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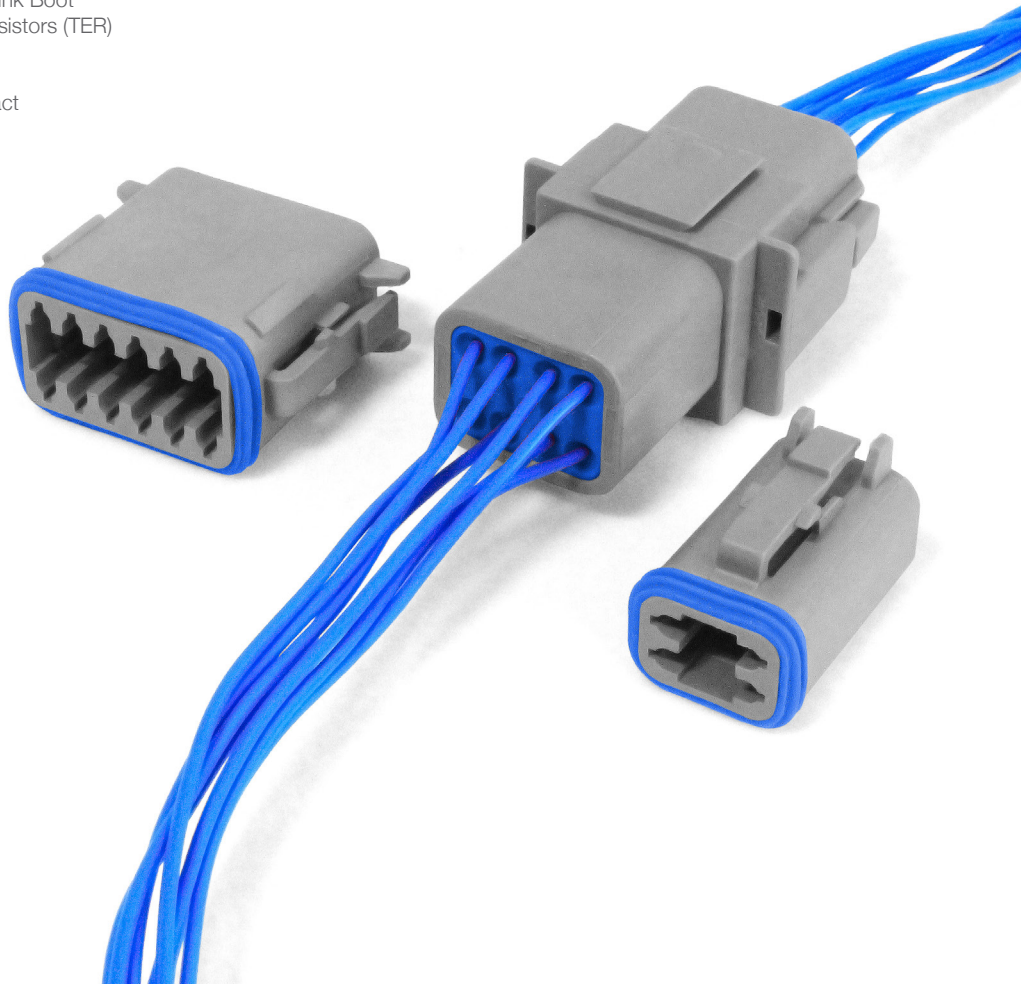
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The Bulgin Rectangular Connector range offers a reliable, rugged solution for cable to cable applications in harsh environments with its environmentally sealed range of products.

The series has a male and female option, as well as modifications such as enhanced seal retention, protective end caps, shrink boot adapters, welded flange, terminating resistors and a Y-Type connector for the automotive industry.

Key Features:

- ⬡ 2, 3, 4, 6, 8 & 12 Contact Count
- ⬡ IP68
- ⬡ Choice of Enhanced Seal Retention (ESR), Protective End Caps (PEC), Shrink Boot Adapters (SBA), Terminating Resistors (TER) and a Y-Type Connector (YTY)
- ⬡ Wedge-locks available for contact retention and alignment
- ⬡ Accepts 14 - 20 AWG

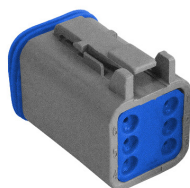


# RECTANGULAR

## Standard Rectangular Connectors

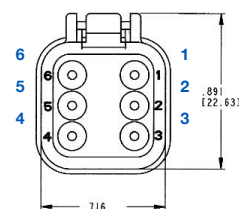


### Standard Rectangular Connectors Male



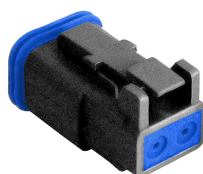
PX0100

- 2, 3, 4, 6, 8 & 12 Contacts
- Male housing
- Socket contacts
- Available in grey and black
- Additional options available



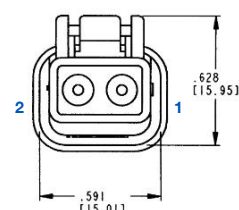
Part Number	Contacts	Key	Termination	Colour	Additional
PX0100S02BK	2	-	Crimp	Black	-
PX0100S02GY	2	-	Crimp	Grey	-
PX0100S03BK	3	-	Crimp	Black	-
PX0100S03GY	3	-	Crimp	Grey	-
PX0100S04BK	4	-	Crimp	Black	-
PX0100S04GY	4	-	Crimp	Grey	-
PX0100S06BK	6	-	Crimp	Black	-
PX0100S06GY	6	-	Crimp	Grey	-
PX0100S08AGY	8	A	Crimp	Grey	-
PX0100S08ABK	8	A	Crimp	Black	-
PX0100S12AGY	12	A	Crimp	Grey	-
PX0100S12ABK	12	A	Crimp	Black	-

### Standard Rectangular Connectors Male - ESR



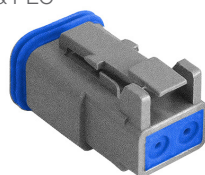
PX0102

- 2 Contacts
- Male housing
- Enhanced seal retention
- Socket contacts
- Available in black
- Additional options available



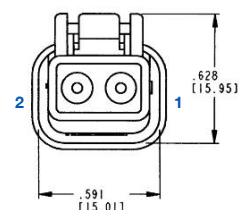
Part Number	Contacts	Key	Termination	Colour	Additional
PX0102S02BK	2	-	Crimp	Black	ESR

### Standard Rectangular Connectors Male - ESR & PEC



PX0103

- 2 Contacts
- Male housing
- Enhanced seal retention & protective end cap
- Socket contacts
- Available in grey
- Additional options available



Part Number	Contacts	Key	Termination	Colour	Additional
PX0103S02GY	2	-	Crimp	Grey	ESR & PEC

# RECTANGULAR

## Standard Rectangular Connectors

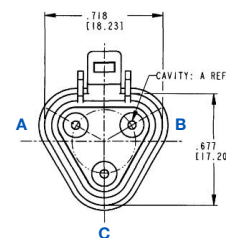


Standard Rectangular Connectors  
Male - PEC



PX0105

- 2, 3, 4, 6, 8 & 12 Contacts
- Male housing
- Protective end cap
- Socket contacts
- Available in grey and black
- Additional options available



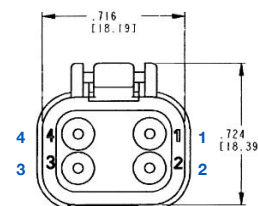
Part Number	Contacts	Key	Termination	Colour	Additional
PX0105S02BK	2	-	Crimp	Black	PEC
PX0105S02GY	2	-	Crimp	Grey	PEC
PX0105S03BK	3	-	Crimp	Black	PEC
PX0105S03GY	3	-	Crimp	Grey	PEC
PX0105S04BK	4	-	Crimp	Black	PEC
PX0105S04GY	4	-	Crimp	Grey	PEC
PX0105S06BK	6	-	Crimp	Black	PEC
PX0105S06GY	6	-	Crimp	Grey	PEC
PX0105S08ABK	8	A	Crimp	Black	PEC
PX0105S08AGY	8	A	Crimp	Grey	PEC
PX0105S12AGY	12	A	Crimp	Grey	PEC
PX0105S12ABK	12	A	Crimp	Black	PEC

Standard Rectangular Connectors  
Male - SBA



PX0108

- 2, 3 & 4, 6 & 12 Contacts
- Male housing
- Shrink boot adapter
- Socket contacts
- Available in grey
- Additional options available



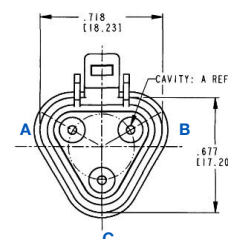
Part Number	Contacts	Key	Termination	Colour	Additional
PX0108S02GY	2	-	Crimp	Grey	SBA
PX0108S03GY	3	-	Crimp	Grey	SBA
PX0108S04GY	4	-	Crimp	Grey	SBA
PX0108S06GY	6	-	Crimp	Grey	SBA
PX0108S12AGY	12	-	Crimp	Grey	SBA

Standard Rectangular Connectors  
Male - TER



PX0110

- 3 Contacts
- Male housing
- Terminating resistor
- Socket contacts
- Available in grey
- Additional options available



Part Number	Contacts	Key	Termination	Colour	Additional
PX0110S03GY	3	-	Crimp	Grey	TER

# RECTANGULAR Standard Rectangular Connectors

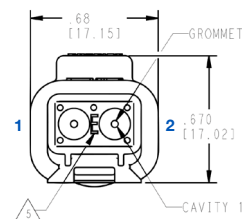


## Standard Rectangular Connectors Female



PX0101

- 2, 3, 4, 6, 8 & 12 Contacts
- Female housing
- Plug contacts
- Available in grey and black
- Additional options available



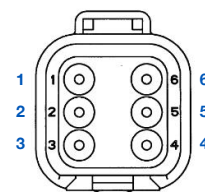
Part Number	Contacts	Key	Termination	Colour	Additional
PX0101P02BK	2	-	Crimp	Black	-
PX0101P02GY	2	-	Crimp	Grey	-
PX0101P03BK	3	-	Crimp	Black	-
PX0101P03GY	3	-	Crimp	Grey	-
PX0101P04BK	4	-	Crimp	Black	-
PX0101P04GY	4	-	Crimp	Grey	-
PX0101P06BK	6	-	Crimp	Black	-
PX0101P06GY	6	-	Crimp	Grey	-
PX0101P08ABK	8	A	Crimp	Black	-
PX0101P08AGY	8	A	Crimp	Grey	-
PX0101P12ABK	12	A	Crimp	Black	-
PX0101P12AGY	12	A	Crimp	Grey	-

## Standard Rectangular Connectors Female - PEC



PX0106

- 2, 3, 4, 6, 8 & 12 Contacts
- Female housing
- Protective end cap
- Plug contacts
- Available in grey and black
- Additional options available



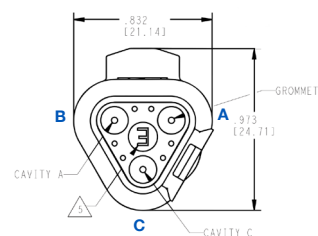
Part Number	Contacts	Key	Termination	Colour	Additional
PX0106P02BK	2	-	Crimp	Black	PEC
PX0106P02GY	2	-	Crimp	Grey	PEC
PX0106P03BK	3	-	Crimp	Black	PEC
PX0106P03GY	3	-	Crimp	Grey	PEC
PX0106P04BK	4	-	Crimp	Black	PEC
PX0106P04GY	4	-	Crimp	Grey	PEC
PX0106P06BK	6	-	Crimp	Black	PEC
PX0106P06GY	6	-	Crimp	Grey	PEC
PX0106P08ABK	8	A	Crimp	Black	PEC
PX0106P08AGY	8	A	Crimp	Grey	PEC
PX0106P12ABK	12	A	Crimp	Black	PEC
PX0106P12AGY	12	A	Crimp	Grey	PEC

## Standard Rectangular Connectors Female - SBA



PX0109

- 2, 3, 4, 6, 8 & 12 Contacts
- Female housing
- Shrink boot adapter
- Plug contacts
- Available in grey and black
- Additional options available



Part Number	Contacts	Key	Termination	Colour	Additional
PX0109P02BK	2	-	Crimp	Black	SBA
PX0109P02GY	2	-	Crimp	Grey	SBA
PX0109P03BK	3	-	Crimp	Black	SBA
PX0109P03GY	3	-	Crimp	Grey	SBA
PX0109P04GY	4	-	Crimp	Grey	SBA
PX0109P06GY	6	-	Crimp	Grey	SBA
PX0109P08GY	8	-	Crimp	Grey	SBA
PX0109P12AGY	12	-	Crimp	Grey	SBA

RECTANGULAR

# Standard Rectangular Connectors

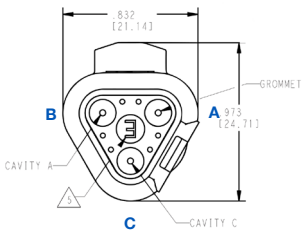


Standard Rectangular Connectors  
Female - TER



PX0111

- 3 Contacts
- Female housing
- Terminating resistor
- Plug contacts
- Available in grey
- Additional options available



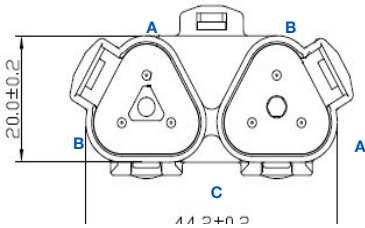
Part Number	Contacts	Key	Termination	Colour	Additional
PX0111P03GY	3	-	Crimp	Grey	TER

Standard Rectangular Connectors  
Female - YTY



PX0113

- 3 Contacts
- Female housing
- Y-type connector
- Plug contacts
- Available in grey
- Additional options available



Part Number	Contacts	Key	Termination	Colour	Additional
PX0113P03GY	3	-	Crimp	Grey	YTY

## Contacts



SA1000

- ⬡ Crimp plug & sockets
- ⬡ Choice of gold and nickel Plated
- ⬡ Green stripe available

Part Number	Plating	AWG	Type	Plug / Socket	Additional
SA1000/G	Nickel Plating	14	Solid	Plug	Green Stripe
SA1001/G	Nickel Plating	14	Solid	Socket	Green Stripe
SA1002/G	Nickel Plating	16 - 20	Solid	Plug	Green Stripe
SA1003/G	Nickel Plating	16 - 20	Solid	Socket	Green Stripe
SA1000	Nickel Plating	14	Solid	Plug	-
SA1001	Nickel Plating	14	Solid	Socket	-
SA1002	Nickel Plating	16 - 20	Solid	Plug	-
SA1003	Nickel Plating	16 - 20	Solid	Socket	-
SA1004	Nickel Plating	16 - 20	Stamped	Plug	Bandolier
SA1005	Nickel Plating	16 - 20	Stamped	Socket	Bandolier
SA1006	Nickel Plating	14 - 18	Stamped	Plug	Bandolier
SA1007	Nickel Plating	14 - 18	Stamped	Socket	Bandolier
SA1008	Gold Plating	14 - 18	Stamped	Plug	Bandolier
SA1009	Gold Plating	14 - 18	Stamped	Socket	Bandolier

## Wedgelocks



WLP12

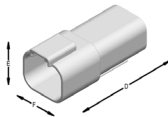
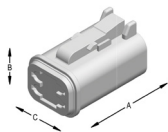
- ⬡ Plug & sockets available
- ⬡ 2, 3, 4, 6, 8 & 12 Contact

\* Wedgelocks are sold separately and are required for confirmation of alignment of contact. Please refer to the chart above to determine part required: e.g. WLP02 is required for 2 Contact female housings

Part Number	Contacts	Plug / Socket	Additional
WLP02	02	Plug	-
WLS02	02	Socket	-
WLP03	03	Plug	-
WLS03	03	Socket	-
WLP04	04	Plug	-
WLS04	04	Socket	-
WLP06	06	Plug	-
WLS06	06	Socket	-
WLP08	08	Plug	-
WLS08	08	Socket	-
WLP12	12	Plug	-
WLS12	12	Socket	-



STANDARD SERIES DIMENSIONS



	Male			Female		
Cavity	Overall Length A	Overall Height B	Overall Width C	Overall Length D	Overall Height E	Overall Width F
2	1.118 (28.4)	.628 (15.95)	.591 (15.01)	1.708 (43.38)	.670 (17.02)	.675 (17.15)
3	1.118 (28.4)	.934 (23.72)	.718 (18.23)	1.698 (43.13)	.973 (24.71)	.832 (21.13)
4	1.218 (30.94)	.724 (18.39)	.716 (18.19)	1.808 (45.92)	.776 (19.71)	.820 (20.83)
6	1.218 (30.94)	.891 (22.63)	.716 (18.19)	1.808 (45.92)	.951 (24.16)	.820 (20.83)
8	1.217 (30.91)	.776 (19.71)	1.465 (37.21)	1.798 (45.67)	1.000 (25.40)	1.435 (36.45)
12	1.218 (30.94)	.716 (18.19)	1.597 (40.56)	1.808 (46.92)	.876 (22.25)	1.597 (40.56)

\* Dimensions are for reference only.

Electrical:

No Contacts:	2, 3, 4, 6, 8 & 12
Insulation Resistance:	>1000MΩ
Dielectric Strength:	No damage when exposed
Dielectric Withstanding Voltage:	1500 VAC
Operating Temperature Range:	-55°C to +125°C

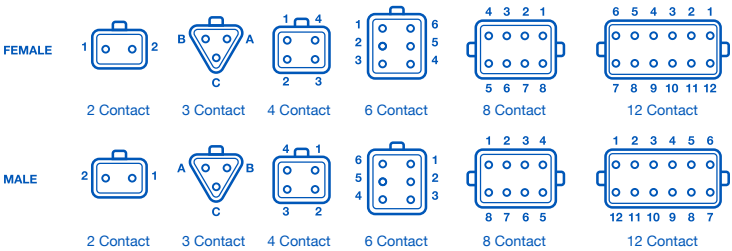
Mechanical:

Sealing:	IP68
Contact Accommodation:	14-20AWG (2.0-0.5mm2)
Termination:	Crimp terminals
Cycles:	>100

Material

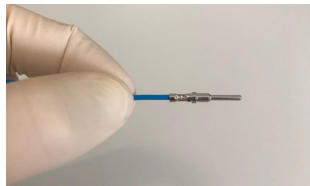
Grommet:	Silicone rubber
Insert Retainer:	Thermoplastic
Receptacle Interfacial Seal:	Silicone Rubber
Shell:	Thermoplastic
Wedgelocks:	Thermoplastic
RoHS:	Compliant

Contact Layout (Rear View)



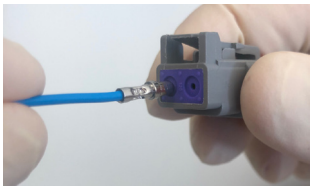
Contact Insertion Instructions

Step One:



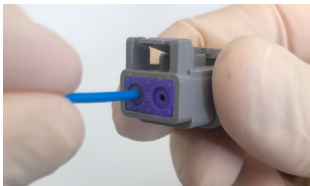
Use a previously crimped contact and wire and hold just behind the contact barrel.

Step Two:



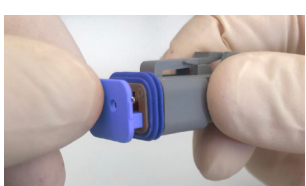
Line the contact up with the grommet.

Step Three:



Push the contact until a click is felt. Check the contact is in place by gently tugging and confirming alignment. Repeat for number of contacts desired

Step Four:



When contacts are in place, insert the appropriate wedgelock until a click is heard. Once male and female housings are prepared the parts can be mated



PX0	XXX	X	XX	X	XX
Range	Body Type	Contact Type	Contacts	Key	Colour
PX0	100 = Male 101 = Female 102 = Male Enhanced Seal Retention 103 = Male Enhanced Seal Retention & Protective End Cap 105 = Male Protective End Cap 106 = Female Protective End Cap 108 = Male Shrink Boot Adapter 109 = Female Shrink Boot Adapter 110 = Male Terminating Resistor 111 = Terminating Resistor 113 = Female Y Type	S = Socket P = Plug	02 03 04 06 08 12	A = A Key	GY = Grey BK = Black

Bulgin **Miniature Rectangular** Connectors offer a solution to **smaller wire gauges** with the ability to design to use multiple-size contacts. These connectors are **environmentally sealed**.

The connectors are made of rugged thermoplastic and feature silicone rear wire and interfacial seals that allow the connectors to withstand conditions of extreme temperature and moisture. Also, provide reliability and performance on the engine or transmission, solenoid interfaces, on the chassis or in the cab & on motor controllers. These connectors are used in Agriculture, Automotive Industry, Forestry, Recreational, Marine & Mining.

Key Features:

- Insulation Resistance: 1000 megohms minimum at 25°C
- Operating temperatures -55°C to +125°C
- IP68 rating
- Male and Female options
- Integrated latch for mating
- Available with Protective End Caps (PEC)
- Wedgelocks confirm contact alignment and retention
- Accepts 14 - 22 AWG



# RECTANGULAR Miniature Rectangular Connectors

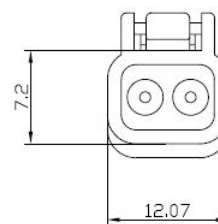


Miniature Rectangular Connectors  
Male



PX0010

- 2, 3, 4, 6, 8 & 12 Contacts
- Male housing
- Socket contacts
- Available in grey



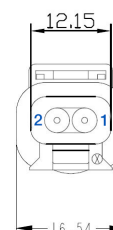
Part Number	Contacts	Key	Termination	Colour	Additional
PX0010S02GY	2	-	Crimp	Grey	-
PX0010S03GY	3	-	Crimp	Grey	-
PX0010S04GY	4	-	Crimp	Grey	-
PX0010S06GY	6	-	Crimp	Grey	-
PX0010S08AGY	8	A	Crimp	Grey	-
PX0010S12AGY	12	A	Crimp	Grey	-

Miniature Rectangular Connectors  
Female



PX0011

- 2, 3, 4, 6, 8 & 12 Contacts
- Female housing
- Plug contacts
- Available in grey



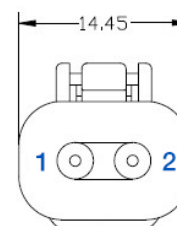
Part Number	Contacts	Key	Termination	Colour	Additional
PX0011P02GY	2	-	Crimp	Grey	-
PX0011P03GY	3	-	Crimp	Grey	-
PX0011P04GY	4	-	Crimp	Grey	-
PX0011P06GY	6	-	Crimp	Grey	-
PX0011P08AGY	8	A	Crimp	Grey	-
PX0011P12AGY	12	A	Crimp	Grey	-

Miniature Rectangular Connectors  
Male - PEC



PX0012

- 2, 3, 4, 6, 8 & 12 Contacts
- Male housing
- Socket contacts
- Available in grey
- Protective end cap



Part Number	Contacts	Key	Termination	Colour	Additional
PX0012P02GY	2	-	Crimp	Grey	PEC
PX0012P03GY	3	-	Crimp	Grey	PEC
PX0012P04GY	4	-	Crimp	Grey	PEC
PX0012P06GY	6	-	Crimp	Grey	PEC
PX0012P08AGY	8	A	Crimp	Grey	PEC
PX0012P12AGY	12	A	Crimp	Grey	PEC

RECTANGULAR

# Miniature Rectangular Connectors

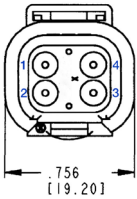


Miniature Rectangular Connectors  
Female - PEC



PX0013

- ⬡ 2, 3, 4, 6, 8 & 12 Contacts
- ⬡ Female housing
- ⬡ Plug contacts
- ⬡ Available in grey
- ⬡ Protective end cap



Part Number	Contacts	Key	Termination	Colour	Additional
PX0013P02GY	2	-	Crimp	Grey	PEC
PX0013P03GY	3	-	Crimp	Grey	PEC
PX0013P04GY	4	-	Crimp	Grey	PEC
PX0013P06GY	6	-	Crimp	Grey	PEC
PX0013P08AGY	8	A	Crimp	Grey	PEC
PX0013P12AGY	12	A	Crimp	Grey	PEC

## Contacts



SA1000

- ⬡ Crimp plug & sockets
- ⬡ Choice of gold and nickel plated

Part Number	Plating	AWG	Type	Plug / Socket
SA1014	Nickel	16 - 22	Stamped	Plug
SA1015	Nickel	16 - 22	Stamped	Socket
SA1016	Gold	16 - 22	Stamped	Plug
SA1017	Gold	16 - 22	Stamped	Socket

## Wedgelocks



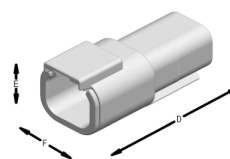
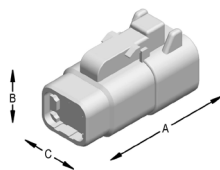
WLM

- ⬡ Plug & sockets available
- ⬡ 2, 3, 4, 6, 8 & 12 Contact

\* Wedgelocks are sold separately and are required for confirmation of alignment of contact. Please refer to the chart above to determine part required.

Part Number	Contacts	Plug / Socket
WLMP02	02	Plug
WLMS02	02	Socket
WLMP03	03	Plug
WLMS03	03	Socket
WLMP04	04	Plug
WLMS04	04	Socket
WLMP06	06	Plug
WLMS06	06	Socket
WLMP08	08	Plug
WLMS08	08	Socket
WLMP12	12	Plug
WLMS12	12	Socket

## MINIATURE SERIES DIMENSIONS



Cavity	Male			Female		
	Overall Length A	Overall Height B	Overall Width C	Overall Length D	Overall Height E	Overall Width F
2	1.620 (41.15)	.638 (16.21)	.475 (12.07)	1.085 (27.56)	.508 (12.90)	.651 (16.54)
3	1.620 (41.15)	.638 (16.21)	.640 (16.26)	1.085 (27.56)	.551 (14.00)	.861 (20.73)
4	1.720 (43.69)	.722 (19.61)	.600 (15.24)	1.185 (30.10)	.695 (17.65)	.756 (19.20)
6	1.720 (43.69)	.937 (23.80)	.600 (15.24)	1.185 (30.10)	.817 (20.75)	.756 (19.20)
8	1.720 (43.69)	.796 (20.22)	1.245 (31.62)	1.185 (30.10)	.600 (15.24)	1.245 (31.62)
12	1.720 (43.69)	.796 (20.22)	1.575 (40.01)	1.185 (30.10)	.600 (15.24)	1.575 (40.01)

\* Dimensions are for reference only.



Electrical:

No Contacts:	2, 3, 4, 6, 8 & 12
Insulation Resistance:	>1000MΩ
Fluid Resistance:	No damage when exposed
Dielectric Withstanding Voltage:	1500 VAC
Operating Temperature Range:	-55°C to +125°C

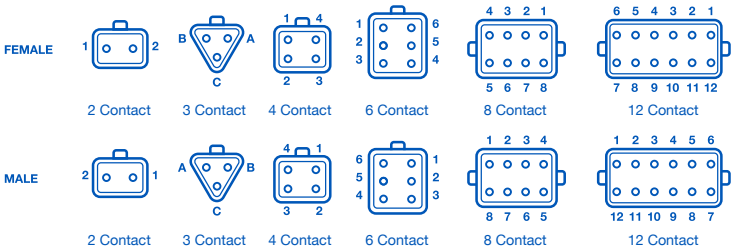
Material

Grommet:	Silicone rubber
Insert Retainer:	Thermoplastic
Receptacle Interfacial Seal:	Silicone rubber
Shell:	Thermoplastic
Wedgelocks:	Thermoplastic
RoHS:	Compliant

Mechanical:

Sealing:	IP68
Contact Accommodation:	14 - 22 AWG (2.50 - 0.35 mm²)
Termination:	Crimp terminals
Cycles:	>100

Contact Layout (Rear View)



Contact Insertion Instructions

Step One:



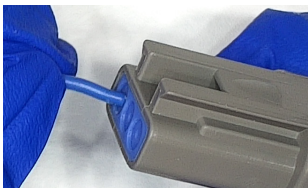
Use a previously crimped contact and wire and hold just behind the contact barrel.

Step Two:



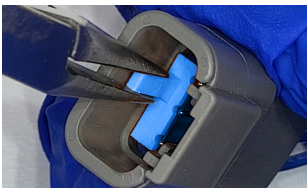
Line the contact up with the grommet.

Step Three:



Push the contact until a click is felt. Check the contact is in place by gently tugging and confirming alignment. Repeat for number of contacts desired

Step Four:



When contacts are in place, insert the appropriate wedge lock until a click is heard. Once male and female housings are prepared the parts can be mated

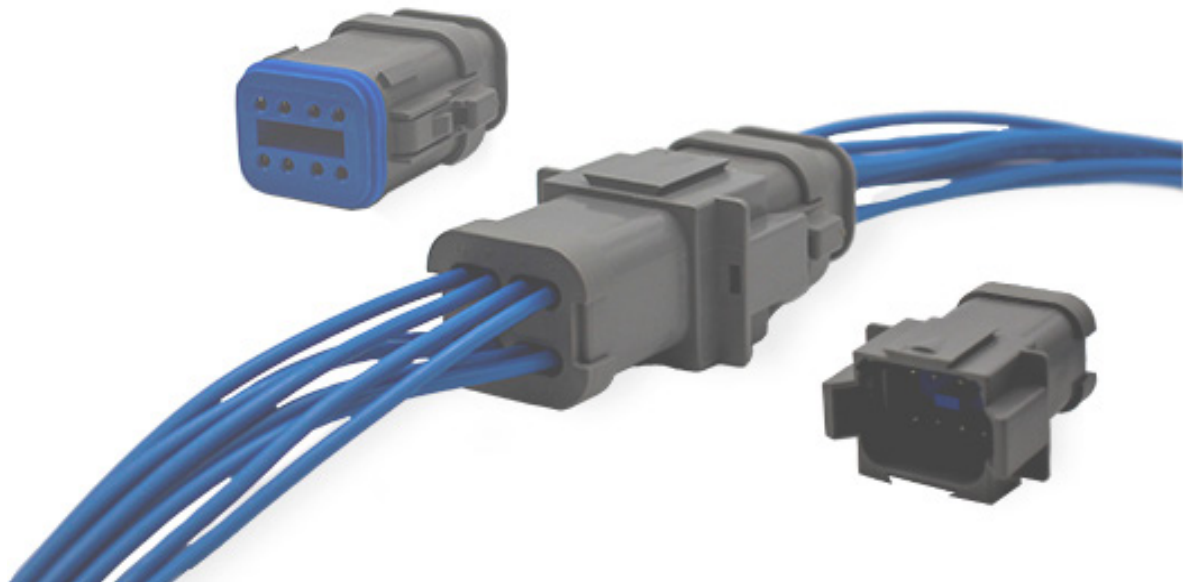
PX0	XX	X	XX	X	XX
Range	Body Type	Contact Type	Contacts	Key	Colour
PX00	10 = Male	S = Socket	02	A = A Key	GY = Grey
	11 = Female	P = Plug	03		BK = Black
	12 = Male Protective End Cap		04		
	13 = Female Protective End Cap		06		
			08		
			12		

The Bulgin Power Rectangular Connector series is environmentally sealed and designed for cable-to-board and cable-to-cable applications. These connectors are used in harsh environment applications where even a small degradation may be critical.

Power Rectangular Connector series offers the designer the ability to use multiple sizes of 12 contacts, each with 25 amp continuous capacity, within a single shell. These connectors are used in Agriculture, Construction, Emergency Vehicles, Forestry, Recreational, Marine, Mining and Automotive Industry.

Key Features:

- ⬡ Insulation Resistance: 1000 megohms minimum at 25°C
- ⬡ Operating temperatures -55°C to +125°C
- ⬡ IP68 rating
- ⬡ Male and Female options
- ⬡ Integrated latch for mating
- ⬡ Available in Protective End Caps (PEC)
- ⬡ Wedgelocks confirm contact alignment and retention
- ⬡ Accepts 10 - 14 AWG





# RECTANGULAR Power Rectangular Connectors

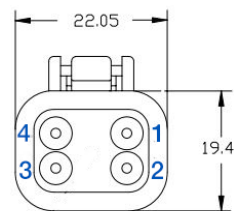


Power Rectangular Connectors  
Male



PX1000

- 2 & 4 Contacts
- Male housing
- Socket contacts
- Available in grey



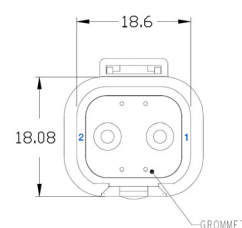
Part Number	Contacts	Key	Termination	Colour	Additional
PX1000S02GY	2	-	Crimp	Grey	-
PX1000S04GY	4	-	Crimp	Grey	-

Power Rectangular Connectors  
Female



PX1001

- 2 & 4 Contacts
- Female housing
- Plug contacts
- Available in grey



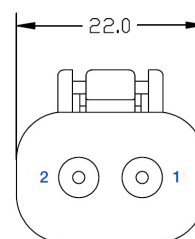
Part Number	Contacts	Key	Termination	Colour	Additional
PX1001P02GY	2	-	Crimp	Grey	
PX1001P04GY	4	-	Crimp	Grey	

Power Rectangular Connectors  
Male - PEC



PX1002

- 2 & 4 Contacts
- Male housing
- Socket contacts
- Available in grey
- Protective end cap



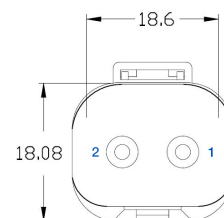
Part Number	Contacts	Key	Termination	Colour	Additional
PX1002S02GY	2	-	Crimp	Grey	PEC
PX1002S04GY	4	-	Crimp	Grey	PEC

Power Rectangular Connectors  
Female - PEC



PX1003

- 2 & 4 Contacts
- Female housing
- Plug contacts
- Available in grey
- Protective end cap




Part Number	Contacts	Key	Termination	Colour	Additional
PX1003P02GY	2	-	Crimp	Grey	PEC
PX1003P04GY	4	-	Crimp	Grey	PEC

# Power Rectangular Connectors



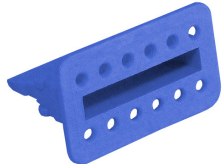
Contacts

  
SA1000

- ⬡ Crimp plug & sockets
- ⬡ Choice of gold and nickel plated

Part Number	Plating	AWG	Type	Plug / Socket
SA1018	Nickel	12 - 14	Stamped	Plug
SA1019	Nickel	12 - 14	Stamped	Socket
SA1020	Gold	12 - 14	Stamped	Plug
SA1021	Gold	12 - 14	Stamped	Socket

WedgeLocks

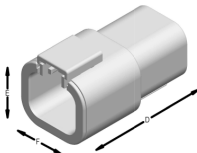
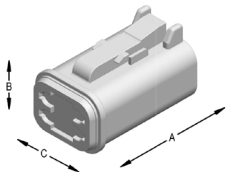
  
WLP12

- ⬡ Plug & sockets available
- ⬡ 2 & 4 Contact

\* WedgeLocks are sold separately and are required for confirmation of alignment of contact. Please refer to the chart above to determine part required.

Part Number	Contacts	Plug / Socket
WLPP02	02	Plug
WLPS02	02	Socket
WLPP04	04	Plug
WLPS04	04	Socket

## POWER SERIES DIMENSIONS



	Male			Female		
Cavity	Overall Length A	Overall Height B	Overall Width C	Overall Length D	Overall Height E	Overall Width F
2	1.364 (34.65)	.711 (18.06)	.732(18.59)	1.861 (47.27)	.869 (22.07)	.872 (22.15)
4	1.364 (34.65)	.960 (24.38)	.868 (22.05)	1.861 (47.27)	1.048 (26.62)	1.060 (26.92)

\* Dimensions are for reference only.



Electrical:

No Contacts:	2 & 4
Insulation Resistance:	>1000MΩ
Fluid Resistance:	No damage when exposed
Dielectric Withstanding Voltage:	1500 VAC
Operating Temperature Range:	-55°C to +125°C

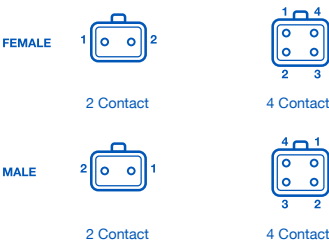
Material

Grommet:	Silicone rubber
Insert Retainer:	Thermoplastic
Receptacle Interfacial Seal:	Silicone rubber
Shell:	Thermoplastic
Wedgelocks:	Thermoplastic
RoHS:	Compliant

Mechanical:

Sealing:	IP68
Contact Accommodation:	10 - 14 AWG (6.00-2.00 mm²)
Termination:	Crimp terminals
Cycles:	>100

Contact Layout (Rear View)



Contact Insertion Instructions

Step One:



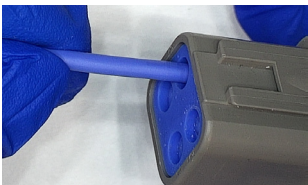
Use a previously crimped contact and wire and hold just behind the contact barrel.

Step Two:



Line the contact up with the grommet.

Step Three:



Push the contact until a click is felt. Check the contact is in place by gently tugging and confirming alignment. Repeat for number of contacts desired

Step Four:



When contacts are in place, insert the appropriate wedgelock until a click is heard. Once male and female housings are prepared the parts can be mated

PX10	XX	X	XX	X	XX
Range	Body Type	Contact Type	Contacts	Key	Colour
PX10	00 = Male 01 = Female 02 = Male Protective End Cap 03 = Female Protective End Cap	S = Socket P = Plug	02 04	A = A Key	GY = Grey BK = Black

The Bulgin Automotive Rectangular Connectors provide environmentally sealed, field-proven reliability and rugged reliability.

These connectors are designed for cable-to-board harsh environment applications. They are available in cable plugs and PCB mount headers that are designed to stand up in high-temperature applications.

Key Features:

- ⬢ Insulation Resistance: 2000 megohms
- ⬢ Operating temperatures -40°C to +125°C
- ⬢ IP67 rating
- ⬢ Current Rating 14A
- ⬢ Male and Female options
- ⬢ Integrated latch for mating
- ⬢ Wedgelocks confirm contact alignment and retention
- ⬢ Accepts 14-22AWG(2.5-0.35mm<sup>2</sup>)



# RECTANGULAR

## Automotive Rectangular Connectors

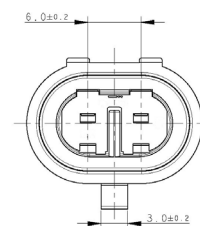


Automotive Rectangular Connector 1.5mm  
Male Terminals



PX2000

- ⬡ 1, 2, 3, 4, 5 & 6 Contacts
- ⬡ Male housing
- ⬡ Socket contacts
- ⬡ Available in black



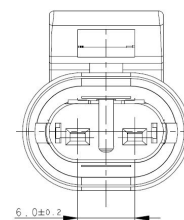
Part Number	Contacts	Key	Termination	Colour	Additional
PX2000P01BK	1	-	Crimp	Black	-
PX2000P02BK	2	-	Crimp	Black	-
PX2000P03BK	3	-	Crimp	Black	-
PX2000P04BK	4	-	Crimp	Black	-
PX2000P05BK	5	-	Crimp	Black	-
PX2000P06BK	6	-	Crimp	Black	-

Automotive Rectangular Connector 1.5mm  
Female Terminals



PX2001

- ⬡ 1,2,3,4,5 & 6 Contacts
- ⬡ Female housing
- ⬡ Plug contacts
- ⬡ Available in black



Part Number	Contacts	Key	Termination	Colour
PX2001S01BK	1	-	Crimp	Black
PX2001S02BK	2	-	Crimp	Black
PX2001S03BK	3	-	Crimp	Black
PX2001S04BK	4	-	Crimp	Black
PX2001S05BK	5	-	Crimp	Black
PX2001S06BK	6	-	Crimp	Black

## Automotive Rectangular Connectors



## Contacts



SA1000

- ⬡ Crimp plug & sockets
- ⬡ Tin plated

Part Number	Plating	AWG	Type	Plug / Socket
SA1022	Tin	13 - 15	Stamped	Plug
SA1023	Tin	13 - 15	Stamped	Socket
SA1024	Tin	15 - 18	Stamped	Plug
SA1025	Tin	15 - 18	Stamped	Socket
SA1026	Tin	20 - 22	Stamped	Plug
SA1027	Tin	20 - 22	Stamped	Socket

## Seals



- ⬡ Silicone seals
- ⬡ Cavity diameter 5.5mm

Part Number	Description
SL001	Rubber Plug Blanking Seal
SL002	Single Wire Seal

## Electrical:

No Contacts:	1,2,3,4,5 & 6
Insulation Resistance:	>200MΩ
Fluid Resistance:	No damage when exposed
Voltage Rating:	24V DC
Operating Temperature Range:	-40°C to +125°C
Current Rating	14A

## Material

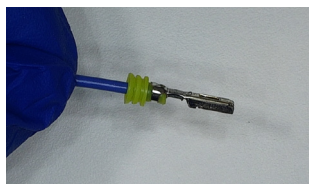
Grommet:	Silicone rubber
Seal:	Silicone rubber
Shell:	Rugged Glass Filled PBT
Wedgelocks:	Rugged PBT
RoHS:	Compliant

## Mechanical:

Sealing:	IP67
Contact Accommodation:	14-20AWG(0.35-2.5mm <sup>2</sup> )
Termination:	Crimp terminals
Cycles:	>100
Contact Size:	1.5mm

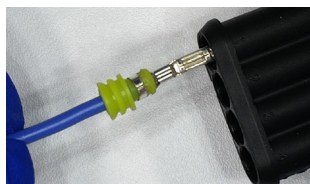
## Contact Insertion Instructions

Step One:



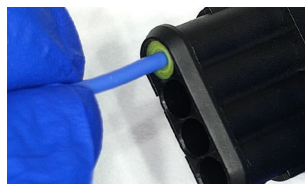
Use a previously crimped contact and wire and hold just behind the contact barrel.

Step Two:



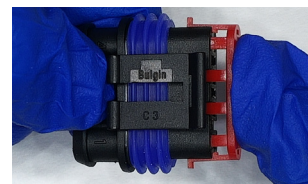
Line the contact up with the grommet.

Step Three:



Push the contact until a click is felt. Check the contact is in place by gently tugging and confirming alignment. Repeat for number of contacts desired

Step Four:



When contacts are in place, insert the appropriate wedgelock until a click is heard. Once male and female housings are prepared the parts can be mated

PX20	XX	X	XX	X	XX
Range	Body Type	Contact Type	Contacts	Key	Colour
PX20	00 = 1.5mm Male Terminals 01 = 1.5mm Female Terminals	S = Socket P = Plug	01 02 03 04 05 06	A = A Key	GY = Grey BK = Black

## Terms and Conditions of Sale

All orders are accepted subject to our Standard Terms & Conditions.

## Health & Safety

Bulgin proprietary components are designed, manufactured, assessed and tested to comply with good commercial quality and engineering standards. They are safe and reliable in use within the vast majority of normal environments. In the interest of safety, application in certain extreme destructive or unsuitable environments must be avoided.

The following restrictions are given as guidance:

- External or wet areas (exposed to rain or spray), except where designated "Sealed".
- Atmospheres designated as "explosive", except where designated "Gas Tight" or "Explosion Proof".
- Highly corrosive atmospheres or subject to contamination by corrosive chemicals.  
(Avoid the use of corrosive acid soldering flux. Use an approved Electrical Grade).
- Atmospheres containing a high density of abrasive dust (mechanically operated components).
- Contamination with Silicone or Silicone Compounds (switches).
- Areas or levels unprotected from severe impact by heavy bodies moving in close proximity - (panel mounted components).
- Extremes of temperatures, beyond the specified limits.
- Electric supply voltage or load current above the published maximum ratings.

## General

To ensure electrical safety as far as is reasonably practical, these products should be properly applied, installed and maintained by or under the supervision of competent persons in accordance with good engineering practice.

## Dimensions

All dimensions are in millimetres (mm) unless otherwise stated.

## The CE Marking Directive

Equipment bearing the CE mark is allowed free circulation throughout Europe. The products in this catalogue, when installed correctly, comply with the CE requirements where it relates to them.

## The Low Voltage Directive

The Low Voltage Directive 2014/35/EU seeks to ensure that electrical equipment within certain limits both provides a high level of protection for European citizens and enjoys a single market in the European Union. Where applicable, Bulgin products comply with the requirements of this directive.

## RoHS

These European Directives introduced environmental responsibilities for electrical and electronics equipment manufacturers. The RoHS (Restriction of use of certain Hazardous Substances) regulation (Directive 2002/95/EC) came into force July 2006. The WEEE (Waste Electrical and Electronic Equipment) regulation (Directive 2002/96/EC), came into force January 2007. The RoHS directive effectively bans the use of certain chemicals, these are defined as:

- Lead
- Cadmium
- Mercury
- Hexavalent Chromium
- Polybrominated Biphenyl (PBB) – flame retardant
- Polybrominated Diphenyl Ether (PBDE) – flame retardant (including Deca BDE)

Action has been taken to ensure all standard products meet the requirements of this directive. All packing carries RoHS compliance information as conformation.

## REACH

REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) is the new system for controlling chemicals in Europe and became law in the UK on 1 June 2007. Bulgin as a manufacturer of articles, are reliant on our supply chain to ensure that the substances/articles we use, are in compliance with the EC1907/2006, REACH Regulations.

Our articles and their packaging, based on our knowledge at this point, do not contain any of the 15 substances on the SVHC Candidate List, dated 28th October 2008, nor any of the 14 substances added to the SVHC Candidate List, dated 13th January 2010, nor Acrylamide added to the SVHC Candidate List, dated 30th March 2010, according to article 59 (1, 10) of Regulation (EC) No. 1907/2006 (REACH), in a concentration above 0.1% weight by weight.

If this situation changes we confirm that this information will be passed through the supply chain in a timely manner.



## United Kingdom



## Denmark



## South Africa



## BS EN ISO 9001:2000



## Europe



## Sweden



## Austria



## Finland



## Switzerland



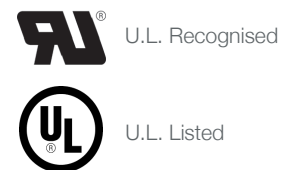
## Australia



## Germany



## U.S.A.



## Belgium



## Holland



## Russia



## Canada



## Italy



## China



## Norway



# Comparison Chart

Metric to AWG wire sizes



AWG	Cross Sectional Area in mm <sup>2</sup>	Closest standard equivalent in mm <sup>2</sup>
30	0.0503	0.05
29	0.0646	-
28	0.0804	-
27	0.102	0.1
26	0.128	0.14
25	0.163	-
24	0.205	0.2
23	0.259	0.25
22	0.325	-
21	0.412	-
20	0.519	0.5
19	0.653	-
18	0.823	0.75
17	1.04	1
16	1.31	-
15	1.65	1.5
14	2.08	-
13	2.63	2.5
12	3.13	-
11	4.15	4
10	5.27	-
9	6.62	6
8	8.35	-
7	10.6	10
6	13.3	-
5	16.8	16
4	21.2	-
3	26.7	25
2	33.6	35
1	42.4	-
0	53.4	50
2/0	67.5	70
3/0	85	95
4/0	107.2	120
5/0	135.1	150

## IP Ratings Guide

The IP classification system designates the degree of protection provide by an enclosure against solid objects or water ingress. Table I shows degrees of protection against solid objects. Table II shows degrees of protection against water.

IP / X / X		
IP Rating	Table 1	Table 2

**Table 1 (1st characteristic numeral)**  
Degree of Protection against solid objects

Digit	
0	Non-protected
1	Protected against a solid object greater than 50mm, such as a hand.
2	Protected against a solid object greater than 12.5mm, such as a finger.
3	Protected against a solid object greater than 2.5mm, such as wire or a tool.
4	Protected against a solid object greater than 1.0mm, such as wire or thin strips.
5	Dust-protected. Prevents ingress of dust sufficient to cause harm.
6	Dust tight. No ingress of dust.

Degree of protection to - DIN 40050-9

**Table 2 (2nd characteristic numeral)**  
Degree of Protection against water

Digit	
0	Non-protected
1	Protected against dripping water.
2	Protected against dripping water when tilted up to 15°.
3	Protected against spraying water at an angle of up to 60°.
4	Protected against splashing water from any direction.
5	Protected against jets of water from any direction.
6	Protected against heavy seas or powerful jets of water. Prevents ingress sufficient to cause harm.
7	Protected against the effects of temporary immersion in water.
8	Protected against the effects of continuous immersion in water.
69K	Protected against very high pressure, high temperature wash-down test.