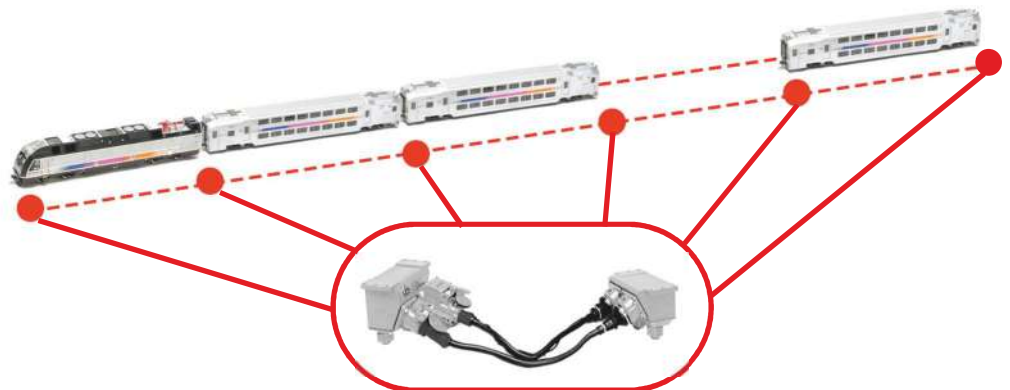


# UIC RECEPTACLE (Socket) & PLUGS

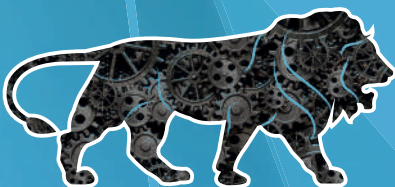


Control Connection Travels through UIC Sockets  
and Plugs From One coach to another



**PPS International Private Limited**

([www.ppsinternational.in](http://www.ppsinternational.in))



“Make In India”

**IRIS**<sup>TM</sup>  
Certified



# Introduction

## UIC Sockets & Plugs as per UIC 558 VE for inter-vehicular coupling

Under "Make in India", PPS International has developed, UIC Sockets and Plugs for inter-vehicular couplers for Rolling stocks application, which is fully compliant to UIC 558 VE norms and tested through a NABL Lab.

Indian Railway has made use of these UIC Sockets & Plugs for their push pull technology in which they have connected 2 locomotives at either end of the train by passing the bunch of cables through all the coaches in between, thereby giving the control of last loco to the driving loco to increase the speed of the train.

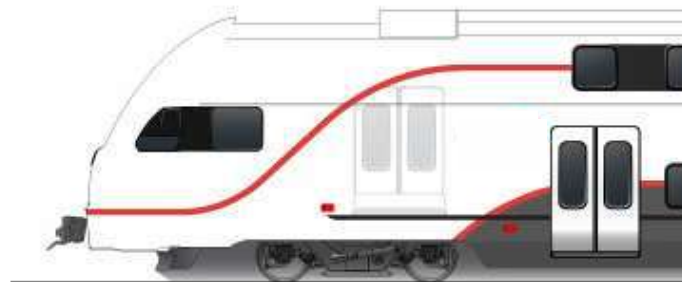
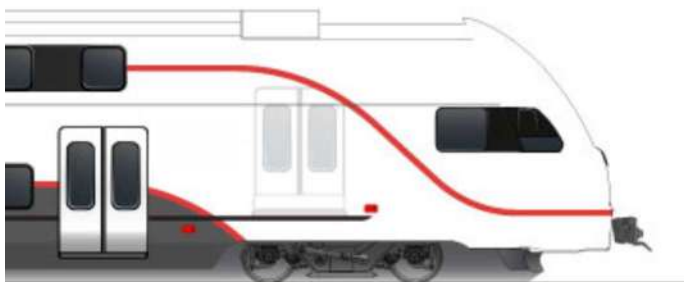
These UIC Sockets & Plugs are not only cost effective but highly durable and highly reliable as well.

Besides loco application, these rugged UIC sockets & Plugs are used typically to connect lines used for the remote control of lights and train doors or for public address systems in the passenger coaches of trains or DEMU's, EMU's and MEMU's.

## Construction & Features



- **Break-away connector:**  
Ensures a non-destructive separation of plug and receptacle when two electrically coupled vehicles move apart in accordance with UIC 558
- **Design life:**  
10,000 mating cycles
- **Cable assembly:**  
We supply on request receptacles and plugs assembled complete with cables or wires to suit the customer's specific requirements
- **Corrosion resistant**  
Increased corrosion resistance to chemicals, in particular to detergents containing acids or alkalis
- **Assembly:**
  - Suitable for gangway connections
  - Quick and easy to assemble
  - Seals can be replaced without disassembling the contacts
- **Shells:**  
Shells of plug, receptacle, dummy and empty receptacle, compliant with UIC 558
- **Receptacle, dummy and empty receptacle:**  
Aluminium die cast: rugged and durable
- **Plug:**  
Polyamide, glass fibre reinforced
- **Inserts:**
  - 13, 18 and 22 pole + PE
  - Compatible with 13 or 18 pole inserts to UIC standard
  - 13 pole plug intermateable with 18 pole receptacle in accordance with UIC 558 VE
  - Polyamide, glass fibre reinforced
- **Contacts:**
  - High-quality machined contacts
  - Gold plated ( Other plating on request )
  - Crimp connection 18 ... 17 AWG (0.75 ... 1.00 mm<sup>2</sup>)
  - Continuous low contact resistance



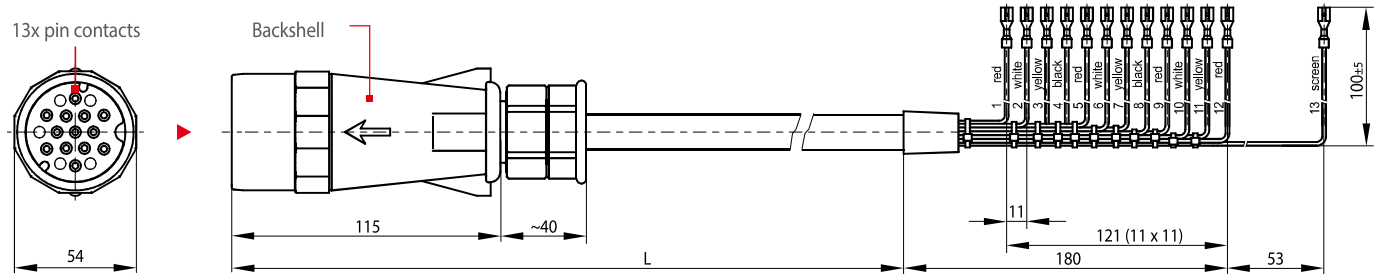
# TECHNICAL SPECIFICATION



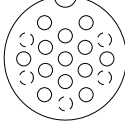
UIC Series	Standard	13 pole	18 pole	22 pole + PE
Jumpers to UIC standard	UIC 558 VE (until 1994: UIC 568 VE)	□	□	---
Layout Contact cavities: ○ implemented ○ empty				
Contact arrangement Contact identification marked on insert Pin insert: rear view Socket insert: front view				
Rated operating voltage, no PE	IEC 60038	60 V	60 V	60 V
Rated operating voltage, plus PE	IEC 60038	---	---	110 V AC
Current rating of individual contacts		10 A	10 A □1	10 A
Contact diameter		3 mm	3 mm	3 mm
Terminal type		Crimp, machined contacts	Crimp, machined contacts	Crimp, machined contacts
Connector type Cable plug Receptacle Receptacle with replacement insert		Pin contacts Socket contacts ---	Pin contacts Socket contacts Pin contacts, socket contacts in replacement insert	Pin contacts Socket contacts ---
Wire gauge		18 ... 17 AWG	18 ... 17 AWG	18 ... 17 AWG
Contact resistance, typ. with replacement insert	IEC 60512-2	< 4 mΩ ---	< 4 mΩ ≤ 40 mΩ <sup>2</sup>	< 4 mΩ ---
Insulation resistance	IEC 60512-3-1	> 10 MΩ	> 10 MΩ	> 10 MΩ
IP rating	EN 60529	IP69K when mated or receptacle closed and locked		
Shock, Vibration	EN 61373		Category 1, Class B	
Operating temperature range			-50 °C ... +90°C	
Mechanical endurance	IEC 60512-5, test 9a		10,000 mating cycles	
Shells/Contact material Receptacle shell Colour Plug shell Colour Seal Insert Contacts Finish		Aluminium die cast / GdAlSi 12 RAL 7035 (light grey) Polyamide PA 6 GF30 black Silicone Polyamide PA 6 GF30 black non-halogen Copper wrought alloy, crimpable Ni / Ag / Au	Aluminium die cast / GdAlSi 12 RAL 7035 (light grey) + red bar Polyamide PA 6 GF30 black + red bar Silicone Polyamide PA 6 GF30 black non-halogen Copper wrought alloy, crimpable Ni / Ag / Au	Aluminium die cast / GdAlSi 12 RAL 7035 (light grey) + blue bar Polyamide PA 6 GF30 black + blue bar Silicone Polyamide PA 6 GF30 black non-halogen Copper wrought alloy, crimpable Ni / Ag / Au
Approvals	Through NABL Approved Lab			

## Preassembled cable with plugs

### 13 pole plug with single ended connector cable and cable harness

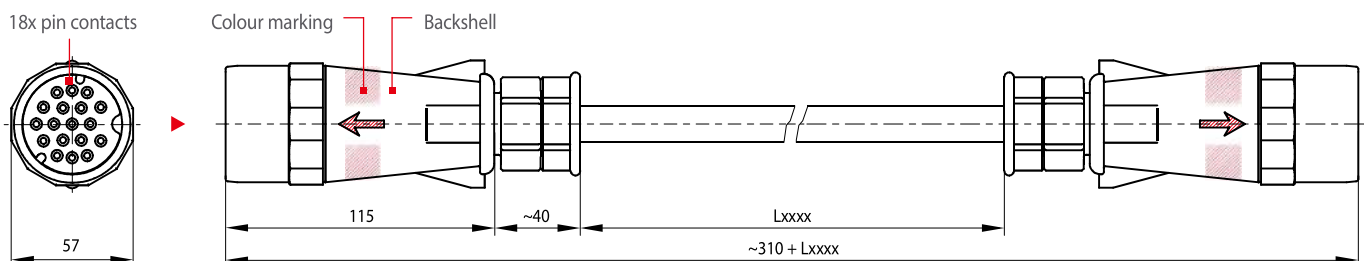


Single ended connector cable with 13 pole plug and cable harness, pre-assembled with the length you require

Layout	Colour	# of contacts	Length
	black, no colour marking	13 pins	Cable length in mm

## Connector cable pre-assembled cable sets for plugs

### 18 pole double ended connector cables with 2 plugs

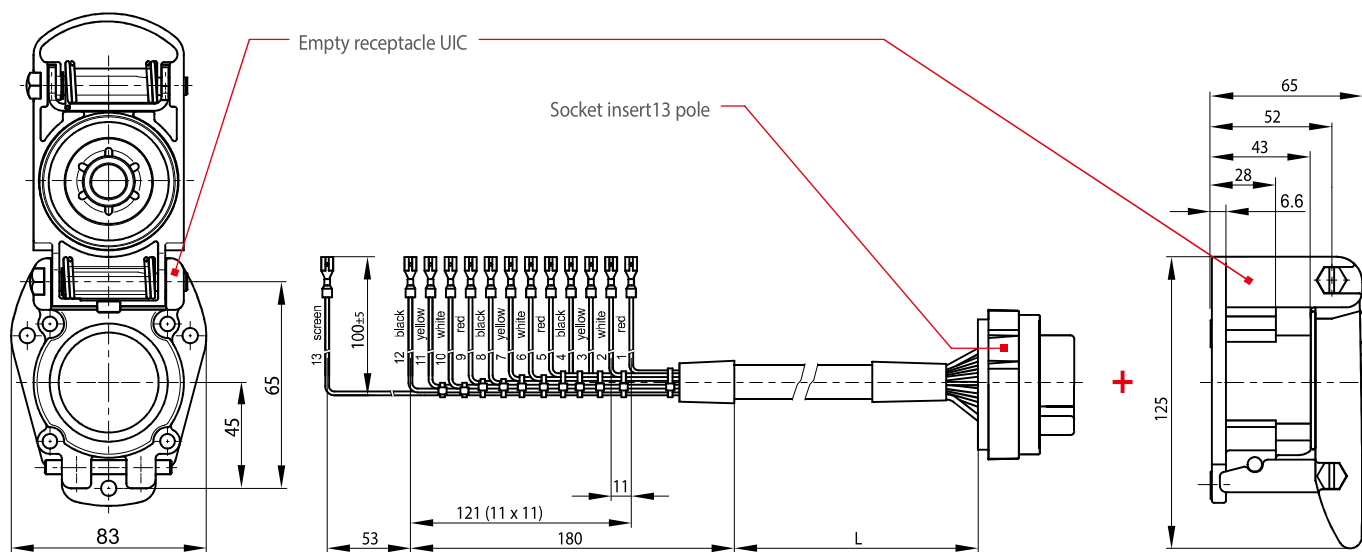


\* Similar Assemblies are also possible for  
13,18 & 22 Pole Plugs

# PREASSEMBLED CABLE SET FOR RECEPTACLES

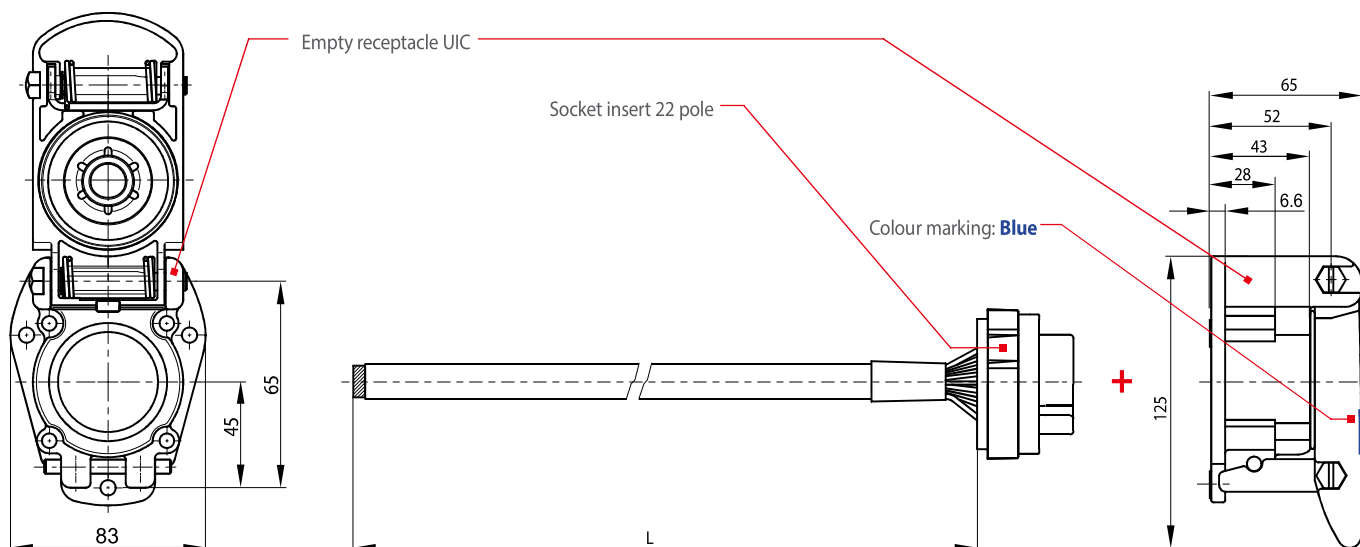


\* 13 pole receptacle with socket insert and single ended connector cable with cable harness, including:



L = Length of cable ( Customer requirement )

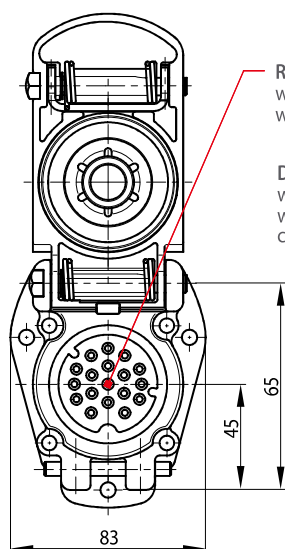
\* 22 pole receptacle with socket insert and single ended connector cable, including:



L = Length of cable ( Customer requirement )

# DUMMY AND EMPTY RECEPTACLES

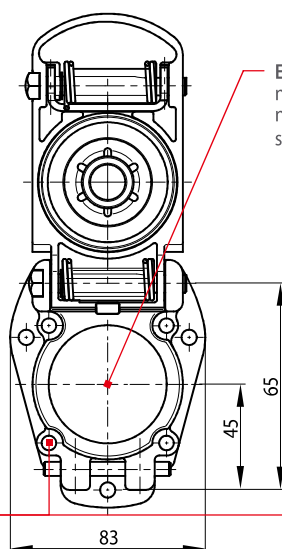
- Receptacle, dummy:  
13, 18, 22 pole



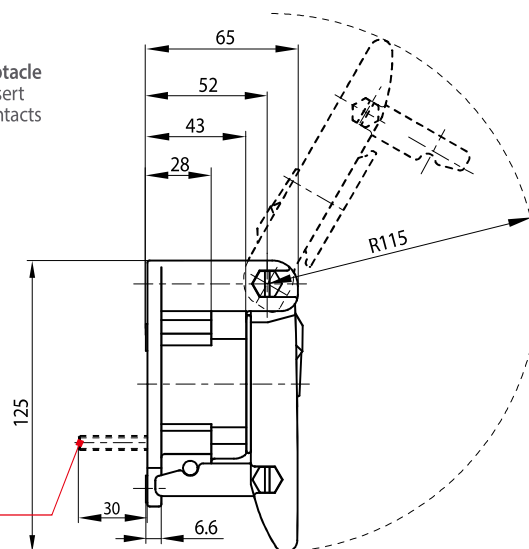
Receptacle  
with socket insert  
with crimp contacts

Dummy receptacle  
with socket insert  
with out crimp  
contacts

- Empty receptacle:  
Shell only

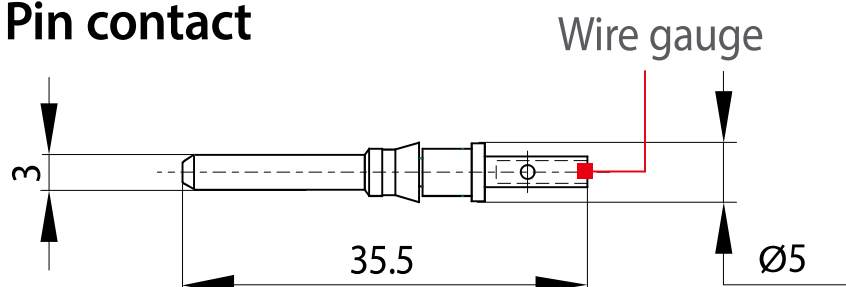


Empty receptacle  
no socket insert  
no crimp contacts  
see table ③

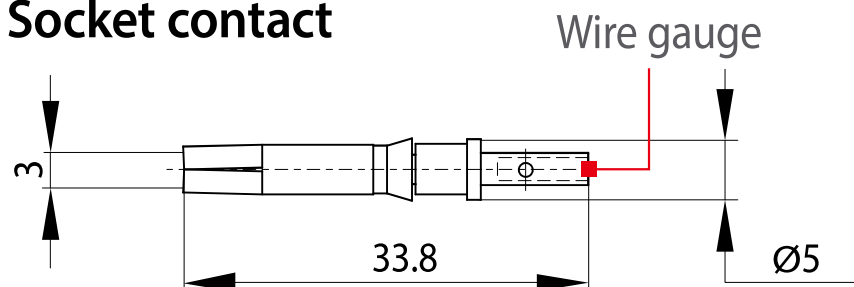


## Pin and socket contacts

- Pin contact

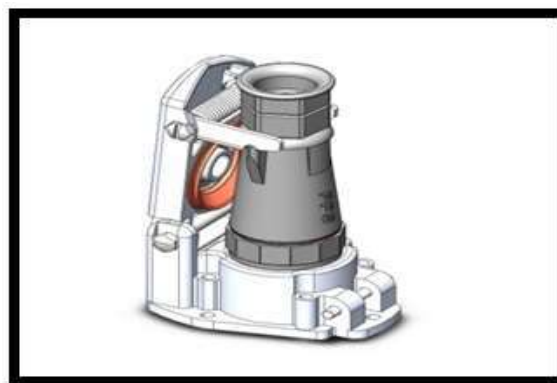
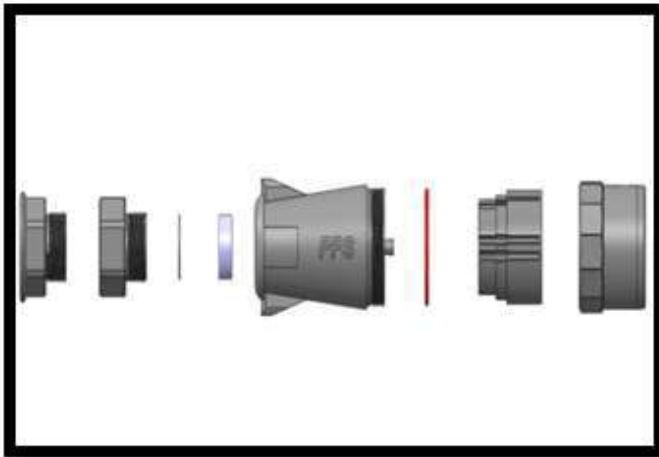
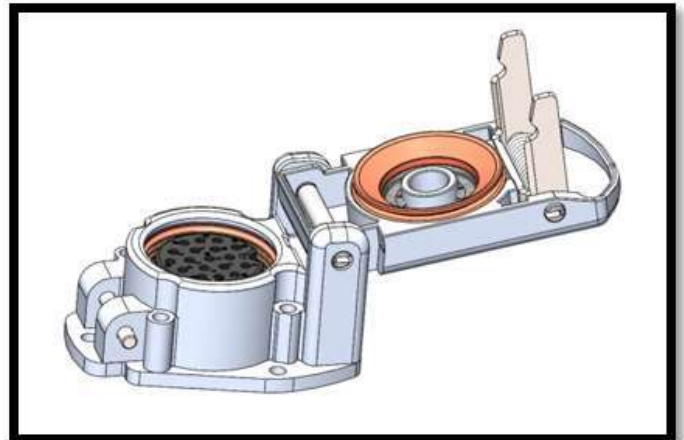
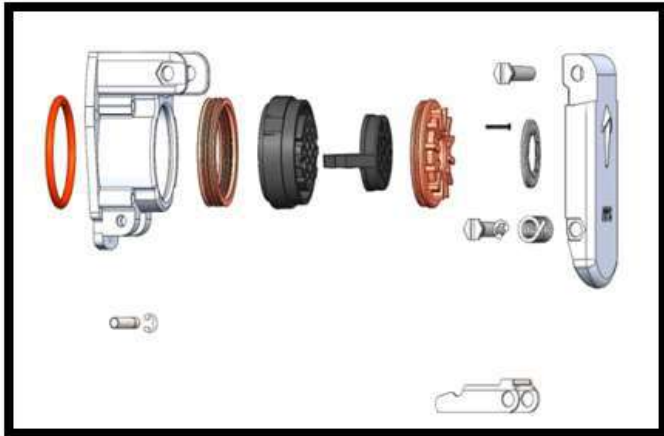


- Socket contact





# PHOTOS



# UNIT-1 Corporate Office



# UNIT-2 Factory



# UNIT-3 Factory



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