

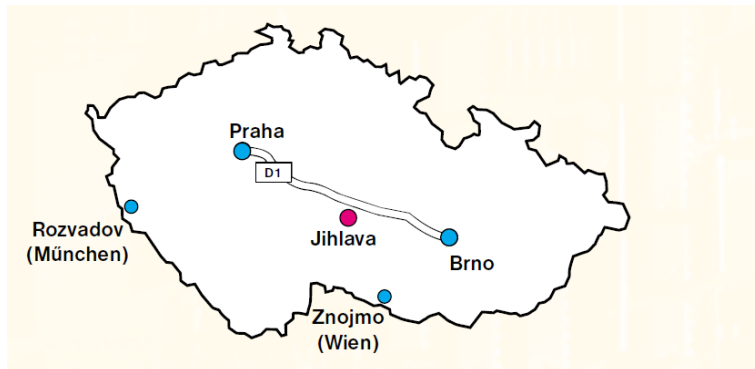
HYPCON CONTACTS

KOLEKTOR

Kolektor Tesla Jihlava s.r.



Welcome to Kolektor Tesla Jihlava



Company profile

Kolektor Tesla Jihlava s.r.o – liability limited company – is one of the largest Czech manufacturers of electromechanical components specializing in production of connectors, hybrid parts, sensors –business since 1958. The company is certified in compliance with IATF 16949 standard and VDA 6.1 directive for the automotive industry and electronics.

Kolektor Tesla Jihlava provides customers with a comprehensive service including sub-contracting of all primary production operations.

Electromechanical Components Products Range

Connectors

- HYPCON (with hyperbolic geometry)

Customer components

- connectors and contacts
- metal and plastic parts for automotive industry
- other electromechanical components

Services:

- progressive dies for metal stamping , injection moulds, design and manufacture
- jigs + single-purpose machine development and manufacture
- tailor-made operations in subcontracting range of:
 - ✓ tool-making workshop
 - ✓ moulding workshop
 - ✓ metal stamping workshop
 - ✓ plating plant
 - ✓ precision machining workshop
 - ✓ automation
- specialized assembly operations

HYPCON CONTACTS

A multiplied linear connection between the pin on the male side and the hyperboloid socket on the female side uses a unique technology. The socket bears number of contact spring wires wound inside the socket at a small angle to the centre –line, thus forming a one-sheet rotary hyperboloid.

When the pin and the socket are mated the hyperboloid –like socket accommodates the round pin and the wires wrap themselves around the pin to ensure a number of linear tensioned contacts.

As a result of this multiple linear connection, an extremely reliable connection is provided even if the connector is exposed to shocks and vibrations (contact interruption < 2 ns).

Round pins mated with HYPCON sockets feature considerably low contact resistance of the connection. One of the key benefits is that low insertion and extraction forces allow the connector to reach a long contact life (up to 100.000 mating and unmating cycles).

HYPCON CONTACT MANUFACTURE

Kolektor Tesla Jihlava is one of few world manufacturers of contacts with hyperboloid technology. We have been experienced in utilizing HYPCON technology since 1971 when Kolektor Tesla Jihlava started to manufacture this contact system under licence.

This high performance of HYPCON contacts is based not only on know-how transferred from the inventor of this system but also on expertise we have acquired over the years.

Most HYPCON contacts are custom designed. On request we can build contacts that differ both in diameter and in shape from those listed in this catalogue. The pin and /or socket body as well as the termination can be adjusted to the requirement of the customer. The design parameters, number, angle and diameter of wires, plating etc. –can be modified to meet requirements on characteristics of the contact.

This catalogue lists only representatives of the manufactured assortment of HYPCON contacts. We reserve the right to implement any changes to the parameters and assortment.

KEY FEATURES OF HYPCON CONTACTS

- Low contact resistance (one of the lowest values among existing contact designs).
- Low insertion and extraction forces
- Long contact life
- High reliability even exposed to shocks and vibrations
- High stability of electrical and mechanical parameters over a high number of mating and unmating cycles
- High current and voltage ratings

APPLICATIONS

The above features make HYPCON contacts suitable for safety-critical applications:

- Avionics, spatial avionics
- Military
- Medical appliances
- Rail traction
- Testing equipment
- Industrial applications
- Communications and data transfer

CHARACTERISTICS OF HYPCON CONTACTS

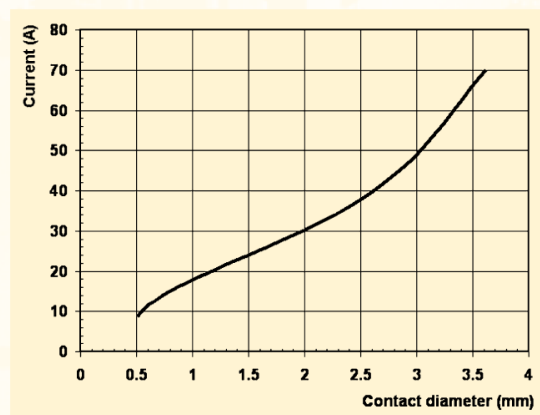
Contact diameter:	according to customer requirement, no fixed upper limit
Rated current:	3 to 70 Amps, higher ampacity on request
Contact resistance (typical):	up to 2.5 mΩ
Mechanical lifetime:	up to 100,000 mating and unmating cycles (type specific)
Corrosion resistance:	0.1 % H ₂ S within 24 hours or salt spray 96 hours
Climatic category:	55/125/56 (other implementation on request)
Material (typical):	
• Socket body:	gold or silver plated brass
• Contact wires:	gold plated brass
• Pins:	gold plated brass or bronze
• Retaining clips:	stamped: beryllium bronze turned: gold plated brass
Termination options:	- Straight solder pin for PCB
(both for sockets and pins)	- Angled solder pin for PCB
	- Solder cup
	- Wire wrap post
	- Crimp termination with / without strain relief
(other plating or termination on request)	

Tab. 1 - Maximal wire gauge (four indenter crimp)

Diameter of crimp barrel (mm)	Max. wire gauge	
	mm ²	AWG
0.9	0.14 to 0.35	26 to 22
1.15	0.5	20
1.3	0.75	18
1.45	1	18
1.8	1.5	16
2.3	2.5	14
2.9	4	12
3.5	6	10
4.4	10	8
5.5	16	6
6.9	25	4

Note: When crimping always follow recommendations of the crimping tool manufacturer

Graph 1 - Maximal HYPCON ampacity



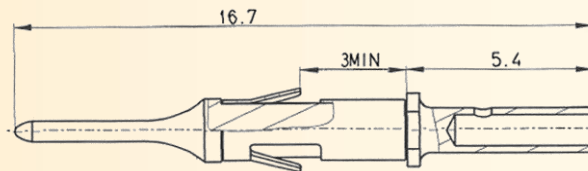
Note: Actual ampacity can be lower due to required design parameters

PINS - pin body can be modified to meet your requirements

Item 1P

HYPCON 0.6

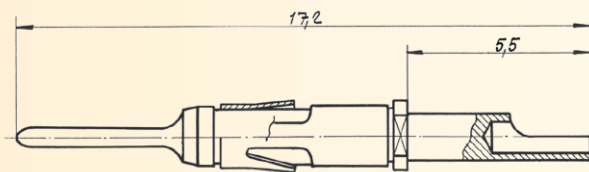
Description: Pin
Part number: WF 817 61
Termination: Crimp



Item 2P

HYPCON 0.6

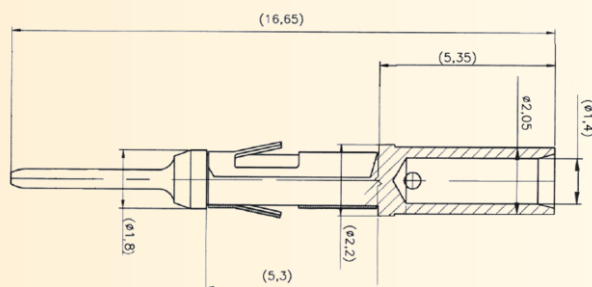
Description: Pin
Part number: 2 WF 459 01
Termination: Solder



Item 3P

HYPCON 0.6

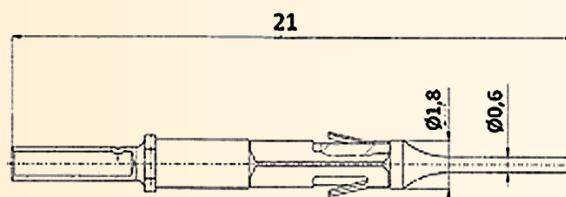
Description: Pin
Part number: 2 WF 459 35
Termination: Crimp



Item 4P

HYPCON 0.6

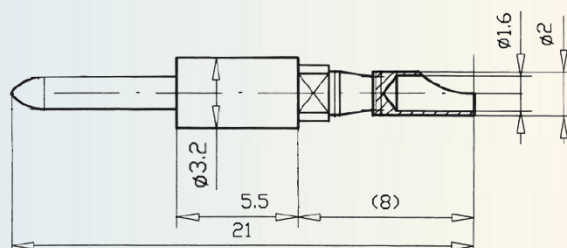
Description: Pin
Part number: 021.060.1020
Termination: Crimp



Item 5P

HYPCON 1.5

Description: Pin
Part number: WA 460 60
Termination: Solder



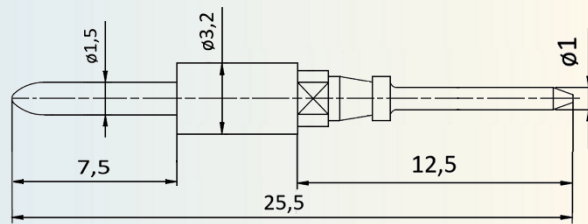
All dimensions in mm

PINS - pin body can be modified to meet your requirements

Item 6P

HYPCON 1.5

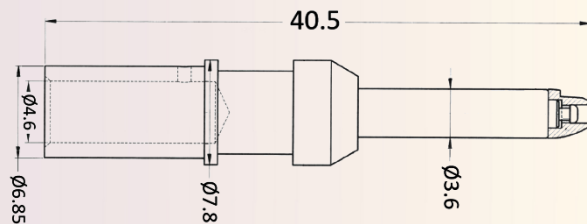
Description: Pin
Part number: WA 460 66
Termination: Solder pin for PCB



Item 7P

HYPCON 3.6

Description: Pin
Part number: 2 WK 182 26
Termination: Crimp



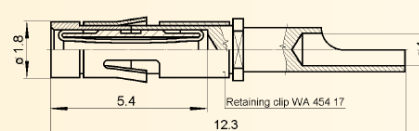
All dimensions in mm

SOCKETS - Socket body can be modified to meet your requirements

Item 1S

HYPCON 0.6

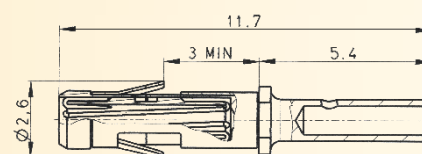
Description: Socket contact with retaining clip
Part number: WF 817 82
Termination: Solder cup



Item 2S

HYPCON 0.6

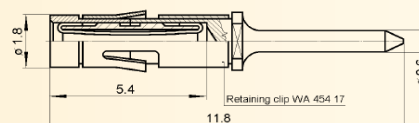
Description: Socket contact with retaining clip
Part number: Special
Termination: Crimp terminal



Item 3S

HYPCON 0.6

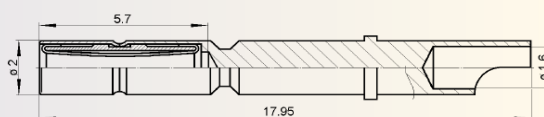
Description: Socket contact with retaining clip
Part number: WF 817 92
Termination: Solder pin for PCB



Item 4S

HYPCON 1

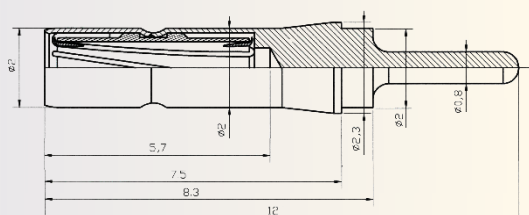
Description: Socket contact
Part number: 2 WF 820 83
Termination: Solder cup



Item 5S

HYPCON 1

Description: Socket contact
Part number: Special
Termination: Pin



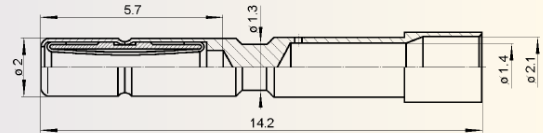
All dimensions in mm

SOCKETS - Socket body can be modified to meet your requirements

Item 6S

HYPCON 1

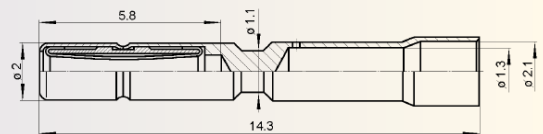
Description: Socket contact
Part number: Special
Termination: Crimp terminal



Item 7S

HYPCON 1

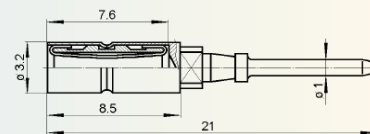
Description: Socket contact
Part number: Special
Termination: Crimp terminal



Item 8S

HYPCON 1.5

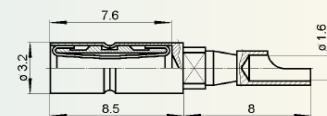
Description: Socket contact
Part number: WF 825 63
Termination: Solder pin for PCB
Retention: Clip WA 024 12



Item 9S

HYPCON 1.5

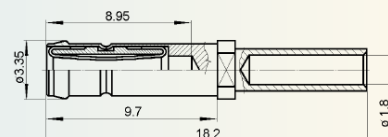
Description: Socket contact
Part number: WF 825 66
Termination: Solder cup
Retention: Clip WA 024 12



Item 10S

HYPCON 1.5

Description: Socket contact
Part number: 2 WF 819 34
Termination: Crimp terminal



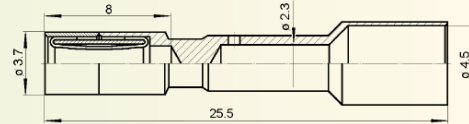
All dimensions in mm

SOCKETS - Socket body can be modified to meet your requirements

Item 11S

HYPCON 2

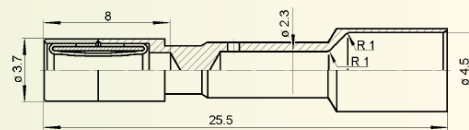
Description: Socket contact
Part number: 2 WF 820 61
Termination: Crimp terminal



Item 12S

HYPCON 2

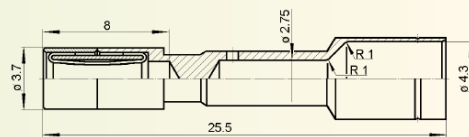
Description: Socket contact
Part number: 2 WF 820 81
Termination: Crimp terminal



Item 13S

HYPCON 2

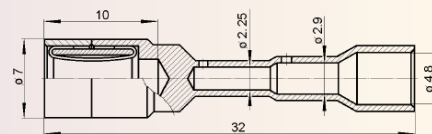
Description: Socket contact
Part number: Special
Termination: Crimp terminal



Item 14S

HYPCON 3.6

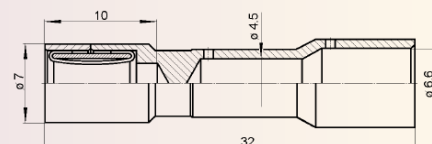
Description: Socket contact
Part number: 2 WF 820 62
Termination: Crimp terminal



Item 15S

HYPCON 3.6

Description: Socket contact
Part number: 2 WF 820 63
Termination: Crimp terminal



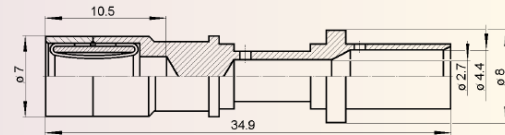
All dimensions in mm

SOCKETS - Socket body can be modified to meet your requirements

Item 16S

HYPCON 3.6

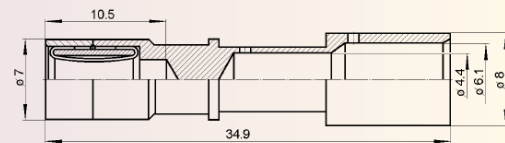
Description: Socket contact
Part number: Special
Termination: Crimp terminal



Item 17S

HYPCON 3.6

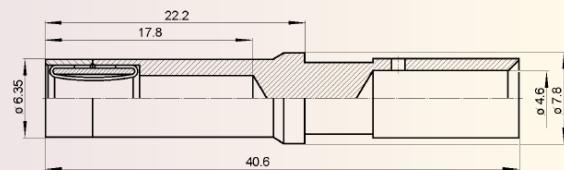
Description: Socket contact
Part number: Special
Termination: Crimp terminal



Item 18S

HYPCON 3.6

Description: Size 8 socket contact
Part number: Special
Termination: Crimp terminal



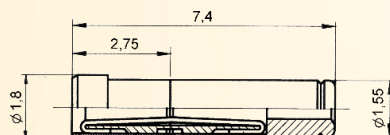
All dimensions in mm

SOCKETS - Some atypical contacts maynot be available in the required volumes or time.
Please always consult manufacturer for latest information on particular P/N.

Item 19S

HYPCON 0.6

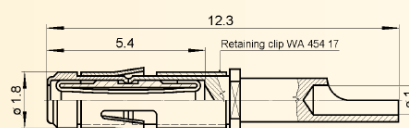
Description: Socket contact
Part number: Socket contact
Termination: 2WF 82037



Item 20S

HYPCON 0.6

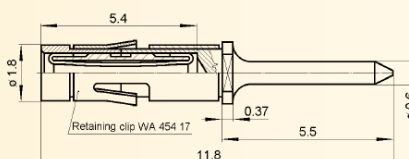
Description: Socket contact with retaining clip
Part number: 2 WF 819 31
Termination: Solder cup



Item 21S

HYPCON 0.6

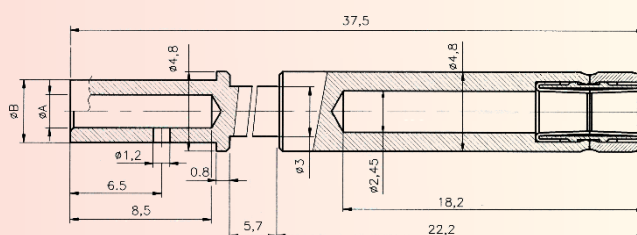
Description: Socket contact with retaining clip
Part number: Special
Termination: Solder pin for PCB



Item 22S

HYPCON 2.5

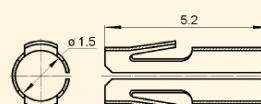
Description: Socket contact
Part number: 2 WF 820 41,42,44,45
Termination: Crimp terminal



Item 23S

HYPCON 0.6

Description: Contact retaining clip for removable contacts
Part number: WA 454 17



All dimensions in mm



Kolektor Tesla Jihlava s.r.o.

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N 49,41684°, E 15,60491°