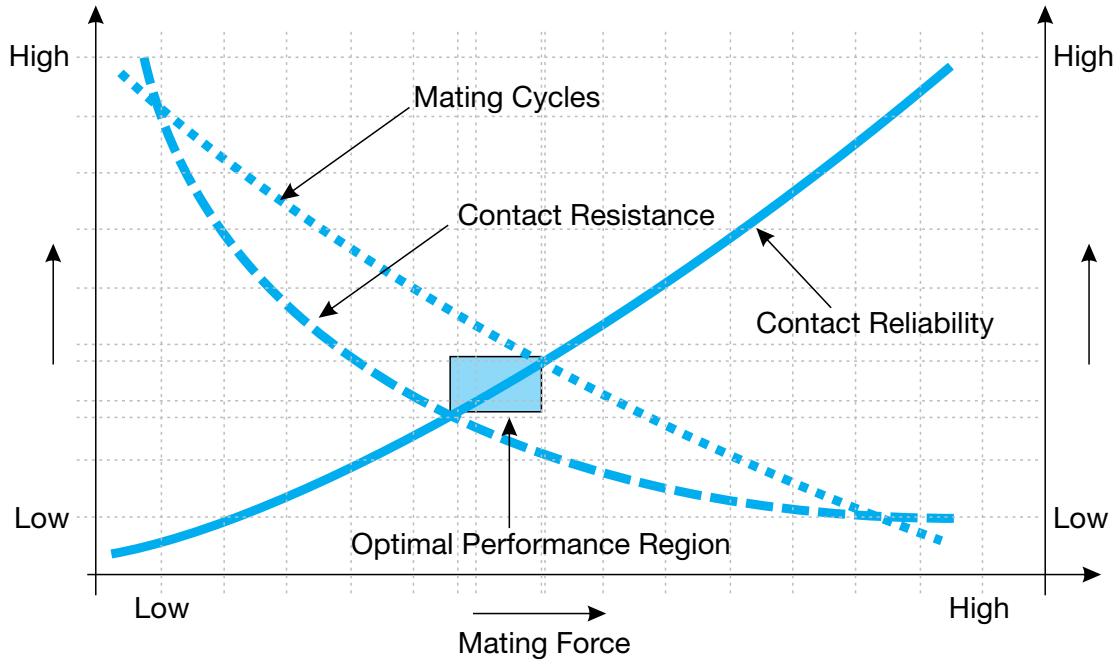
自我清洁
Self cleaning

抗震动，耐冲击
Excellent shock and vibration resistance

高寿命
High number of mating cycles

Important parameters of terminal contact performance

Contact resistance and load current are the two most important parameters.



The relationship between the mating cycles, the contact resistance, the contact reliability and the insertion force

It can be known from the above table that reducing the terminal contact resistance can greatly enhance the electrical conductivity of the same terminal.

$$R_d = R_b + R_k$$

The contact resistance R_d can be obtained by measuring, and the conductor resistance can be calculated.

$$R_b = \frac{L \cdot \varrho}{A}$$

R_b(Ω)=导体电阻
L(m)=导体长度
ϱ(Ω·mm^2/m)=导体电阻率
A(mm^2)=导体截面积

Busbar launch 3 series structure according to the market demand：

Bas-Lok™ 簧结构系列端子 Torsion Spring Structure Series Terminal；
Bas-Net™ 转簧结构系列端子 Rotary Spring Structure Series Terminal；
Bas-Core™ 鳞片结构系列端子 Structure Series Terminal。

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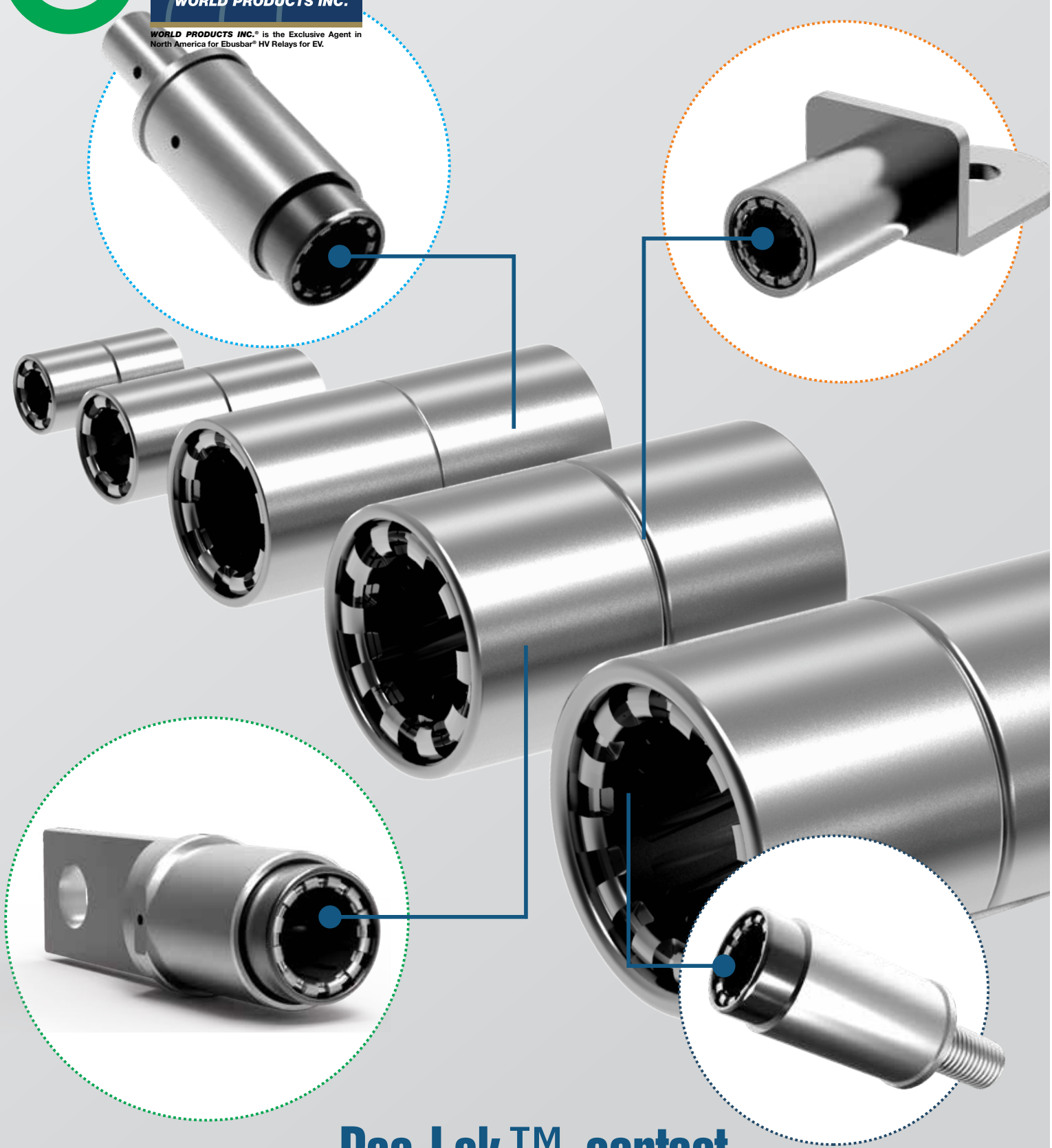
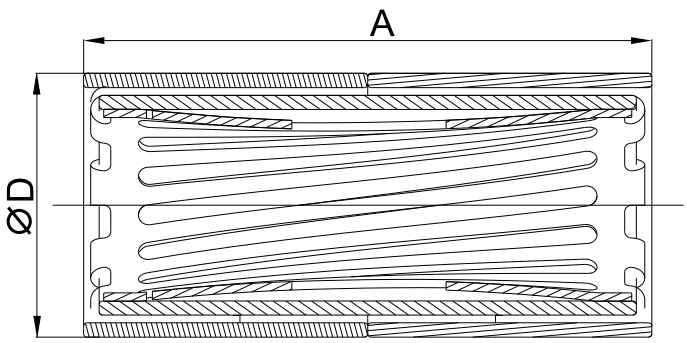


Bas-Lok™ contact

扭簧结构系列端子

Bas-Lok™ contact



规格参数 Specification:

序号 NO.	端子规格 Size Spec	配合插针直径 Mated pin (Φd 0/−0.03)	基本尺寸 Size (mm)		机械参数 Machine parameter		电气参数 Electrical parameter	
			ΦD	A	插入力 N (Max)	拔出力 N (Max)	工作电流 (A) Current	接触电阻 (mΩ) Resistance
1	2.4	2.4	4.22	7.9	10	3	50	0.3
2	3.6	3.6	6	11.6	12	5	70	0.25
3	6.0	6.0	9.58	20.5	18	7	130	0.2
4	8.0	8.0	13.5	22	25	15	185	0.17
5	9.1	9.1	15.24	22.3	28	15	260	0.14
6	10.3	10.3	17.04	28.2	30	18	280	0.09
7	12.0	12.0	18.2	28.2	35	25	320	0.05

注：以上数据为单颗端子的电性参数。
Note: The given electrical values correspond to a single contact.

特征和优点 Features and Benefits:

- 低接触电阻
  Low contact resistance
- 低插拔力
  Low insertion force
- 插拔次数10000次以上
  Over 10000 mating cycles
- 自我清洁
  Self cleaning
- 低电压降
  Low voltage drop
- 高电流密度
  High current transfer density
- 抗震动，耐冲击
  Excellent shock and vibration resistance

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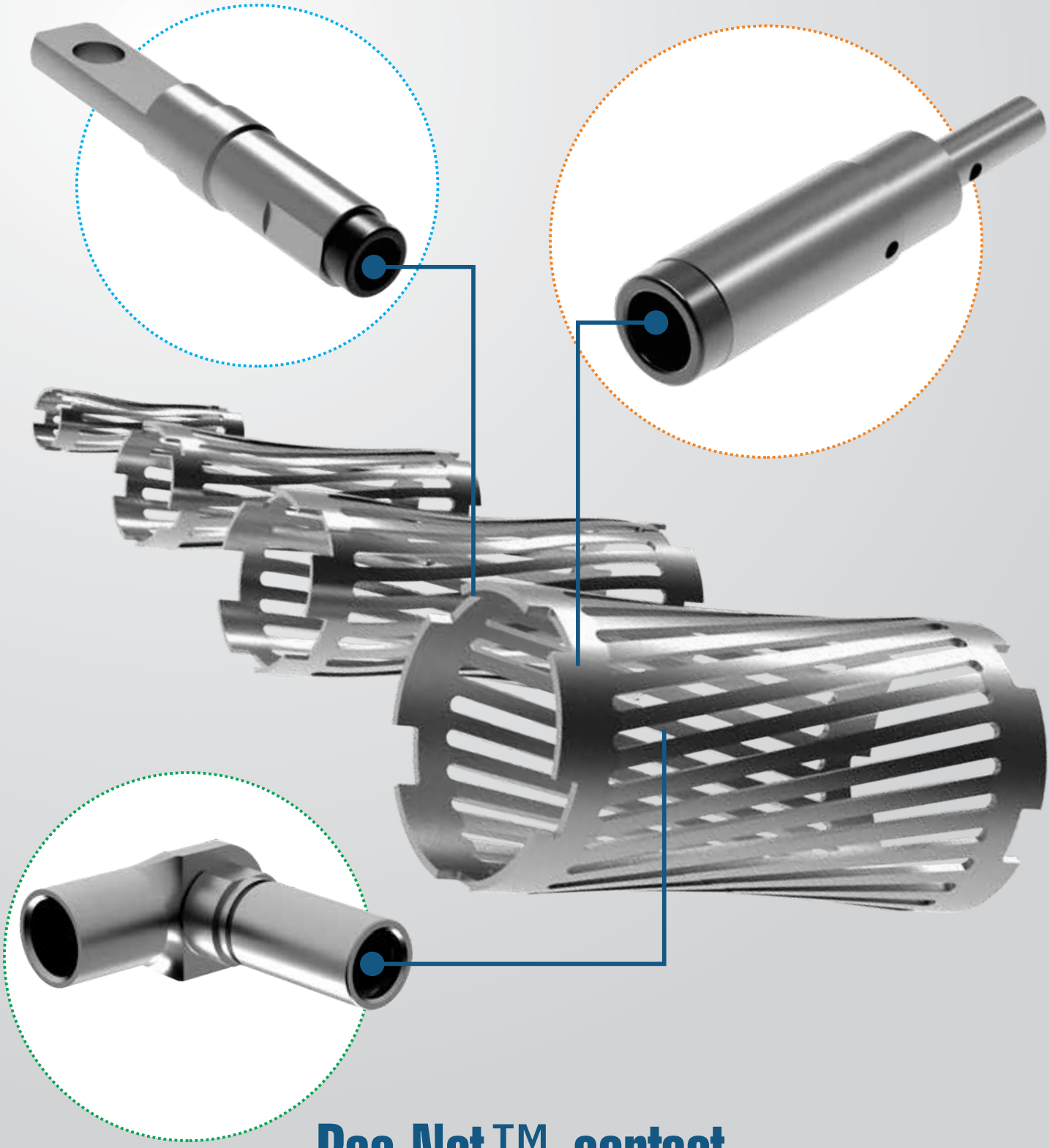
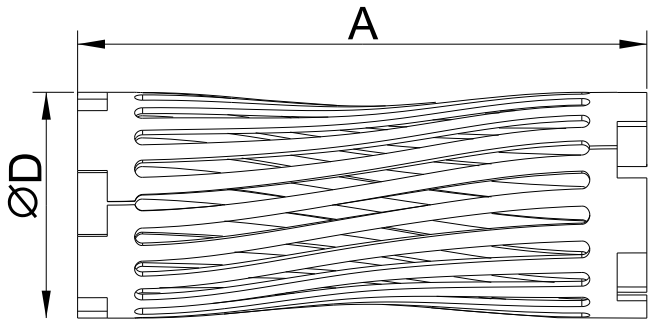


Bas-Net™ contact

Bas-Net ™ contact



规格参数 Specification:

序号 NO.	端子规格 Size Spec	配合插针直径 Mated pin (Φd 0/−0.03)	基本尺寸 Size (mm)		机械参数 Machine parameter		电气参数 Electrical parameter	
			ΦD	A	插入力 N (Max)	拔出力 N (Max)	工作电流 (A) Current	接触电阻 (mΩ) Resistance
1	1.5	1.5	1.85	6.5	9	3	20	3.00
2	2.4	2.4	2.95	8.0	9	3	35	0.50
3	3.0	3.0	3.55	12.0	9	3	40	0.40
4	6.0	6.0	6.95	20.0	18	9	130	0.30
5	8.0	8.0	9.36	25.0	30	15	185	0.25
6	9.1	9.1	10.55	20.0	35	18	240	0.17
7	10.3	10.3	11.65	25.0	35	18	260	0.15
8	12.0	12.0	13.35	25.0	40	25	300	0.10
9	14.0	14.0	15.35	30.0	40	25	350	0.07

注：以上数据为单颗端子的电性参数，
Note: The given electrical values correspond to a single contact.

特征和优点 Features and Benefits:

- 较低的接触电阻
  Lower contact resistance
- 低插拔力
  Low insertion force
- 高寿命
  High number of mating cycles
- 自我清洁
  Self cleaning
- 较低的电压降
  Lower voltage drop
- 高电流密度
  High current transfer density
- 抗震动，耐冲击
  Excellent shock and vibration resistance
- 成本低
  The cost is low

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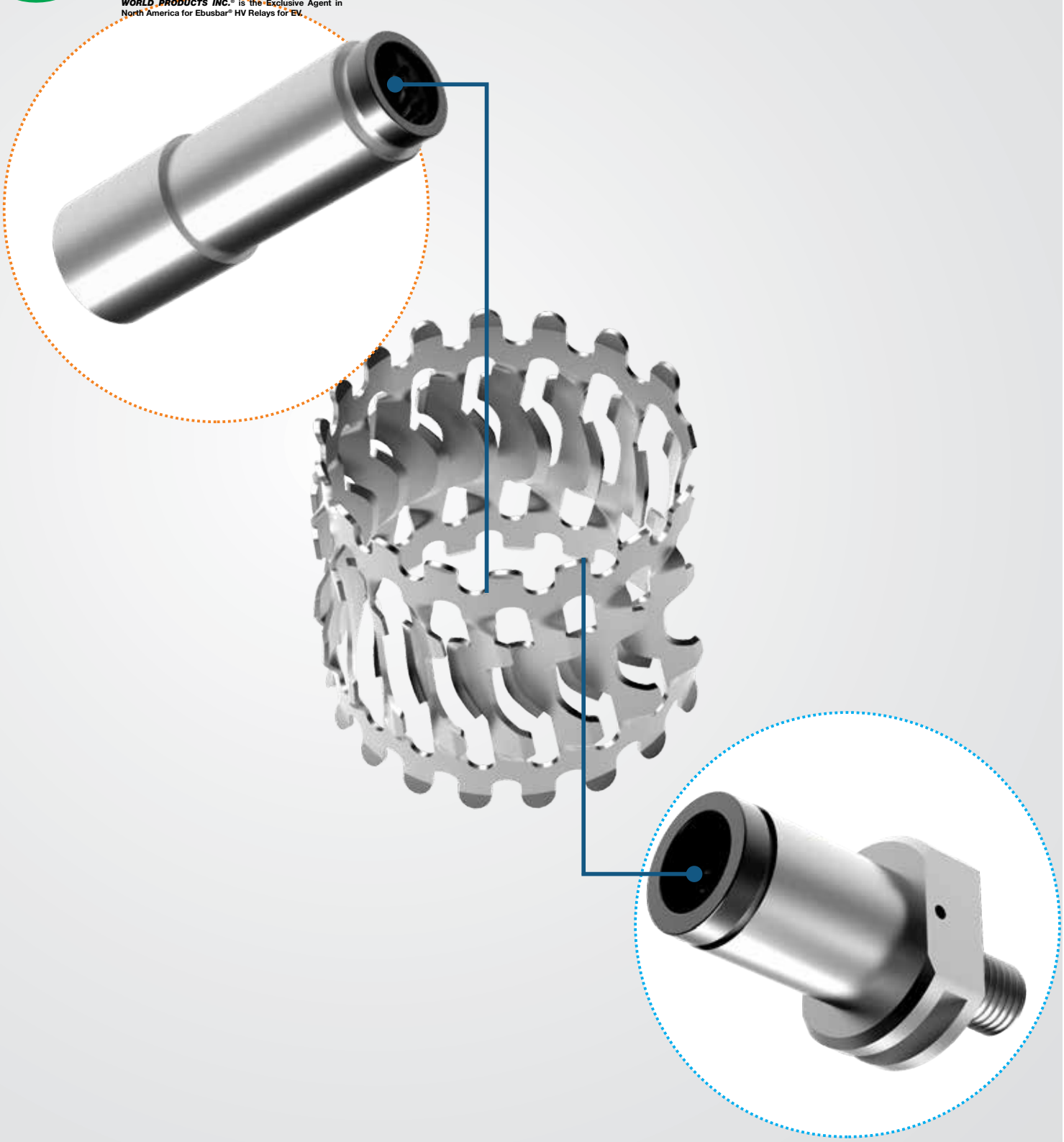
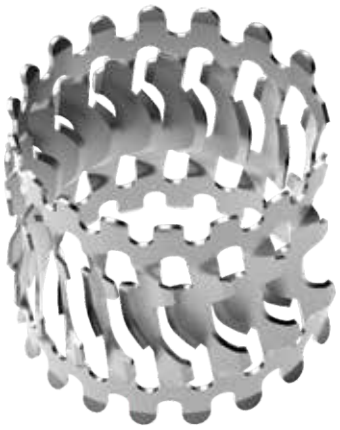
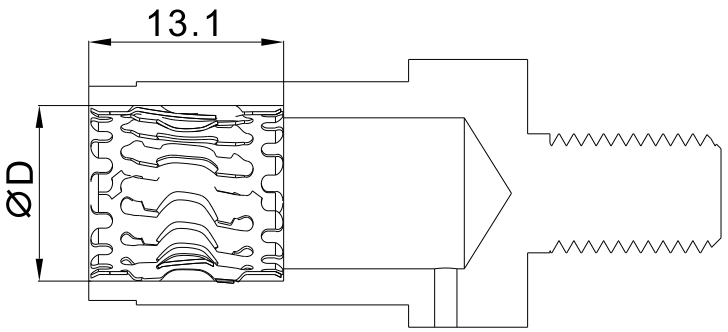


Bas-Core™ contact

Bas-Core ™ contact





规格参数 Specification:

序号 NO.	端子规格 Size Spec	配合插针直径 Mated pin (Φd 0/−0.03)	基本尺寸 Size (mm)	机械参数 Machine parameter		电气参数 Electrical parameter	
			ΦD	插入力 N (Max)	拔出力 N (Max)	工作电流 (A) Current	接触电阻 (mΩ) Resistance
1	8.0	8.0	10.35	25	15	185	0.17
2	9.1	9.1	11.3	28	15	240	0.14
3	10.3	10.3	12.2	30	18	260	0.12
4	12.0	12.0	13.9	40	18	300	0.1
5	更大规格开发中						

Note: The given electrical values correspond to a single contact.

特征和优点 Features and Benefits:

- 低接触电阻
  Low contact resistance
- 低插拔力
  Low insertion force
- 紧凑设计
  Compact design
- 自我清洁
  Self cleaning
- 低电压降
  Low voltage drop
- 高电流密度
  High current transfer density
- 成本低
  The cost is low

Application

AC Charging Receptacle

Push-pull type connector

AC Charging Plug

GB Supply Socket

IEC TYPE-1 Charging Receptacle

HV Connector Series

IEC TYPE-1 Charging Plug

IEC TYPE-2 Charging Plug

High current contact-How to order

B P L - 060 S C - XXX - 0001

系列选定 /Series designation
B-大电流圆形端子 High current contact

插孔类型 /Contact style
P-公端
S-母端

系列类型 /Series specification
L -扭簧（Bas-Lok™）结构系列端子
N-转簧（Bas-Net™）结构系列端子
C-鳞片（Bas-Core™）结构系列端子

端子规格 /Contact size
015-Φ1.5mm
024-Φ2.4mm
030-Φ3.0mm
036-Φ3.6mm
060-Φ6.0mm
080-Φ8.0mm
091-Φ9.1mm
103-Φ10.3mm
120-Φ12.0mm
140-Φ14.0mm
.....

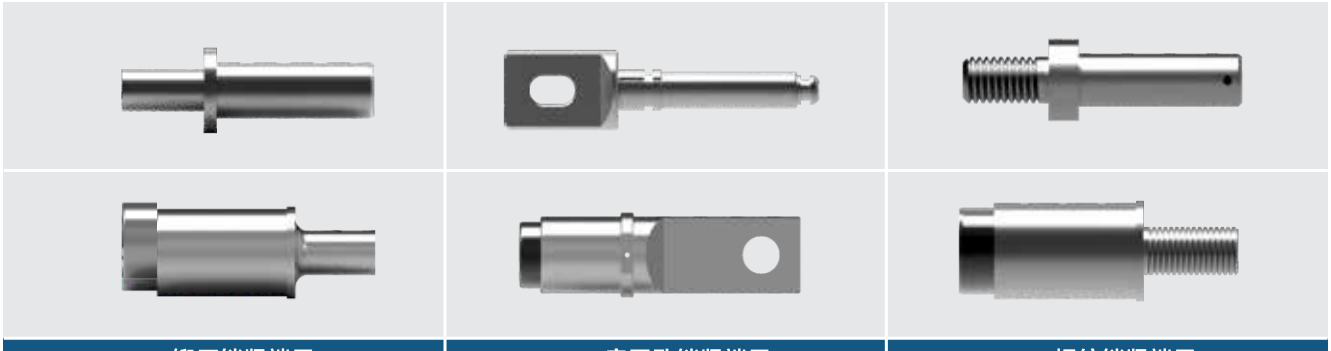
流水码
0001- 数字编码（内部编码）

额定电流
025-25A
.....
200-200A
.....
250-250A
.....

尾部压接方式
C-铆压锁紧端子 Crimp contact type
F-扁平孔锁紧端子 Flat Hole Tail
S-螺纹锁紧端子 Screw Tail

表面处理 Plating
T-镀锡 Tin
F-漂金/Gold flash
G-镀金/Gold plate
N-镀镍/Nickle
S-镀银/Silver plate

Typical contacts pictures



铆压锁紧端子 Crimp contact type	扁平孔锁紧端子 Flat Hole Tail	螺纹锁紧端子 Screw Tail

Consult factory for additional type contacts

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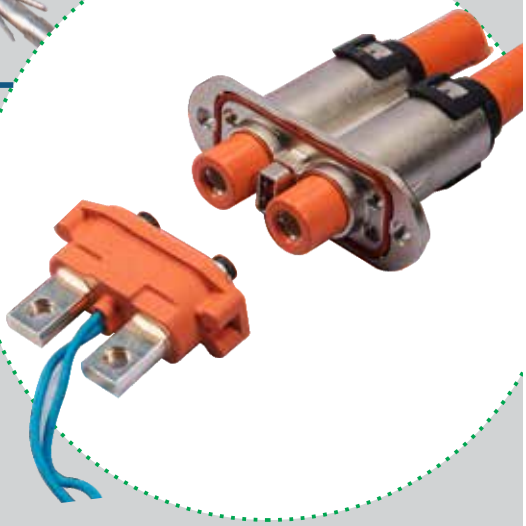
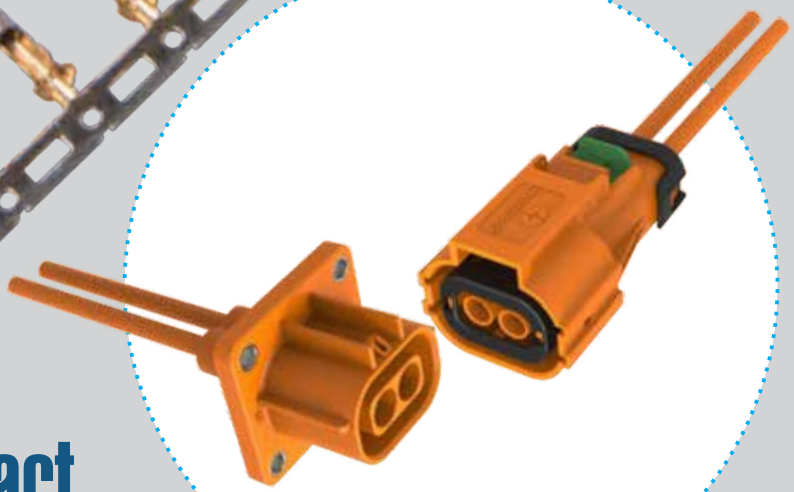
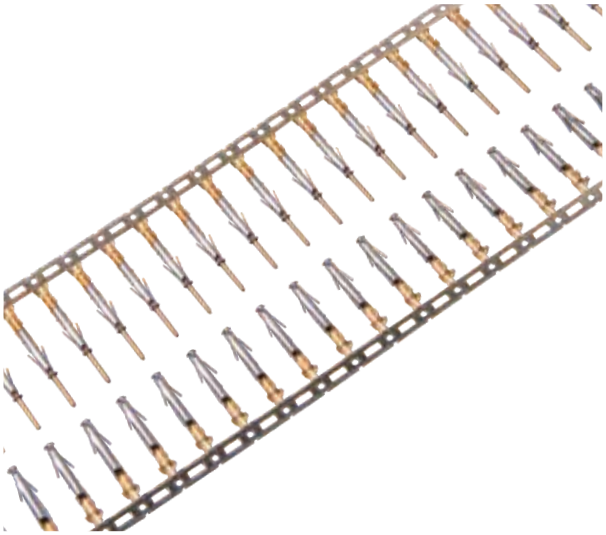




Bas-Cy™ contact

Bas-Cy ™ contact



Product Features：

- 低电压降
  Low voltage drop
- 低插拔力
  Low insertion force
- 500次寿命
  Over 500 mating cycles
- 紧凑设计
  Compact design
- 成本低廉
  The cost is low
- 抗震动，耐冲击
  Excellent shock and vibration resistance

How to order

ESP 20 M 23 ■ G30

端子类型/ Contact style
ESP 代表 冲压公针/Stamped&formed pin
ESS 代表 冲压母针/Stamped&Formed socket

可压接线号/ Wire size range
10 代表 12~10AWG(3mm² to 6mm²)(仅限及机加工端子 Only for machined contact)
12 代表 14~12AWG(2.5mm²~3.5mm²)(仅限冲压端子 Only for stamped and formed contact)
14 代表 16~14AWG(2.0mm² to 2.5mm²)
16 代表 18~16AWG(0.75mm² to 1.5mm²)
20 代表 22~20AWG(0.35mm² to 0.5mm²)

端子尺寸/ Contact size
A 代表 8号尺寸电源端子（size 8）
M 代表 16号尺寸（size 16）
W 代表 20号尺寸（size 20）

表面处理/Plating
T 代表 镀锡/tin plated(仅限冲压端子 only for stamped and formed contact)
S 代表 镀银5um/silver plated 5 um(仅限机加工端子 only for machined contact)
F 代表 漂金/Gold plated
G5 代表镀金5u"/Gold plated [thickness 5"]
G10 代表镀金10u"/Gold plated [thickness 10"]
G15 代表镀金15u"/Gold plated [thickness 15"]
G30 代表镀金30u"/Gold plated [thickness 30"]

接地端子/Grounding contact
Ge1 代表1mm长接地端子/For 1mm long GND contacts

设计变更/design variation
1 代表铆压类型/Crimp type(仅限冲压端子 Only for stamped and formed contact)
23 代表铆压/Crimp barrel(仅限机加工端子 Only for machined contact)

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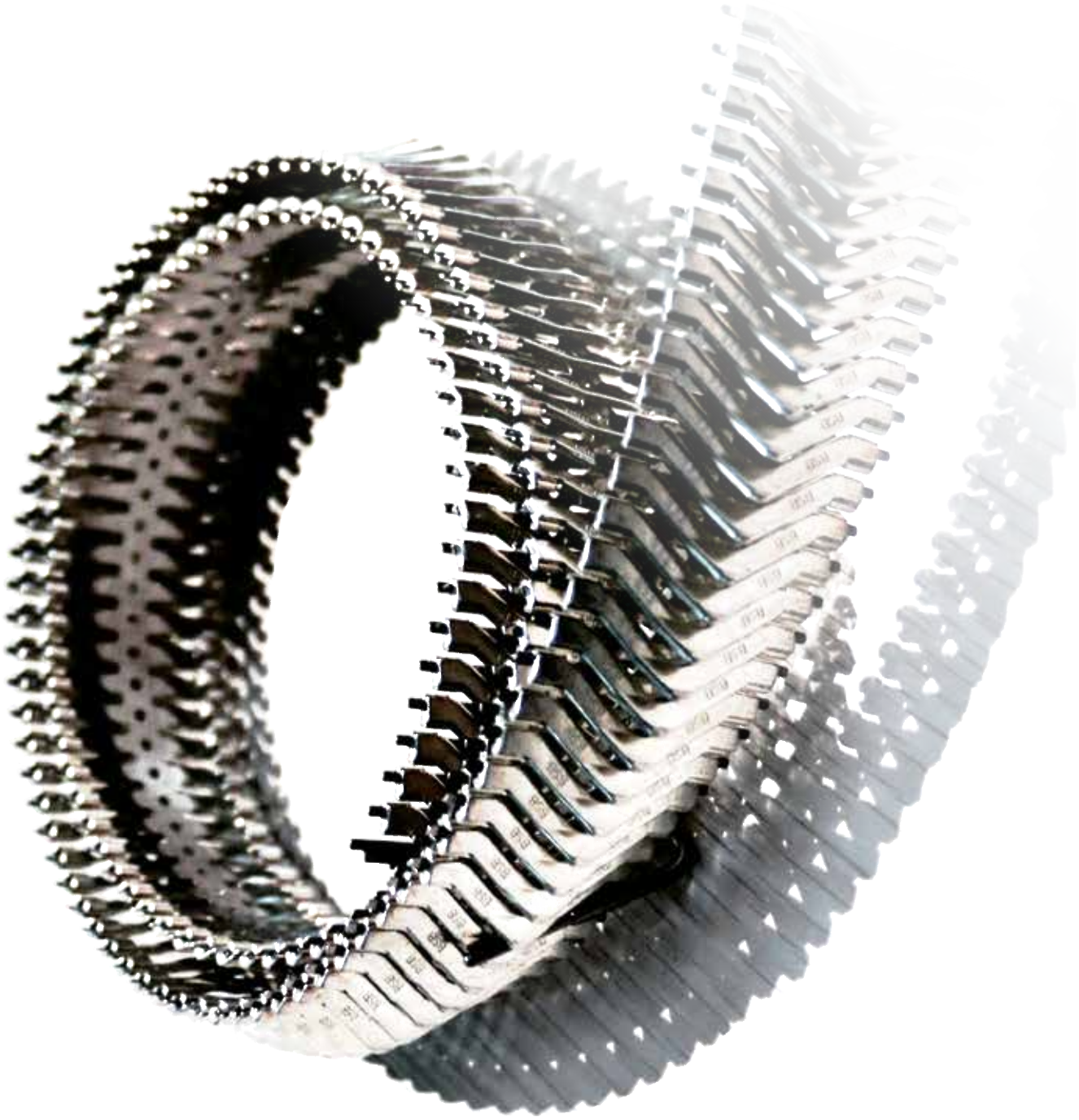
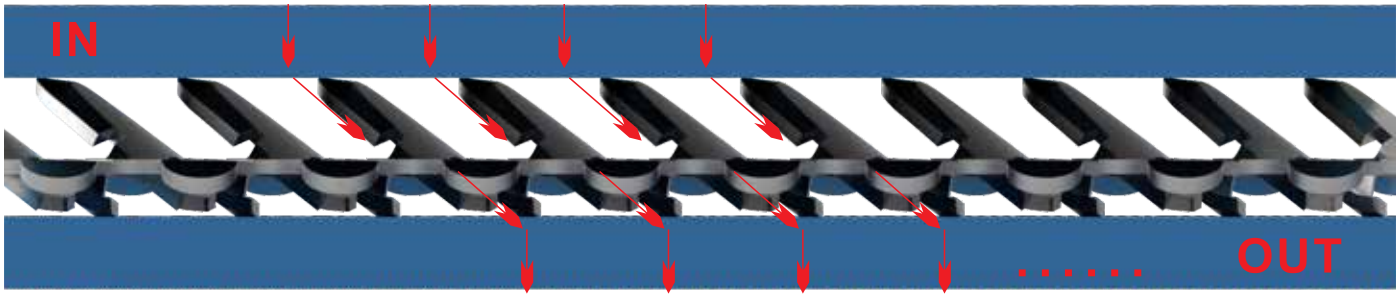


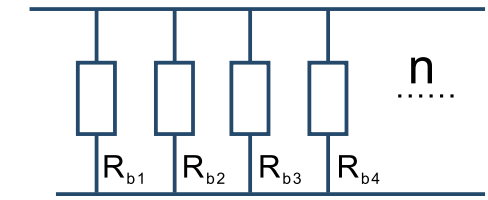
Bas-Lc™ contact

Rectangular connecting terminal for the demand of operating environment constraint and compactness.Supply high reliability, easy molding and low cost solutions

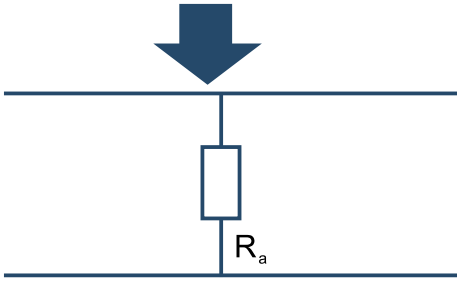
Electrical contact principle

The contact chip of the rectangular connecting terminal adopts the principle that connect indepent elastic load with a single chip, and build the independent current carrying bridge. According to the principle of parallel shunt, use the number of the current carrying bridge to achieve the purpose of reducing the contact resistance.





$$1/R_a=1/R_b+1/R_b+....+1/R_b$$



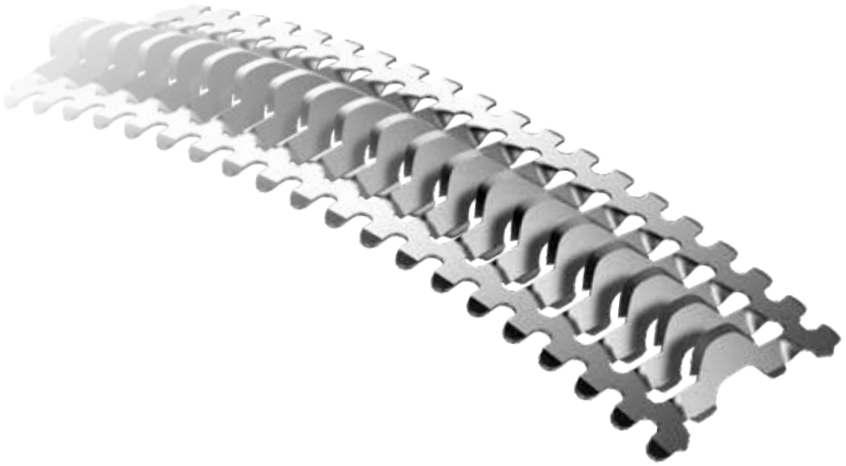
$$R_a=R_b/n$$

R_a=接触电阻 Contact Resistance

R_b=单片接触电阻 Single Chip Contact Resistance

n=接触页片的个数 Number of Contact Chip

Bas-Lc ™ contact



规格参数 Specification:

类型 Type	图示 Picture	尺寸（mm） Size			机械技术参数 Machine parameters		电气参数 Electrical parameters	
		宽度 Bandbreite	厚度 Thickness	节距 Bridge spacing	正向力 Contact force	插拔力 Sliding force	单片接触工作电流 Current	单片接触电阻 Resistance
LP 连接端子 Bas-Lc™ contact		12.9	0.2	1.9	10N	5N	13A	1mΩ

注：以上数据，弹片由铜合金制造，表面镀银时有效。
Note: The given electrical values correspond to a single contact.

特征和优点 Features and Benefits:

- 低接触电阻 Low contact resistance
- 低插拔力 Low insertion force
- 自我清洁 Self cleaning
- 紧凑设计 Compact design
- 易安装 Easy to install
- 低电压降 Low voltage drop
- 高寿命 High number of mating cycles
- 抗震动，耐冲击 Excellent shock and vibration resistance
- 成本低廉 The cost is low
- 自动校正角度偏差 Automatic correction Angle deviation

Bas-Lc ™ contact

规格参数 Specification:

类型 Type	图示 Picture	尺寸（mm） Size			机械技术参数 Machine parameters		电气参数 Electrical parameters	
		宽度 Bandbreite	厚度 Thickness	节距 Bridge spacing	正向力 Contact force	插拔力 Sliding force	单片接触工作电流 Current	单片接触电阻 Resistance
MC 连接端子 Bas-Lc™ contact		30	0.25 (Cu 1)	4	10N	3N	40A	0.4mΩ

注：以上数据，弹片由铜合金制造，表面镀银时有效。
Note: The given electrical values correspond to a single contact.

特征和优点 Features and Benefits:

- 低接触电阻 Low contact resistance
- 高电流密度 High current transfer density
- 易安装 Easy to install
- 自我清洁 Self cleaning
- 低电压降 Low voltage drop
- 大压缩量 Large amount of compression
- 抗震动，耐冲击 Excellent shock and vibration resistance
- 自动校正角度偏差 Automatic correction Angle deviation

WORLD PRODUCTS INC.® is the Exclusive Agent in North America for Ebusbar® HV Relays for EV.

World Products Inc.®

For over 45 years, World Products Inc.® (WPI) has worked with Tier 1 automotive suppliers and has offered the highest quality products with superior technical support to the automotive industry. WPI brings additional value in today's electric vehicle market with our award-winning customer service and a dedicated automotive sales force, while providing our customers with environmentally sound and technologically advanced products. WPI consistently delivers the highest quality products at competitive prices and we support our customers with a world-wide distribution network which assists their businesses to successfully compete in a global market.

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