



# POW SERIES

ELECTRICAL CONNECTORS



# DESIGN AND MANUFACTURE HIGH POWER INTERCONNECT SYSTEMS **POW SERIES** FOR HARSH ENVIRONMENT

## POW SERIES



EASY MATING &  
UNMATING SYSTEM



CONFIGURATION  
ADAPTED TO  
YOUR NEEDS



VISUAL  
POLARIZATION BY  
COLOR CODING



OPERATING  
TEMPERATURE  
-55°C to 155 °C

## COMPETENCY

BERNIER can provide  
integrated solution  
adapted to your  
applications, mastery of  
special processes and  
subcontracting through  
French industrial  
manufacturing according to  
ISO 9001 & EN 9100  
standards.

## ENGAGEMENTS

Ensure daily contact to **match**  
**all relevant solutions to your**  
**needs for innovative**  
**connectors.**

According to MIL-DTL-38999  
type connectors with compact  
design, offering extended safety  
power range and signal contacts  
for data transfer communication

## SERVICES

Customer satisfaction oriented.  
We propose the study &  
development of interconnect  
systems for all sectors.

**For a better adaptation, we**  
**manufacture according to**  
**specifications,** from prototyping  
to small, medium and mass  
production. We insure product  
qualification & maintenance during  
product life cycle.



## AN INNOVATIVE SOLUTION

- Current rating of contacts are 20% higher than existing contacts technologies of the same size (see De-rating curve)
- Increased power density allows for use of one shell size smaller in most applications
- Saves up to 20 % space, saving valuable weight
- Small interface footprint with weight & space saving for all applications
- Key coding with corresponding color bands prevent mis-mating
- Quick Push locking & ¼ turn Pull Exit system
- Ideal for harsh environments



## PERFORMANCE AND SAFETY OVERVIEW

- Current Rating: up to 1000 A
- MIL-DTL-38999 standard panel cutting interface
- Contacts with low insertion and extraction force
- Reinforced security: 1000V AC / 1500V DC
- IP2X Finger proof protection
- IP67 Waterproof
- Mating cycles: > 500



## PRODUCT CONFIGURATION AVAILABILITY

- 4 shell sizes: 300 / 400 / 600 and 700
- Multiple insert configurations
- 7 contact sizes
- Shells in aluminum, stainless steel, and plastic material

### PERFORMANCE

**FROM 50 A to 1000 A**

EXTENDED PRODUCT RANGE

### MODULARITY

**300, 400, 600 & 700**

4 SHELL SIZES MODEL

### SAFETY

**IP2X**

FINGER PROOF PROTECTION

## ELECTRICAL PERFORMANCES\*

| SINGLE POLE CONFIGURATION |              |                                                |                                        |                                                            |                                               |               |
|---------------------------|--------------|------------------------------------------------|----------------------------------------|------------------------------------------------------------|-----------------------------------------------|---------------|
| Connector Size            | Contact Size | Maximum Continuous Current Rating (EIA-364-70) | Copper Contact Resistance (EIA-364-06) | Cable cross section (mm <sup>2</sup> ) - (AWG)             | Max operating Voltage (VAC / VDC @ Sea Level) | DWV (VAC RMS) |
| POW Hybrid                | A            | 10 A                                           | ≤ 3 mΩ                                 | 0,5 mm <sup>2</sup> to 2,5 mm <sup>2</sup><br>AWG 20 to 13 | 500 / 600                                     | 1500          |
| POW Hybrid                | B            | 120 A                                          | 0,10 mΩ/mm                             | 10 mm <sup>2</sup> - AWG 7                                 | 500 / 600                                     | 1500          |
| POW Hybrid                | C            | 160 A                                          | 0,05 mΩ/mm                             | 16 mm <sup>2</sup> - AWG 5                                 | 500 / 600                                     | 1500          |
| POW Hybrid                | D            | 265 A                                          | 0,03 mΩ/mm                             | 35 mm <sup>2</sup> - AWG 2                                 | 500 / 600                                     | 1500          |
| POW 300                   | E            | 300 A                                          | 0,03 mΩ/mm                             | 50 mm <sup>2</sup> - AWG 2/0                               | 500 / 600                                     | 1500          |
| POW 400                   | F            | 400 A                                          | 0,03 mΩ/mm                             | 70 mm <sup>2</sup> - AWG 2/0                               | 800 / 1000                                    | 2600          |
| POW 600                   | G            | 600 A                                          | 0,02 mΩ/mm                             | 120 mm <sup>2</sup> - AWG 250                              | 1000 / 1500                                   | 4500          |
| POW 700                   | H            | 1000 A                                         | 0,02 mΩ/mm                             | 240 mm <sup>2</sup> - AWG 500                              | 1000 / 1500                                   | 4500          |

EMI 360° screen for straight or right-angle EMC back shell in accordance with

EIA-364-83 Shell to back shell resistance: < 5.00mΩ

Shell to shell resistance: < 2.50mΩ

## MECHANICAL & ENVIRONMENTAL PERFORMANCES\*

| Connector Size | Contact Size | Standard mating Cycles | Contact Insertion Force (N)* | Contact Extraction Force (N)* |
|----------------|--------------|------------------------|------------------------------|-------------------------------|
| POW Hybrid     | A            | ≥ 500                  | 5                            | 5                             |
| POW Hybrid     | B            | 500                    | 10                           | 10                            |
| POW Hybrid     | C            | 500                    | 15                           | 15                            |
| POW Hybrid     | D            | 500                    | 20                           | 20                            |
| POW 300        | E            | 500                    | 50                           | 60                            |
| POW 400        | F            | 500                    | 50                           | 60                            |
| POW 600        | G            | 500                    | 70                           | 70                            |
| POW 700        | H            | 500                    | 120                          | 120                           |

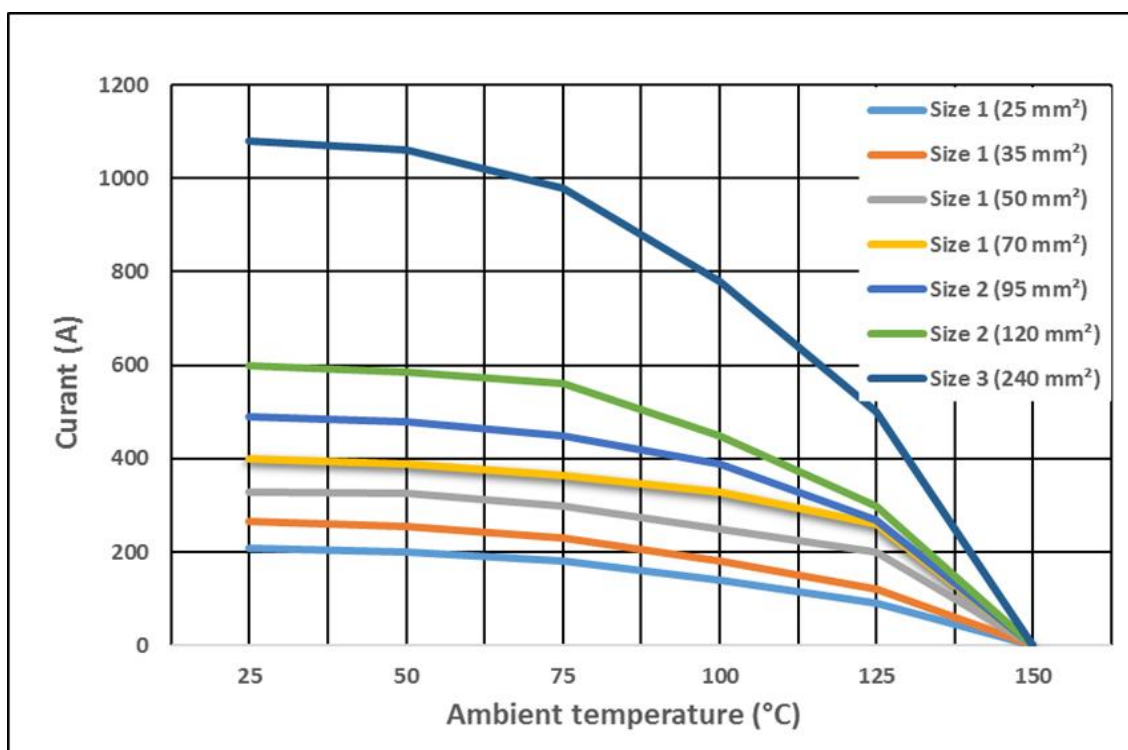
\*Based upon single power contact configuration

- Endurance, mating & unmating cycles according with EIA-364-09
- Shock Test condition according with EIA-364-27
- Vibration according with EIA-364-28 Test condition letter E (0,2 g<sup>2</sup>/Hz), duration 1.5 hours
- Salt spray according with ISO 9227
 

|                                |            |
|--------------------------------|------------|
| Aluminum shell / hard anodized | 500 hours  |
| Aluminum shell / zinc nickel   | 500 hours  |
| Stainless steel                | >750 hours |
- Fire and smoke according to EN 45545-2 for railway application (option)
- Sealing (mated / unmated): IP67, 1hr at 2 meters immersion and waterproof against high pressure steam jet Cleaning
- Temperature range -55°C to +155°C (optional 260°C)
- Fluid resistance: AS Per MIL-DTL 38999

## POW SERIES

### De-rating curve POW connector (EN 60512-5-2)



De-rating curve is according to EN 60512-5-2 tested with cables 1.5-meter length. Please contact us, should you require a derating curve for an alternate cable length.

## CONTACT SIZES

| Contact | Signal cable cross section (mm²) - AWG    |
|---------|-------------------------------------------|
| Size A  | Between 0.5 mm² to 2.5 mm² - AWG 20 to 13 |

| Contact |     | Power cable cross section (mm²) - AWG |    |   |    |    |    |    |    |     |     |     |     |     |     |
|---------|-----|---------------------------------------|----|---|----|----|----|----|----|-----|-----|-----|-----|-----|-----|
|         | AWG | 12                                    | 10 | 8 | 7  | 5  | 4  | 2  | 0  | 2/0 | 3/0 | 250 | 300 | 350 | 500 |
|         | mm² | 4                                     | 6  | 8 | 10 | 16 | 25 | 35 | 50 | 70  | 95  | 120 | 150 | 185 | 240 |
| Size B  |     | 0                                     | 0  | 0 | X  |    |    |    |    |     |     |     |     |     |     |
| Size C  |     |                                       |    | 0 | 0  | X  |    |    |    |     |     |     |     |     |     |
| Size D  |     |                                       |    |   |    | 0  | 0  | X  |    |     |     |     |     |     |     |
| Size E  |     |                                       |    |   |    |    |    | 0  | X  |     |     |     |     |     |     |
| Size F  |     |                                       |    |   |    |    |    |    | 0  | X   |     |     |     |     |     |
| Size G  |     |                                       |    |   |    |    |    |    |    | 0   | 0   | X   |     |     |     |
| Size H  |     |                                       |    |   |    |    |    |    |    |     |     | 0   | 0   | 0   | X   |

X: Standard

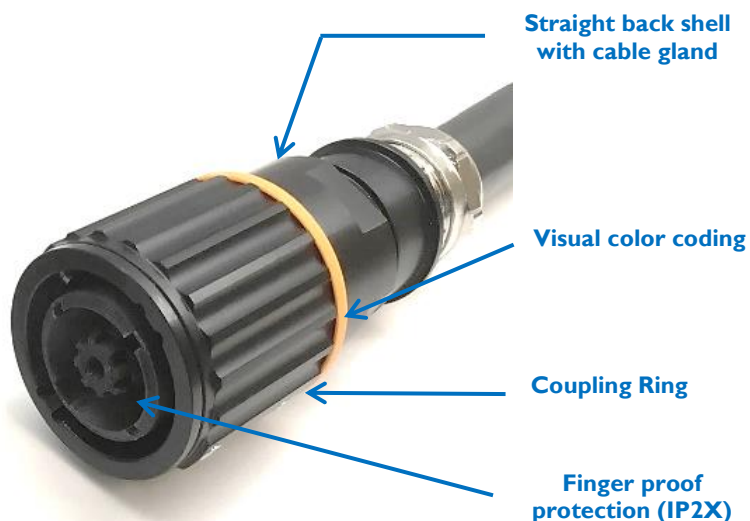
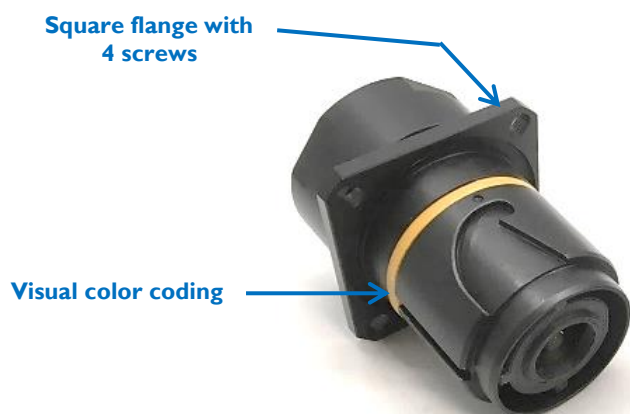
O: Optional with cable adaptor

| Cable*                                                         |                            |       | Connector Size* (Single pole configuration) |             |             |     |
|----------------------------------------------------------------|----------------------------|-------|---------------------------------------------|-------------|-------------|-----|
|                                                                |                            |       | 300                                         | 400         | 600         | 700 |
| <b>10 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 7</b>    | Conductor Ø (mm)           | 4,59  | X                                           |             |             |     |
|                                                                | Maximum Current (A) @ 30°C | 120A  |                                             |             |             |     |
| <b>16 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 5</b>    | Conductor Ø (mm)           | 6,15  | X                                           |             |             |     |
|                                                                | Maximum Current (A) @ 30°C | 160 A |                                             |             |             |     |
| <b>25 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 4</b>    | Conductor Ø (mm)           | 7,25  | X                                           |             |             |     |
|                                                                | Maximum Current (A) @ 30°C | 210 A |                                             |             |             |     |
| <b>35 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 2</b>    | Conductor Ø (mm)           | 8,68  | X                                           | X           |             |     |
|                                                                | Maximum Current (A) @ 30°C | 265A  |                                             |             |             |     |
| <b>50 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 0</b>    | Conductor Ø (mm)           | 10,15 | X                                           | X           |             |     |
|                                                                | Maximum Current (A) @ 30°C | 330A  |                                             |             |             |     |
| <b>70 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 2/0</b>  | Conductor Ø (mm)           | 12,32 | Optional **                                 | X           | X           |     |
|                                                                | Maximum Current (A) @ 30°C | 420A  |                                             |             |             |     |
| <b>95 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 3/0</b>  | Conductor Ø (mm)           | 13,5  |                                             | Optional ** | X           |     |
|                                                                | Maximum Current (A) @ 30°C | 500A  |                                             |             |             |     |
| <b>120 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 250</b> | Conductor Ø (mm)           | 15,84 |                                             |             | X           | X   |
|                                                                | Maximum Current (A) @ 30°C | 600A  |                                             |             |             |     |
| <b>150 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 300</b> | Conductor Ø (mm)           | 18    |                                             |             | Optional ** | X   |
|                                                                | Maximum Current (A) @ 30°C | 670A  |                                             |             |             |     |
| <b>185 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 350</b> | Conductor Ø (mm)           | 20,6  |                                             |             | Optional ** | X   |
|                                                                | Maximum Current (A) @ 30°C | 770A  |                                             |             |             |     |
| <b>240 mm<sup>2</sup></b><br>(cross section)<br><b>AWG 500</b> | Conductor Ø (mm)           | 22    |                                             |             | Optional ** | X   |
|                                                                | Maximum Current (A) @ 30°C | 1000A |                                             |             |             |     |

\* For other cables sizes or other configurations, please contact us or our local representative.

**RECEPTACLE**

**PLUG**



**CONNECTOR TYPE**  
*SINGLE POLE CONFIGURATION*



According to MIL-DTL-38999 Panel mounted interface

## POW 300 Connector

### Standard Panel mounted interface

SIZE 15 Back Panel  
(POW)



Size 15 Jam-Nut  
(MIL-38999)



Size 15 Front Panel  
(POW)



**POW 300**

Optional\* configuration of POW 300 according to the MIL 38999 Panel mounted interface:

- Jam Nut or back and front shells :  
Size 15  
Size 17

### Optional configuration of POW series

SIZE 15 Max



(Back panel)

Size 15 Min



(Back Panel)

Size 15 Jam Nut



Size 15 Min



(Front panel)

**POW 300**

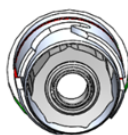
## POW 400 Connector

Size 17 Max



Back Panel

Size 17 Min



Back Panel

Size 17 Jam-Nut



Size 17 Min



(Front Panel)

**POW 400**

Optional\* configuration of POW 400 according to the MIL 38999 Panel mounted interface:

- Jam-Nut receptacle shell
- 4 Screws receptacle shell for Back or Front mounted
- Size 17 or Size 21
- Size 21



## POW 600 Connector

Size 21 Max



(Back Panel)

Size 21 Min



(Back Panel)

Size 21 Jam-Nut



Size 23



Front Panel

### POW 600

Optional\* configuration of POW 600 according to the MIL 38999 Panel mounted interface:

- Jam-Nut receptacle shell
- 4 Screws receptacle shell for Back or Front mounted
- Size 23 or Size 25
- Size 23 or Size 25

## POW 700 Connector

Size 25 Max



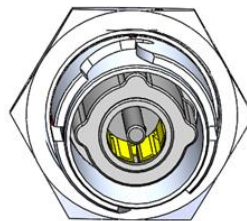
(Back Panel)

Size 25 Min

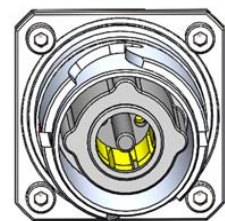


(Back Panel)

Size 25 Jam-Nut



Size 25

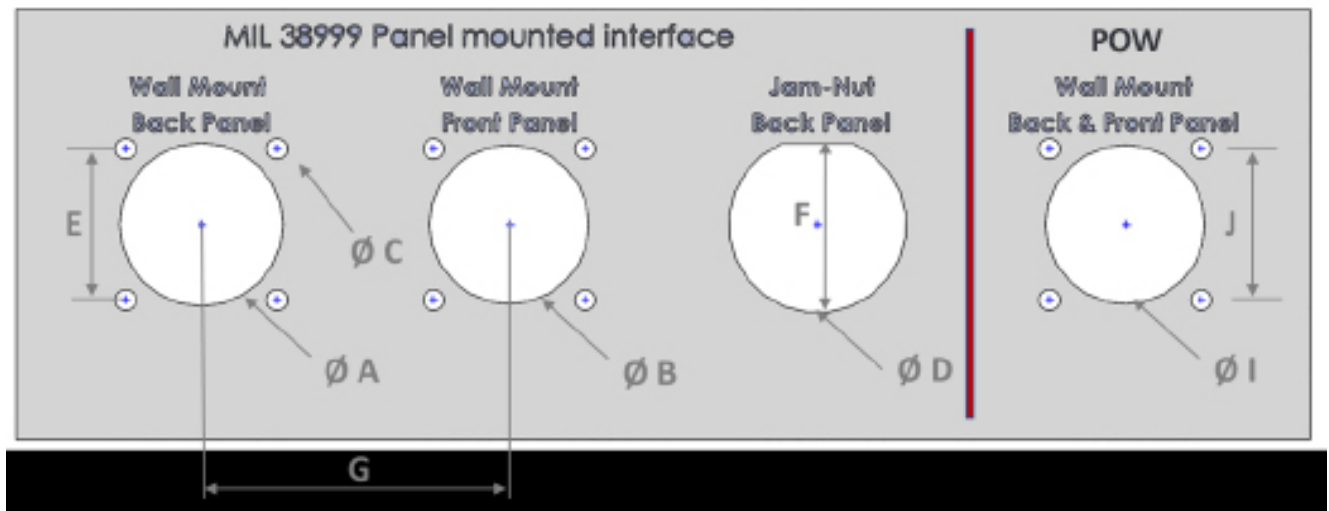


Front Panel

### POW 700

#### Note\*

Specific receptacle shell. For additional information, please contact us or our local representative



| MIL 38999 Panel interface (mm) |                     |                      |      |       |       |       |    | POW Specific interface Back & Front Panel (mm) |       |
|--------------------------------|---------------------|----------------------|------|-------|-------|-------|----|------------------------------------------------|-------|
| Connector type                 | Ø A<br>"Back Panel" | Ø B<br>"Front Panel" | Ø C  | Ø D   | E     | F     | G  | I                                              | J     |
| Size 15                        | 25.91               | 26.59                | 3.40 | 28.83 | 24.61 | 27.56 | 48 | 28.83                                          | 26.80 |
| Size 17                        | 29.46               | 30.96                | 3.40 | 32.00 | 26.97 | 30.73 | 50 | /                                              | /     |
| Size 21                        | 34.25               | 34.25                | 3.40 | 38.35 | 31.75 | 37.08 | 58 | /                                              | /     |
| Size 23                        | 38.43               | 38.43                | 4.50 | 41.53 | 34.93 | 40.26 | 58 | 42,60                                          | 40    |
| Size 25                        | 41.43               | 41.43                | 4.50 | 44.70 | 38.10 | 43.43 | 62 | 47,10                                          | 44    |

| Connector type | Standard configuration, panel interface (mm) |                               |                     |    | Optional* (according with Mil 38999) |                        |                    |
|----------------|----------------------------------------------|-------------------------------|---------------------|----|--------------------------------------|------------------------|--------------------|
|                | Back Panel                                   | Front Panel                   | Jam-Nut Back Panel  | G  | Back Panel                           | Front Panel            | Jam-Nut Back Panel |
| POW 300        | Size 15 (POW)                                | Size 15 (POW)                 | Size 15 (Mil 38999) | 48 | Size 17 (Ø A & B)                    | Size 15 & 17 (Ø A & B) | Size 17            |
| POW 400        | Size 17 (Mil 38999 / Ø A & B)                | Size 17 (Mil 38999 / Ø A & B) | Size 15 (Mil 38999) | 50 | Size 21 (Ø A & B)                    | Size 21 (Ø A & B)      | Size 17 & 21       |
| POW600         | Size 21 (Mil 38999 / Ø A & B)                | Size 23 (POW Specific)        | Size 21 (Mil 38999) | 58 | Size 23 & 25 (Ø A & B)               | /                      | Size 23 & 25       |
| POW700         | Size 25 (Mil 38999 / Ø A & B)                | Size 25 (POW)                 | Size 25 (Mil 38999) | 62 | /                                    | /                      | /                  |

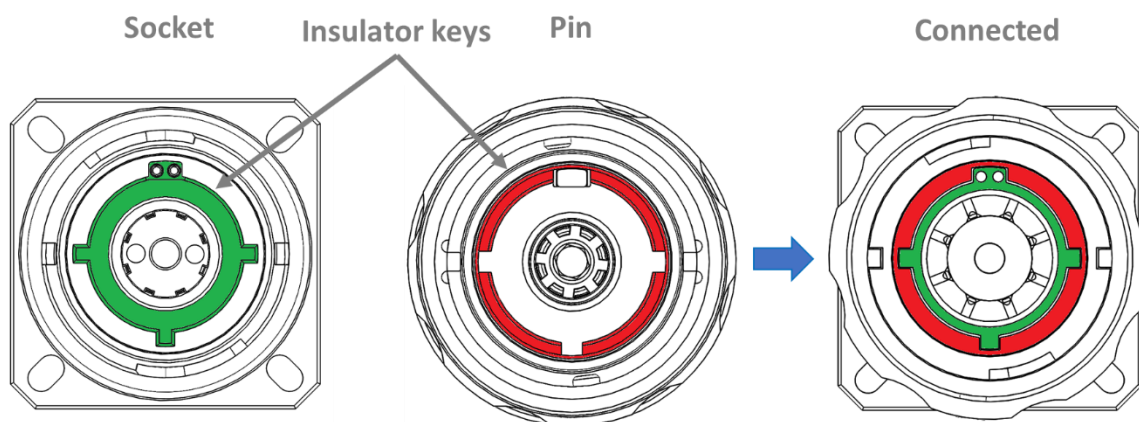
**Note\***

Specific receptacle shell. For additional information, please contact us or our local representative.

The connector polarization is realized during the cabling operation process. With same parts, it is possible to setup 5 key positions. A visual coding can be added to help the end user to easily connect the right receptacle to the associated plug.

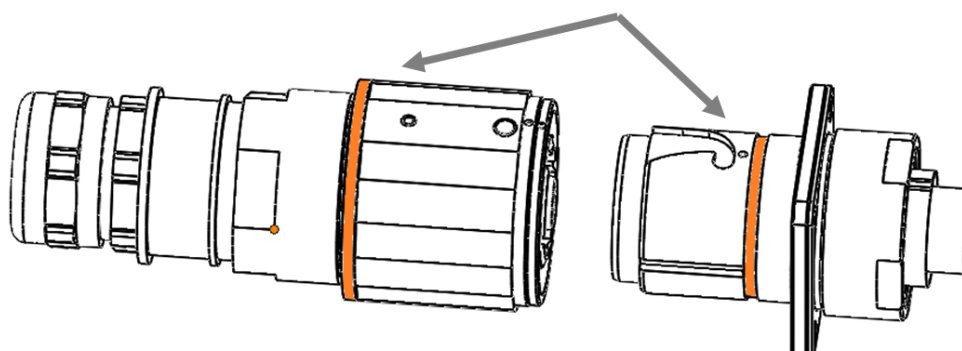
| Color     | Coding |
|-----------|--------|
| No Coding | X      |
| Red       | R      |
| Yellow    | Y      |
| Green     | G      |
| Blue      | B      |
| Orange    | O      |

### Connector mechanical coding key



### Connector visual coding

#### VISUAL POLARIZATION CODE WITH COLORED RING



**POW-X00-XXXXX-XXX-XXXX-X**

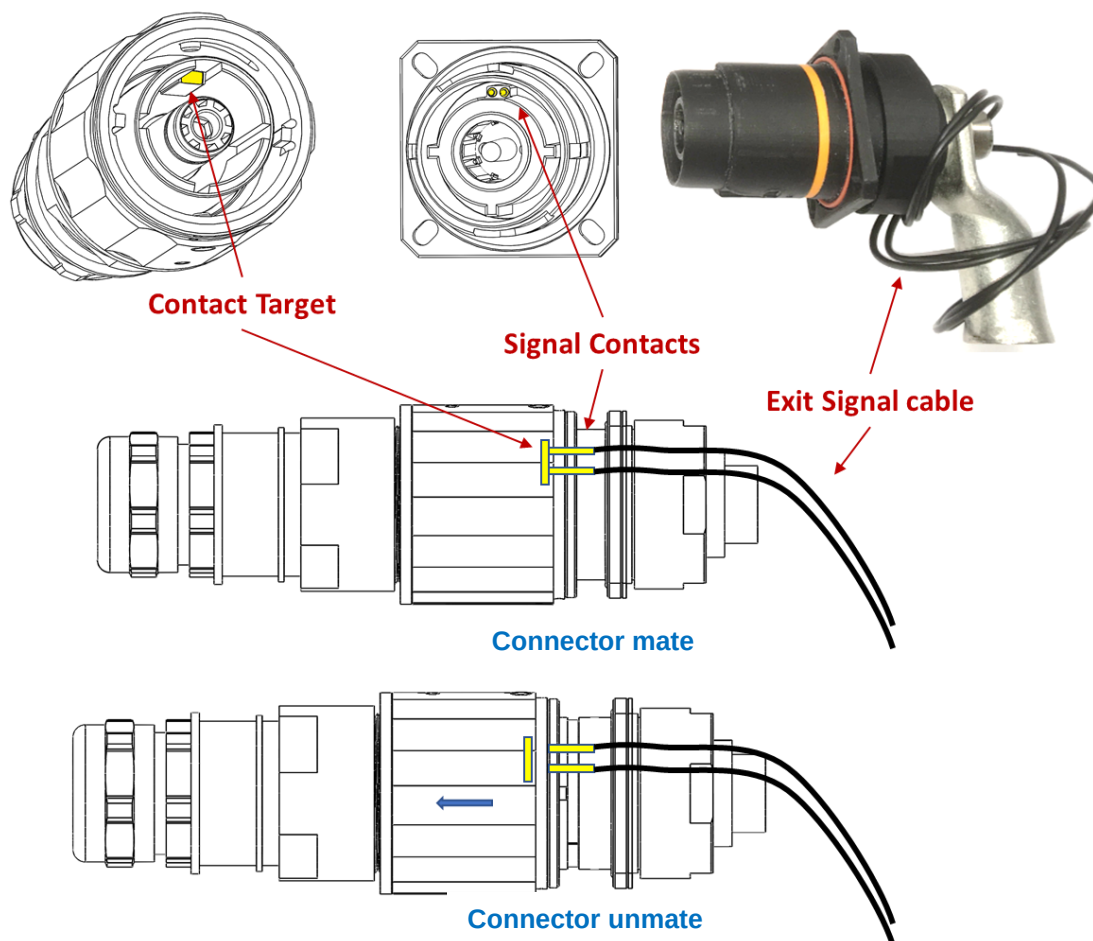
↑  
**Coding  
Color**

For special (high voltage) applications, a small power line monitoring system can be integrated into the connector. If someone inadvertently tries to disconnect the connector, the power line is cut off before the connector is disengaged.

The system is delivered with:

- Two signal contacts inside the socket insulator. The contacts will already be cabled with 1 m of cable.
- One contact “target” inside the pin insulator to close the electrical monitoring loop when the connector is locked.

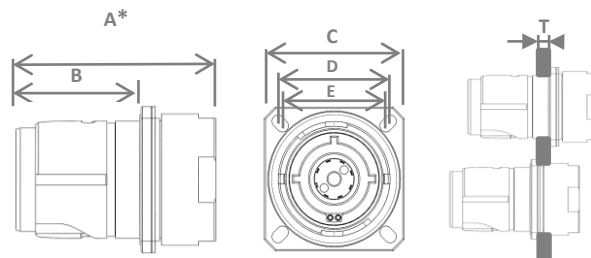
**POW-XXX-XXXX-XXX-XXX-~~XXX~~-X**



| Insulator type           | Pilot contact |
|--------------------------|---------------|
| Standard (150°C)         | A             |
| High temperature (230°C) | B             |


**RECEPTACLE**

Wall mount square  
flange  
4-screw shell equipped  
with crimp contact or  
lug.


**POW-XXX-XX|XX-XXX-XXXX-X**

| Connector type | Standard Dimensions (mm) |    |       |       |       |   | Optional**        |                           |   |
|----------------|--------------------------|----|-------|-------|-------|---|-------------------|---------------------------|---|
|                | A*                       | B  | C     | D     | E     | T | Compatible with   | Compatible with MIL 38999 | T |
| <b>POW 300</b> | 46                       | 32 | 36    | 27.60 | 26.70 | 7 | POW Size 15       | Size 15 & 17              | 4 |
| <b>POW 400</b> | 58                       | 33 | 33.32 | 27.22 | 24.62 | 6 | Mil 38999 Size 17 | Size 21                   | 6 |
| <b>POW 600</b> | 76                       | 46 | 42.90 | 34.93 | 31.75 | 7 | Mil 38999 Size 21 | Size 23 & 25              | 7 |
| <b>POW700</b>  | 77                       | 53 | 50.00 | 39.00 | 37.20 | 7 | MIL 38999 Size 25 | /                         | 7 |

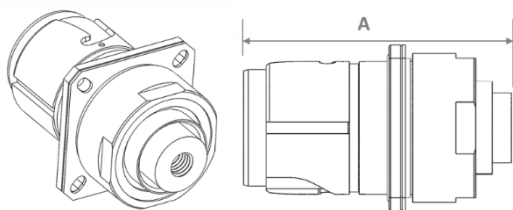
\* Without the contact length

\*\* For the other sizes of back shell or the other configurations, please contact us or our local representative

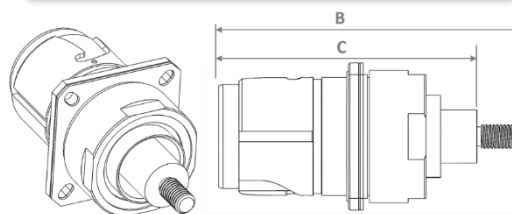
**RECEPTACLE**

4 screw wall mount square  
flange  
equipped with crimp, screw or  
flat tail contact

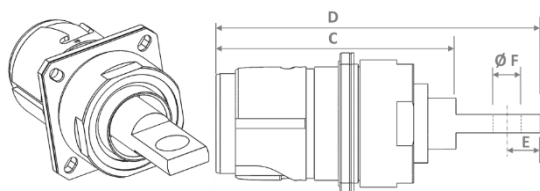
| Connector type | Dimensions (mm)* |     |    |     |    |       |    |
|----------------|------------------|-----|----|-----|----|-------|----|
|                | A                | B   | C  | D   | E  | Ø F   | G  |
| <b>POW 300</b> | 63               | 75  | 64 | 88  | 11 | 7.10  | 63 |
| <b>POW 400</b> | 72               | 90  | 76 | 98  | 11 | 11.20 | 75 |
| <b>POW 600</b> | 82               | 105 | 86 | 116 | 12 | 13.10 | 85 |
| <b>POW 700</b> | 82               | 105 | 86 | 116 | 12 | 13.10 | 85 |

**POW-XXX-|X|X0-XXX-XXXX-X**


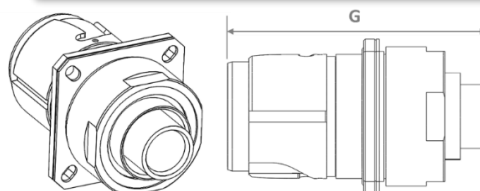
Wall mount 4 screw receptacle with screw  
contact (internal thread)

**POW-XXX-4X|X0-XXX-XXXX-X**


Wall mount 4 screw receptacle with  
screw contact (external thread)

**POW-XXX-5X|X0-XXX-XXXX-X**


Wall mount 4 screw receptacle with flat  
tail termination contact

**POW-XXX-0X|X0-XXX-XXXX-X**


Wall mount 4 screw  
receptacle with crimp contact

## RECEPTACLE

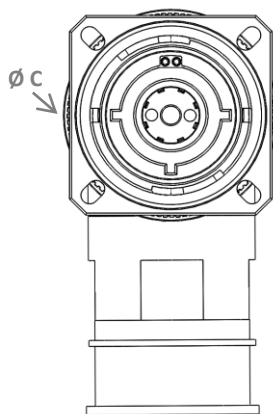
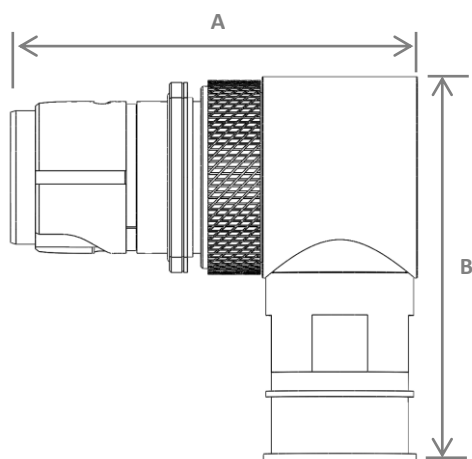
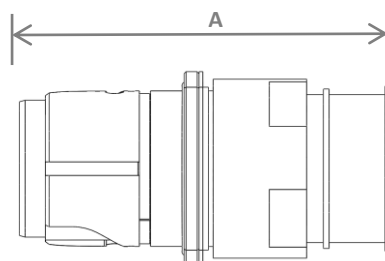
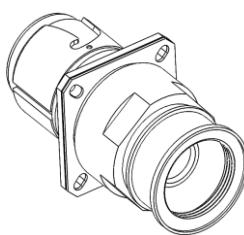
Wall Mount 4 screw shell, crimp contact with a straight termination for cable gland or shrink boots

POW-XXX-0XIXI-XXX-XXXX-X

POW-XXX-0XIX2-XXX-XXXX-



| Connector type | Dimensions (mm) |
|----------------|-----------------|
|                | A               |
| POW300         | 58              |
| POW 400        | 74              |
| POW 600        | 104             |
| POW 700        | 101             |



## RECEPTACLE

Wall Mount 4-screw shell with a right-angle crimp termination for cable gland or shrink boots

| Connector type | Dimensions (mm) |     |     |
|----------------|-----------------|-----|-----|
|                | A               | B   | Ø C |
| POW 300        | 88              | 63  | 37  |
| POW 400        | 93              | 63  | 37  |
| POW 600        | 115             | 97  | 46  |
| POW 700        | 115             | 102 | 53  |

POW-XXX-0XAXI-XXX-XXXX-X

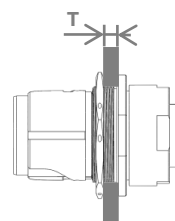
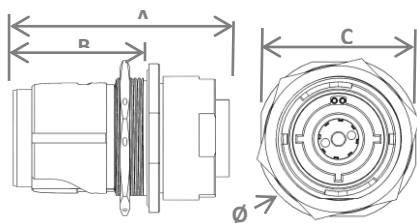
POW-XXX-0XAX2-XXX-XXXX-X





## RECEPTACLE

Wall mount  
Jam Nut with  
crimp or screw  
contact



Backwall  
mounting of the  
Receptacle

**POW-XXX-XX9XX-XXX-XXXX-X**

| Connector type | Standard Dimensions (mm) |    |    |     |                               | Optional**                    | T<br>(maxi wall thickness) |
|----------------|--------------------------|----|----|-----|-------------------------------|-------------------------------|----------------------------|
|                | A*                       | B  | C  | Ø D | Compatible with the MIL 38999 | Compatible with the MIL 38999 |                            |
| POW 300        | 44                       | 32 | 36 | 46  | Size 15                       | /                             | 4 mm                       |
| POW 400        | 58                       | 37 | 36 | 46  | Size 15                       | Size 17 & 21                  | 6 mm                       |
| POW 600        | 73                       | 51 | 48 | 51  | Size 21                       | Size 23 & 25                  | 7 mm                       |
| POW 700        | 79                       | 50 | 54 | 57  | Size 25                       | /                             |                            |

\* Without the contact length

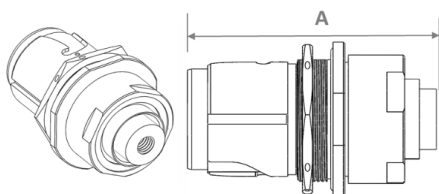
\*\* For the other sizes of back shell or other configurations, please contact us or our local representative

| Connector type | Dimensions (mm) |     |    |     |    |       |    |
|----------------|-----------------|-----|----|-----|----|-------|----|
|                | A               | B   | C  | D   | E  | Ø F   | G  |
| POW 300        | 63              | 75  | 66 | 90  | 11 | 7.10  | 65 |
| POW 400        | 72              | 90  | 78 | 101 | 11 | 11.20 | 77 |
| POW 600        | 85              | 105 | 89 | 120 | 12 | 10    | 88 |
| POW 700        | 85              | 105 | 89 | 120 | 12 | 10    | 88 |

## RECEPTACLE

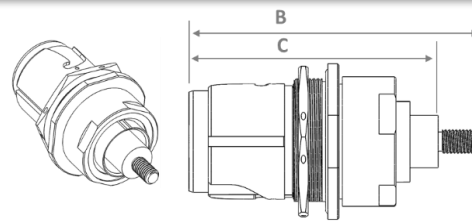
Wall Mount Jam Nut  
crimp or screw con-  
tact

**POW-XXX-1X9X0-XXX-XXXX-X**



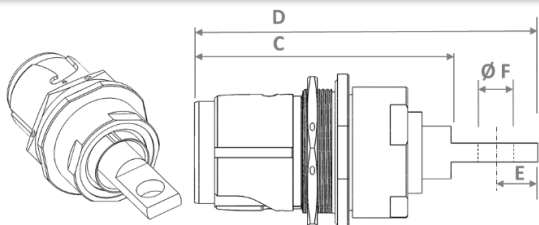
Wall mount Jam Nut receptacle with  
screw contact (internal thread)

**POW-XXX-4X9X0-XXX-XXXX-X**



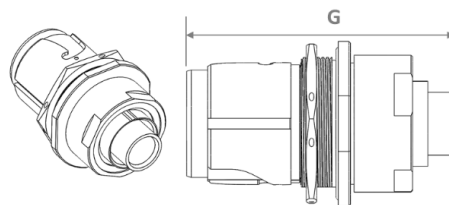
Wall mount Jam Nut receptacle with  
screw contact (external thread)

**POW-XXX-5X9X0-XXX-XXXX-X**



Wall mount Jam Nut receptacle with  
flat tail termination contact

**POW-XXX-0X9X0-XXX-XXXX-X**



Wall mount Jam Nut receptacle with  
crimp contact

POW-XXX-0X9X2-XXX-XXXX-X



Jam nut shell with shrink boot

## RECEPTACLE

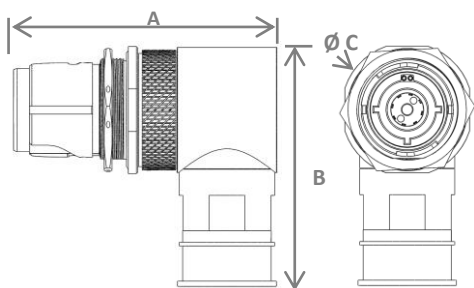
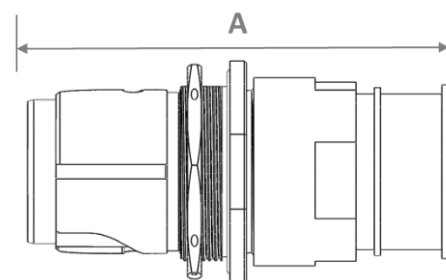
Straight wall mount Jam Nut shell crimp contact with a straight termination for cable gland or shrink boots

POW-XXX-0X9XI-XXX-XXXX-X



Jam nut shell with cable gland

| Connector type | Dimensions (mm) |
|----------------|-----------------|
|                | A               |
| POW 300        | 58              |
| POW 400        | 72              |
| POW 600        | 103             |
| POW 700        | 106             |



| Connector type | Dimensions (mm) |     |     |
|----------------|-----------------|-----|-----|
|                | A               | B   | Ø C |
| POW 300        | 88              | 63  | 37  |
| POW 400        | 93              | 63  | 37  |
| POW 600        | 115             | 97  | 46  |
| POW 700        | 115             | 102 | 53  |

## RECEPTACLE

Straight wall mount Jam Nut shell, crimp contact with a straight termination for cable gland or shrink boots

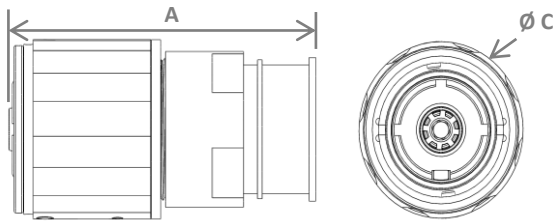
Shrink boot configuration  
POW-XXX-0XCXI-XXX-XXXX-X



Shrink boot configuration  
POW-XXX-0XCX2-XXX-XXXX-X







**PLUG**

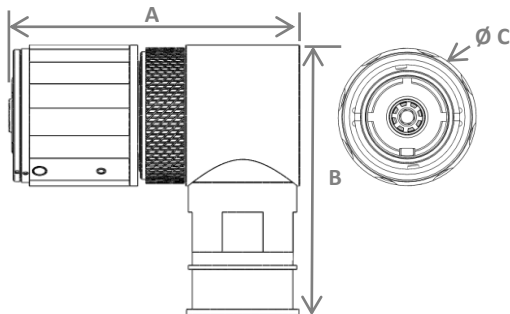
Straight for cable gland or shrink boots

| Connector type | Dimensions (mm) |     |
|----------------|-----------------|-----|
|                | A               | Ø C |
| POW 300        | 48              | 35  |
| POW 400        | 72              | 38  |
| POW 600        | 98              | 47  |
| POW 700        | 97              | 53  |

Cable gland configuration  
**POW-XXX-0X5X2-XXX-XXXX-X**



Shrink boot configuration  
**POW-XXX-0X5XI-XXX-XXXX-X**



**PLUG**

Right angle for cable gland or shrink boots

| Connector type | Dimensions (mm) |    |     |
|----------------|-----------------|----|-----|
|                | A               | B  | Ø C |
| POW300         | 78              | 63 | 35  |
| POW400         | 95              | 64 | 38  |
| POW 600        | 110             | 98 | 47  |
| POW 700        | 110             | 98 | 53  |

Shrink boot configuration  
**POW-XXX-0X6X2-XXX-XXXX-X**



Shrink boot configuration  
**POW-XXX-0X6XI-XXX-XXXX-X**



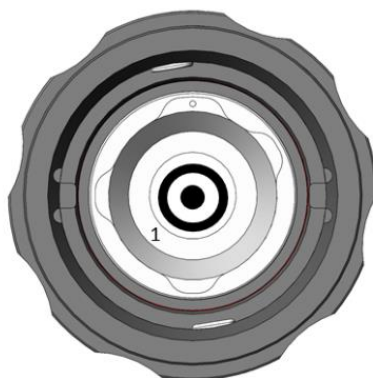


## Single Pole Version

### POW 300



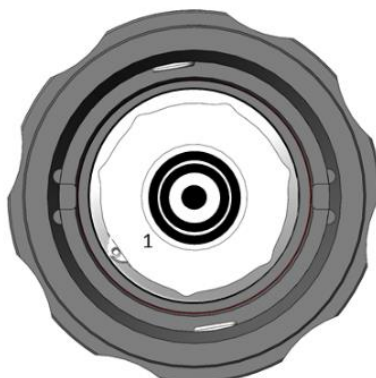
Contact Size E



### POW 400



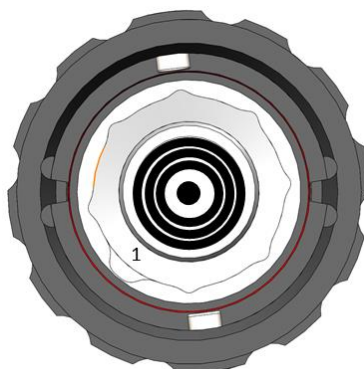
Contact Size F



### POW 600



Contact Size G



### POW 700



Contact Size G



Contact Size H





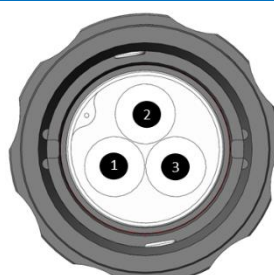
## Hybrid Insert Layouts

### POW 300

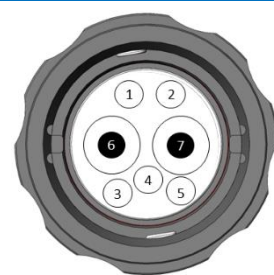
- Contact Size A
- Contact Size B



14 contacts



3 contacts



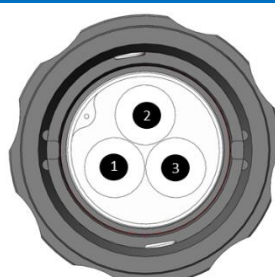
7 contacts

### POW 400

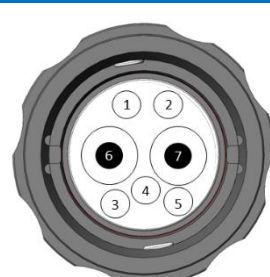
- Contact Size A
- Contact Size B



14 contacts



4 contacts



7 contacts

### POW 600

- Contact Size A
- ◉ Contact Size C
- Contact Size D



12 contacts



3 contacts



2 contacts

### POW 700

- Contact Size A
- Contact Size B
- ◉ Contact Size C
- Contact Size D
- ◉ Contact Size E



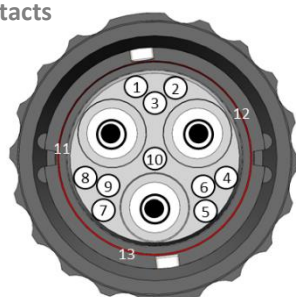
12 contacts



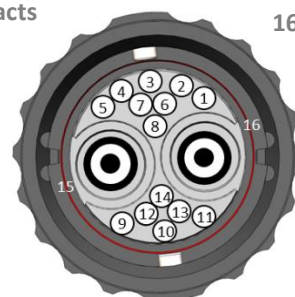
4 contacts



16 contacts



12 contacts



16 contacts

## Special Version according customer specification

| Connector family               |  | Digits                               |   |   |   |   |   |   |   |    |    |    |    |  |
|--------------------------------|--|--------------------------------------|---|---|---|---|---|---|---|----|----|----|----|--|
|                                |  | 1                                    | 2 | 3 | 4 | 5 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |  |
| [ ] - POW - [X][X][X]          |  | [U] - [X][X][X][X][X][X] - [X][X][X] |   |   |   |   |   |   |   |    |    |    |    |  |
| Shell Size:                    |  | Drawing Number                       |   |   |   |   |   |   |   |    |    |    |    |  |
| (according to MIL-C-38999-III) |  |                                      |   |   |   |   |   |   |   |    |    |    |    |  |
| - Size 15                      |  | 3                                    | 9 | 0 |   |   |   |   |   |    |    |    |    |  |
| - Size 17                      |  | 4                                    | 9 | 0 |   |   |   |   |   |    |    |    |    |  |
| - Size 21                      |  | 6                                    | 9 | 0 |   |   |   |   |   |    |    |    |    |  |
| - Size 25                      |  | 7                                    | 9 | 0 |   |   |   |   |   |    |    |    |    |  |

## BESPOKE SOLUTION

- Mixed power and signal, special configuration on demand.
- Special back shell.
- Special systems for locking and disconnection.

### Examples:

- Quick connect and disconnect connector with an emergency disconnection system (automatic disconnection when the pull force is higher than 400N).
  - Hybrid EMC connector with power (300A by contact) and signal contacts
  - 16 contacts in total
  - Finger proof
  - IP67 connected and disconnected shells
- Back shell adaptor to use various cable sizes with cable lugs for different configurations of applications.
  - Single pole EMC connector (cable between 50mm<sup>2</sup> to 250 mm<sup>2</sup>)
  - Straight configuration
  - Finger proof
  - IP67 connected and disconnected
- Charging connector for electrical plane
  - Hybrid EMC connector with 3 independent cable glands (2 powers and 1 signal)
  - 16 contacts in total.
  - Straight configuration
  - Finger proof
  - IP67 connected and disconnected

Our design office is at your service to customize connectors devices according to your application request. Don't hesitate to contact us.

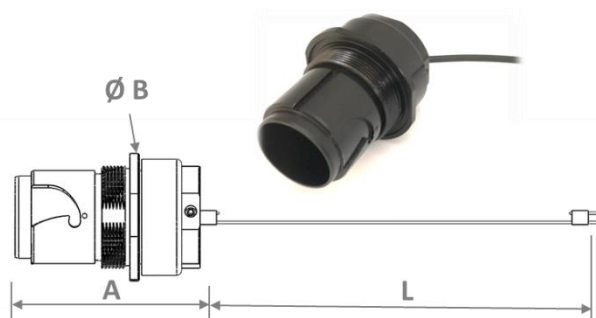
POW-XXX-X0PX0-XXX-XXXX-X

Cable length (L)

Type of the ring for fixing the cap

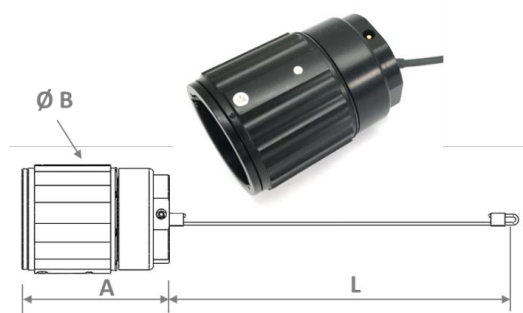
Type of plating

## Metal cap for Plugs



| Connector type | Dimensions (mm) |     |                                     |
|----------------|-----------------|-----|-------------------------------------|
|                | A               | Ø B | L                                   |
| POW 300        | 50              | 40  | Length<br>200 to 450 mm +/-<br>6 mm |
| POW 400        | 65              | 40  |                                     |
| POW 600        | 79              | 51  |                                     |
| POW 700        | 79              | 57  |                                     |

## Metal cap for Receptacles



| Connector type | Dimensions (mm) |     |                                  |
|----------------|-----------------|-----|----------------------------------|
|                | A               | Ø B | L                                |
| POW 300        | 45              | 35  | Length<br>200 to 450 mm +/- 6 mm |
| POW 400        | 59              | 38  |                                  |
| POW 600        | 73              | 47  |                                  |
| POW 700        | 73              | 53  |                                  |

POW-XXX-X0RX0-XXX-XXXX-X

Cable length (L)

Type of the ring for fixing the cap

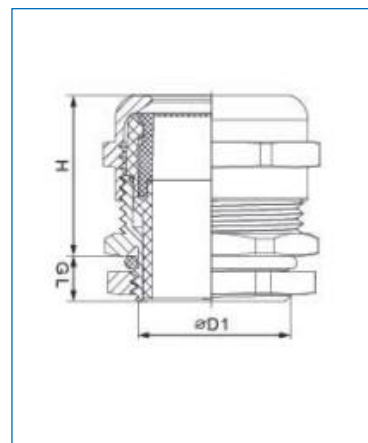
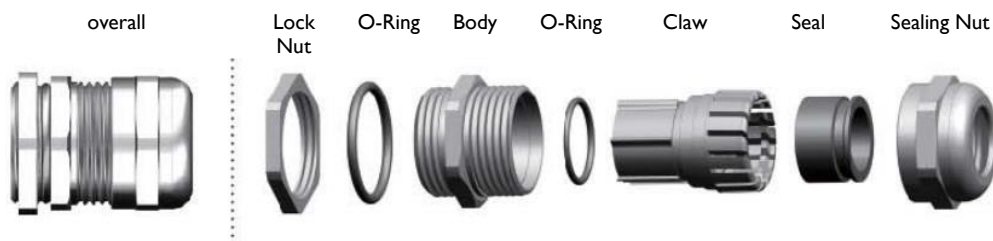
Type of plating



→ Metric metal cable gland

Metric Type  
Metal Cable  
Glands

Material : Nickel-Plated brass  
 Fixture material : PA(NYLON), UL 94 V-2  
 Seal: NBR (optional material EPDM, Silicone Rubber, TPV)  
 O-Ring: EPDM (optional material, Silicone Rubber, TPV, FPM)  
 Working temperature: -40°C to 100°C



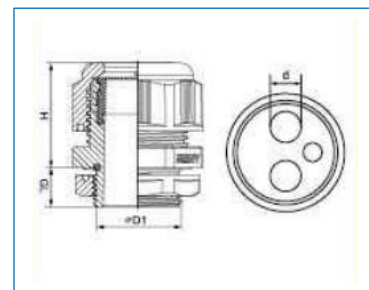
| Standard version on configuration table (page 28) | Thread<br>ØD1 | Hole diameter<br>Ø mm | H<br>mm | GL<br>mm |  mm | BERNIER Connect No. |
|---------------------------------------------------|---------------|-----------------------|---------|----------|------------------------------------------------------------------------------------------|---------------------|
| Standard                                          | M12 x 1.5     | 3-6.5                 | 19      | 6.5      | 14                                                                                       | POW1207BR           |
| On demand                                         | M12 x 1.5     | 2-5                   | 19      | 6.5      | 14                                                                                       | POW1205BR           |
| Standard                                          | M16 x 1.5     | 4-8                   | 21      | 6        | 17/19                                                                                    | POW1608BR           |
| On demand                                         | M16 x 1.5     | 2-6                   | 21      | 6        | 17/19                                                                                    | POW1606BR           |
| On demand                                         | M16 x 1.5     | 5-10                  | 22      | 6        | 20                                                                                       | POW1610BR           |
| Standard                                          | M20 x 1.5     | 6-12                  | 23      | 6        | 22                                                                                       | POW2012BR           |
| On demand                                         | M20 x 1.5     | 5-9                   | 23      | 6        | 22                                                                                       | POW2009BR           |
| On demand                                         | M20 x 1.5     | 10-14                 | 24      | 6        | 24                                                                                       | POW2014BR           |
| Standard                                          | M25 x 1.5     | 13-18                 | 25      | 7        | 30                                                                                       | POW2518BR           |
| On demand                                         | M25 x 1.5     | 9-16                  | 25      | 7        | 30                                                                                       | POW2516BR           |
| Standard                                          | M32 x 1.5     | 18-15                 | 31      | 8        | 40                                                                                       | POW3225BR           |
| On demand                                         | M32 x 1.5     | 13-20                 | 31      | 8        | 40                                                                                       | POW3220BR           |
| Standard                                          | M40 x 1.5     | 22-32                 | 37      | 8        | 50                                                                                       | POW4032BR           |
| On demand                                         | M40 x 1.5     | 20-26                 | 37      | 8        | 50                                                                                       | POW4026BR           |
| Standard                                          | M50 x 1.5     | 32-38                 | 37      | 9        | 57                                                                                       | POW5038BR           |
| On demand                                         | M50 x 1.5     | 25-31                 | 37      | 9        | 57                                                                                       | POW5031BR           |
| On demand                                         | M63 x 1.5     | 37-44                 | 38      | 10       | 64/68                                                                                    | POW6344BR           |
| Standard                                          | M63 x 1.5     | 29-35                 | 38      | 10       | 64/68                                                                                    | POW6335BR           |
| Standard                                          | M18 x 1.5     | 5-10                  | 22      | 6        | 20                                                                                       | POW1810BR           |
| On demand                                         | M18 x 1.5     | 3-7                   | 22      | 6        | 20                                                                                       | POW1807BR           |
| Standard                                          | M22 x 1.5     | 10-14                 | 24      | 6        | 24                                                                                       | POW2214BR           |
| On demand                                         | M22 x 1.5     | 7-12                  | 24      | 6        | 24                                                                                       | POW2212BR           |
| Standard                                          | M27 x 1.5     | 13-18                 | 25      | 7        | 30                                                                                       | POW2718BR           |
| On demand                                         | M27 x 1.5     | 9-16                  | 25      | 7        | 30                                                                                       | POW2716BR           |



Multiple-entry  
Metal Cable  
Glands Metric  
Length Type

➔ Multi entry metal cable gland

Material : Nickel-Plated brass  
 Fixture material : PA(NYLON), UL 94 V-2  
 Seal: NBR (optional material EPDM, Silicone Rubber, TPV)  
 O-Ring: EPDM (optional material, Silicone Rubber, TPV, FPM)  
 Working temperature: -40°C to 100°C  
 Number of holes Could be customized



Other material upon request  
 All O rings are pre-assembled as standard.

| No. Of Holes | Thread ØD1 | No. Of holes X cl mm | H mm | GL Mm | mm    | BERNIER Connect No.    |
|--------------|------------|----------------------|------|-------|-------|------------------------|
| 1            | M20S x 1.5 | 1 x 5                | 23   | 10    | 22    | POW20SBRL-H1-5         |
| 1            | M20S x 1.5 | 1 x 8                | 23   | 10    | 22    | POW20SBRL-H1-8         |
| 1            | M20B x 1.5 | 1 x 7.5              | 24   | 10    | 24    | POW20BBRL-H1-7.5       |
| 1            | M20B x 1.5 | 1 x 9                | 24   | 10    | 24    | POW20BBRL-H1-9         |
| 1            | M25 x 1.5  | 1 x 6                | 25   | 12    | 30    | POW25BRL-H1-6          |
| 1            | M25 x 1.5  | 1 x 7.5              | 25   | 12    | 30    | POW25BRL-H1-7.5        |
| 1            | M25 x 1.5  | 1 x 10               | 25   | 12    | 30    | POW25BRL-H1-10         |
| 1            | M40 x 1.5  | 1 x 33               | 37   | 15    | 50    | POW40BRL-H2-33         |
| 2            | M12 x 1.5  | 2 x 2.5              | 19   | 10    | 14    | POW12BRL-H2-2.5        |
| 2            | M12 x 1.5  | 2 x 2.8              | 19   | 10    | 14    | POW12BRL-H2-2.8        |
| 2            | M16S x 1.5 | 2 x 3                | 21   | 10    | 17/19 | POW16SBRL-H2-3         |
| 2            | M16B x 1.5 | 2 x 4                | 22   | 10    | 20    | POW16BBRL-H2-4         |
| 2            | M20S x 1.5 | 2 x 5                | 23   | 10    | 22    | POW20SBRL-H2-5         |
| 2            | M20B x 1.5 | 2 x 6                | 24   | 10    | 24    | POW20BBRL-H2-6         |
| 2            | M20B x 1.5 | 2 x 6.7              | 24   | 10    | 24    | POW20BBRL-H2-6.7       |
| 2            | M25 x 1.5  | 2 x 2.8              | 25   | 12    | 30    | POW25BRL-H2-8          |
| 2            | M25 x 1.5  | 2 x 4.4              | 25   | 12    | 30    | POW25BRL-H1-4.4        |
| 2            | M25 x 1.5  | 2 x 5.7              | 25   | 12    | 30    | POW25BRL-H1-5.7        |
| 2            | M25 x 1.5  | 5 + 8                | 25   | 12    | 30    | POW25BRL-H1-5(5+8)     |
| 2            | M25 x 1.5  | 2 x 6                | 25   | 12    | 30    | POW25BRL-H1-6          |
| 2            | M25 x 1.5  | 2 x 6.3              | 25   | 12    | 30    | POW25BRL-H1-6.3        |
| 2            | M25 x 1.5  | 2 x 8                | 25   | 12    | 30    | POW25BRL-H1-8          |
| 2            | M32 x 1.5  | 2 x 4.5              | 31   | 12    | 40    | POW32BRL-H1-4.5        |
| 3            | M12 x 1.5  | 3 x 1.5              | 19   | 10    | 14    | POW12BRL-H3-1.5        |
| 3            | M16S x 1.5 | 3 x 3                | 21   | 10    | 17/19 | POW12BRL-H-3           |
| 3            | M20S x 1.5 | 3 x 4                | 23   | 10    | 22    | POW20SBRL-H3-4         |
| 3            | M25 x 1.5  | 3 x 4.5              | 25   | 12    | 30    | POW25BRL-H3-4.5        |
| 3            | M25 x 1.5  | 3 x 6                | 25   | 12    | 30    | POW25BRL-H3-6          |
| 3            | M25 x 1.5  | 3 x 7                | 25   | 12    | 30    | POW25BRL-H3-7          |
| 3            | M32 x 1.5  | 1x6.7+2x10.2         | 31   | 12    | 40    | POW32BRL-H3-(6.7+10.2) |
| 3            | M32 x 1.5  | 1x7.6+2x11.7         | 31   | 12    | 40    | POW32BRL-H3-(7.6+11.7) |
| 3            | M63 x 1.5  | 3 x 6.5              | 49   | 15    | 64/68 | POW63SBRL-H3-6.5       |
| 4            | M16S x 1.5 | 4 x 2                | 21   | 10    | 17/19 | POW16SBRL-H4-2         |
| 4            | M25 x 1.5  | 4 x 5                | 25   | 12    | 30    | POW25BRL-H4-5          |
| 4            | M25 x 1.5  | 4 x 6                | 25   | 12    | 30    | POW25BRL-H4-6          |
| 4            | M32 x 1.5  | 4 x 7                | 31   | 12    | 40    | POW32BRL-H4-7          |
| 4            | M32 x 1.5  | 2x5+2x8              | 31   | 12    | 40    | POW32BRL-H4-(2x5+2x8)  |
| 4            | M32 x 1.5  | 4 x 8                | 31   | 12    | 40    | POW32BRL-H4-8          |
| 4            | M40 x 1.5  | 4 x 10               | 37   | 15    | 50    | POW40BRL-H4-10         |
| 5            | M25 x 1.5  | 5 X 4                | 25   | 12    | 30    | POW25BRL-H5-4          |
| 6            | M20S x 1.5 | 6 x 2.5              | 23   | 10    | 22    | POW20BRL-H6-2.5        |
| 6            | M20S x 1.5 | 5 X 3.2              | 23   | 10    | 22    | POW20SBRL-H6-3.2       |
| 6            | M32 x 1.5  | 6 x 6                | 31   | 12    | 40    | POW32BRL-H6-5          |
| 8            | M32 x 1.5  | 8 x 5                | 31   | 12    | 40    | POW32BRL-H8-6          |
| 8            | M40 x 1.5  | 8 x 6                | 37   | 15    | 50    | POW40BRL-H8-5          |
| 9            | M50 x 1.5  | 9 x 8                | 37   | 15    | 57    | POW50BRL-H9-8          |
| 25           | M50 x 1.5  | 25 x 5               | 37   | 15    | 57    | POW50BRL-H25-5         |





PG Type  
EMC Metal  
Cable  
Glands-Ring  
Type

→ Shielded metric metal cable gland

Material :

Seal:

O-Ring:

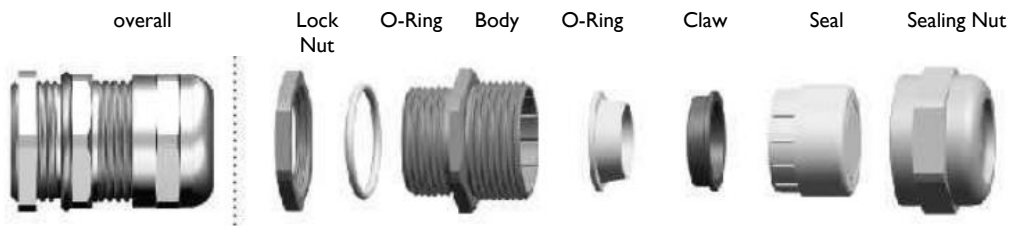
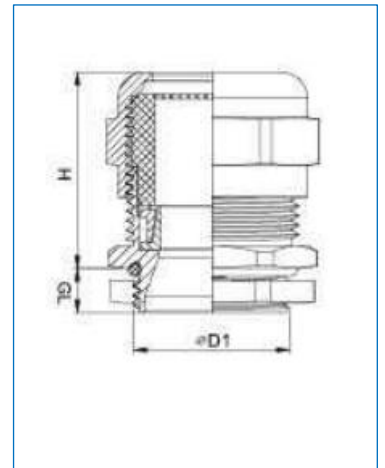
Working temperature:

Nickel-Plated brass

NBR (EPDM upon request)

EPDM (Silicone upon request)

-40°C to 100°C



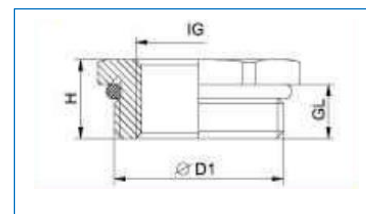
| Thread<br>ØD1 | Hole diameter<br>Ø mm | H<br>mm | GL<br>mm | <br>mm | BERNIER Connect No. |
|---------------|-----------------------|---------|----------|-------------------------------------------------------------------------------------------|---------------------|
| M12 x 1.5     | 3-6.5                 | 23      | 10       | 17                                                                                        | POW1207BRL-EMC-R    |
| M12 x 1.5     | 2-5                   | 23      | 10       | 17                                                                                        | POW1205BRL-EMC-R    |
| M16 x 1.5     | 4-8                   | 25      | 10       | 20                                                                                        | POW1608BRL-EMC-R    |
| M16 x 1.5     | 2-6                   | 25      | 10       | 20                                                                                        | POW1606BRL-EMC-R    |
| M16 x 1.5     | 5-10                  | 25      | 10       | 20                                                                                        | POW1610BRL-EMC-R    |
| M16x 1.5      | 3-7                   | 25      | 10       | 20                                                                                        | POW1607BRL-EMC-R    |
| M20 x 1.5     | 6-12                  | 28      | 10       | 24                                                                                        | POW2012BRL-EMC-R    |
| M20 x 1.5     | 5-9                   | 28      | 10       | 24                                                                                        | POW2009BRL-EMC-R    |
| M20 x 1.5     | 10-14                 | 28      | 10       | 24                                                                                        | POW2014BRL-EMC-R    |
| M25 x 1.5     | 13-18                 | 30      | 12       | 30                                                                                        | POW2518BRL-EMC-R    |
| M25 x 1.5     | 9-16                  | 30      | 12       | 30                                                                                        | POW2516BRL-EMC-R    |
| M32 x 1.5     | 18-21                 | 36      | 12       | 34                                                                                        | POW3221BRL-EMC-R    |
| M32 x 1.5     | 13-20                 | 36      | 12       | 34                                                                                        | POW3220BRL-EMC-R    |
| M40 x 1.5     | 20-28                 | 39      | 15       | 50                                                                                        | POW4028BRL-EMC-R    |
| M40 x 1.5     | 18-26                 | 39      | 15       | 50                                                                                        | POW4026BRL-EMC-R    |
| M50 x 1.5     | 30-35.5               | 41      | 15       | 57                                                                                        | POW5035BRL-EMC-R    |
| M50 x 1.5     | 25-31                 | 41      | 15       | 57                                                                                        | POW5031BRL-EMC-R    |



## ➔ Metal reducer – On demand

## Metal Reducer

Material : Nickel-Plated brass  
 O-Ring: Silicone rubber  
 Working temperature: -30°C to 80°C  
 Marking: Ex eb II C Gb/ Ex tD A2I IP68



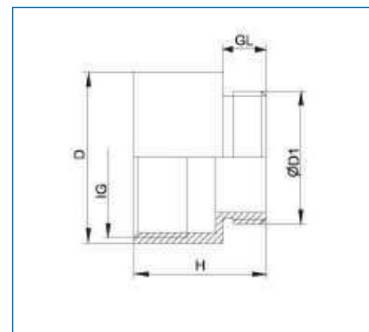
| Thread<br>ØD1 | IG<br>mm  | GL<br>mm | H<br>mm | <br>mm | BERNIER Connect<br>No. |
|---------------|-----------|----------|---------|-------------------------------------------------------------------------------------------|------------------------|
| MTR-M16 x 1.5 | M12 x 1.5 | 5        | 8       | 17                                                                                        | POWx-M1612BRR          |
| MTR-M20 x 1.5 | M12 x 1.5 | 6        | 9       | 22                                                                                        | POWx-M2012BRR          |
| MTR-M20 x 1.5 | M16 x 1.5 | 6        | 9       | 22                                                                                        | POWx-M2016BRR          |
| MTR-M25 x 1.5 | M16 x 1.5 | 7        | 10      | 27                                                                                        | POWx-M2516BRR          |
| MTR-M25 x 1.5 | M20 x 1.5 | 7        | 10      | 27                                                                                        | POWx-M2520BRR          |
| MTR-M32 x 1.5 | M16x 1.5  | 8        | 11      | 34                                                                                        | POWx-M3216BRR          |
| MTR-M32 x 1.5 | M20 x 1.5 | 8        | 11      | 34                                                                                        | POWx-M3220BRR          |
| MTR-M32 x 1.5 | M25 x 1.5 | 8        | 11      | 34                                                                                        | POWx-M3225BRR          |
| MTR-M40 x 1.5 | M20 x 1.5 | 8        | 12      | 43                                                                                        | POWx-M4020BRR          |
| MTR-M40 x 1.5 | M25 x 1.5 | 8        | 12      | 43                                                                                        | POWx-M4025BRR          |
| MTR-M40 x 1.5 | M32 x 1.5 | 8        | 12      | 43                                                                                        | POWx-M4032BRR          |
| MTR-M50 x 1.5 | M25 x 1.5 | 9        | 13      | 55                                                                                        | POWx-M5025BRR          |
| MTR-M50 x 1.5 | M32 x 1.5 | 9        | 13      | 55                                                                                        | POWx-M5032BRR          |
| MTR-M50 x 1.5 | M40 x 1.5 | 9        | 13      | 55                                                                                        | POWx-M5040BRR          |
| MTR-63 x 1.5  | M32 x 1.5 | 10       | 14      | 65                                                                                        | POWx-M6332BRR          |
| MTR-63 x 1.5  | M40 x 1.5 | 10       | 14      | 65                                                                                        | POWx-M6340BRR          |
| MTR-63 x 1.5  | M50 x 1.5 | 10       | 14      | 65                                                                                        | POWx-M5350BRR          |



## Metal Enlarger

➔ Metal enlarger – On demand

Material : Nickel-Plated brass  
 O-Ring: Silicone rubber  
 Working temperature: -30°C to 80°C  
 Marking: Ex eb II C Gb/ Ex tD A2I IP68



| Thread<br>ØD1 | IG<br>mm  | GL<br>mm | H<br>mm | <br>mm | Steele Connect<br>No. |
|---------------|-----------|----------|---------|-------------------------------------------------------------------------------------------|-----------------------|
| MTE-M12 x 1.5 | M16 x 1.5 | 5        | 15      | 18                                                                                        | POWx-M1216BRE         |
| MTE-M16 x 1.5 | M20 x 1.5 | 6        | 17.5    | 22                                                                                        | POWx-M1620BRE         |
| MTE-M20 x 1.5 | M25 x 1.5 | 6.5      | 19      | 27                                                                                        | POWx-M2025BRE         |
| MTE-M25 x 1.5 | M32 x 1.5 | 6.5      | 21      | 34                                                                                        | POWx-M2532BRE         |
| MTE-M32 x 1.5 | M40 x 1.5 | 7        | 23      | 42                                                                                        | POWx-M3240BRE         |
| MTE-M40 x 1.5 | M50 x 1.5 | 9        | 31      | 53                                                                                        | POWx-M4050BRE         |
| MTE-M50 x 1.5 | M63 x 1.5 | 9        | 31      | 66                                                                                        | POWx-M5053BRE         |



## CRIMPING TOOLS

Manual mechanic tool

**Reference B-TO00058**

Cable between 16 mm<sup>2</sup> to 70 mm<sup>2</sup> diameter



Electrical hydraulic tool

**Reference B-TO00064**

Cable between 95 mm<sup>2</sup> to 240mm<sup>2</sup> diameter.



| Cable*                                            |                               |       | Crimp Tool | Die       | Die Interface |
|---------------------------------------------------|-------------------------------|-------|------------|-----------|---------------|
| 10 mm <sup>2</sup><br>(Cross section)<br>AWG 7    | Conductor Ø (mm)              | 4,59  | B-TO00058  | B-TO00069 | /             |
|                                                   | Maximum Current (A)<br>@ 30°C | 120A  |            |           |               |
| 16 mm <sup>2</sup><br>(Cross section)<br>AWG 5    | Conductor Ø (mm)              | 6,15  | B-TO00058  | B-TO00063 | /             |
|                                                   | Maximum Current (A)<br>@ 30°C | 160A  |            |           |               |
| 25 mm <sup>2</sup><br>(Cross section)<br>AWG 4    | Conductor Ø (mm)              | 7,25  | B-TO00058  | B-TO00059 | /             |
|                                                   | Maximum Current (A)<br>@ 30°C | 210A  |            |           |               |
| 35 mm <sup>2</sup><br>(Cross section)<br>AWG 2    | Conductor Ø (mm)              | 8,68  | B-TO00058  | B-TO00060 | /             |
|                                                   | Maximum Current (A)<br>@ 30°C | 265A  |            |           |               |
| 50 mm <sup>2</sup><br>(Cross section)<br>AWG 0    | Conductor Ø (mm)              | 10,15 | B-TO00058  | B-TO00061 | /             |
|                                                   | Maximum Current (A)<br>@ 30°C | 330A  |            |           |               |
| 70 mm <sup>2</sup><br>(Cross section)<br>AWG 2/0  | Conductor Ø (mm)              | 12,32 | B-TO00058  | B-TO00062 | /             |
|                                                   | Maximum Current (A)<br>@ 30°C | 420A  |            |           |               |
| 95 mm <sup>2</sup><br>(Cross section)<br>AWG 3/0  | Conductor Ø (mm)              | 13,5  | B-TO00064  | B-TO00065 | B-TO00068     |
|                                                   | Maximum Current (A)<br>@ 30°C | 500A  |            |           |               |
| 120 mm <sup>2</sup><br>(Cross section)<br>AWG 250 | Conductor Ø (mm)              | 15,84 | B-TO00064  | B-TO00066 | B-TO00068     |
|                                                   | Maximum Current (A)<br>@ 30°C | 600A  |            |           |               |
| 150 mm <sup>2</sup><br>(Cross section)<br>AWG 300 | Conductor Ø (mm)              | 18    | B-TO00064  | B-TO00067 | B-TO00068     |
|                                                   | Maximum Current (A)<br>@ 30°C | 670A  |            |           |               |
| 185 mm <sup>2</sup><br>(Cross section)<br>AWG 350 | Conductor Ø (mm)              | 20,6  | B-TO00064  | B-TO00070 | B-TO00068     |
|                                                   | Maximum Current (A)<br>@ 30°C | 770A  |            |           |               |
| 240 mm <sup>2</sup><br>(Cross section)<br>AWG 500 | Conductor Ø (mm)              | 22    | B-TO00064  | B-TO00071 | B-TO00068     |
|                                                   | Maximum Current (A)<br>@ 30°C | 1000A |            |           |               |

|                                |                                                               |          |       | Digits |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|--------------------------------|---------------------------------------------------------------|----------|-------|--------|---------------------|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
|                                |                                                               |          |       | 1      | 2                   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|                                | POW                                                           | -        | X X X | -      | X                   | X | X | X | X | - | X | X | X  | -  | X  | X  | X  | -  | X  |
|                                |                                                               |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Shell Size:                    | - Size 15                                                     |          | 3 0 0 |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| (according to MIL-C-38999-III) | - Size 17                                                     |          | 4 0 0 |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Size 21                                                     |          | 6 0 0 |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Size 25                                                     |          | 7 0 0 |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Contact Termination:           | - Crimp                                                       |          |       | 0      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Screw (internal thread)                                     |          |       | 1      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Press Fit                                                   |          |       | 2      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Welding Friction                                            |          |       | 3      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Screw (extrenal thread)                                     |          |       | 4      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Flat Tail                                                   |          |       | 5      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Contact type:                  | - Without contact                                             |          |       |        | O                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Socket                                                      |          |       |        | S                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Pin                                                         |          |       |        | P                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Type of shell:                 | - Receptacle, Straight                                        |          |       | 0      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle, Wall Mount 4-Screw, Straight                    |          |       | 1      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle, 4-Screw Straight                                |          |       | 2      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Plug, Straight                                              |          |       | 5      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Plug, Right Angle                                           |          |       | 6      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle, Jam Nut, Straight                               |          |       | 7      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle, Jam Nut, Right Angle                            |          |       | 8      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle, Wall Mount & Jam Nut, Straight                  |          |       | 9      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle, Wall Mount 4-Screw, Right Angle                 |          |       | A      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle 4-Screw Right Angle                              |          |       | B      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle, Wall Mount & Jam Nut, Right Angle               |          |       | C      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle Jam Nut & 4 screw Wall Mount                     |          |       | D      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Receptacle Jam Nut & 4 screw Wall Mount Right Angle         |          |       | E      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Cap for Plug                                                |          |       | P      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Cap for Receptacle                                          |          |       | R      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Screen Conductivity:           | - Non Shielded:                                               |          |       | 0      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| (EMC)                          | - Shielded                                                    |          |       | 1      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Cable Interface:               | - Null                                                        |          |       | 0      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Shrink boot                                                 |          |       | 1      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Cable Gland (metric thread) non shielded                    |          |       | 2      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Cable Gland (metric thread) shielded                        |          |       | 3      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Cable cross-section:           | - 10 mm²                                                      | #AWG 7   |       |        | # diam Env 3,665 mm | 0 | 1 | 0 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 16 mm²                                                      | #AWG 5   |       |        | # diam Env 4,621 mm | 0 | 1 | 6 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 25 mm²                                                      | #AWG 4   |       |        | # diam Env 5,189 mm | 0 | 2 | 5 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 35 mm²                                                      | #AWG 2   |       |        | # diam Env 6,54 mm  | 0 | 3 | 5 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 50 mm²                                                      | #AWG 0   |       |        | # diam Env 8,25 mm  | 0 | 5 | 0 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 70 mm²                                                      | #AWG 2/0 |       |        | # diam Env 9,27 mm  | 0 | 7 | 0 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 95 mm²:                                                     | #AWG 3/0 |       |        | # diam Env 10,40 mm | 0 | 9 | 5 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 120 mm²                                                     | #AWG 250 |       |        | # diam Env 14,6 mm  | 1 | 2 | 0 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 150 mm²                                                     | #AWG 300 |       |        | # diam Env 16,0 mm  | 1 | 5 | 0 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 185 mm²                                                     | #AWG 350 |       |        | # diam Env 17,3 mm  | 1 | 8 | 5 |   |   |   |   |    |    |    |    |    |    |    |
|                                | - 240 mm²                                                     | #AWG 500 |       |        | # diam Env 20,7 mm  | 2 | 4 | 0 |   |   |   |   |    |    |    |    |    |    |    |
| Contact Raw Material :         | - Copper                                                      |          |       | 0      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Aluminum                                                    |          |       | 1      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Ring for cap fixing:           | - Ring, Receptacle, Jam Nut                                   |          |       | A      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Ring, Plug                                                  |          |       | B      |                     |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Contact Protection:            | - Silver                                                      |          |       |        | A                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Gold                                                        |          |       |        | B                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Shell plating:                 | - Anodic Oxidation                                            |          |       |        | G                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Black Zink Nickel                                           |          |       |        | B                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Stainless steel                                             |          |       |        | S                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                                | - Olive Drab Cadmium                                          |          |       |        | C                   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Insulator :                    | - Standard                                                    |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    | 1  |    |
|                                | - Standard with pilot contacts                                |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    | A  |    |
|                                | - High temperature                                            |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    | 2  |    |
|                                | - High temperature with pilot contacts                        |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    | B  |    |
|                                | - According to EN45545 (Fire and smoke toxicity requirements) |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    | 3  |    |
| Color coding ring:             | - No Coding                                                   |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    | X  |
|                                | - Red                                                         |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    | R  |
|                                | - Yellow                                                      |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    | Y  |
|                                | - Green                                                       |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    | G  |
|                                | - Blue                                                        |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    | B  |
|                                | - Orange                                                      |          |       |        |                     |   |   |   |   |   |   |   |    |    |    |    |    |    | O  |

|                        |                                                               |          |       | Digits |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|------------------------|---------------------------------------------------------------|----------|-------|--------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
|                        |                                                               |          |       | 1      | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|                        | POW                                                           | -        | X X X | X      | X | X | X | X | - | X | X | X | X  | X  | -  | X  | X  | -  | X  |
| Shell                  | - Size 15                                                     |          | 3 9 0 |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Size 17                                                     |          | 4 9 0 |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Size 21                                                     |          | 6 9 0 |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Size 25                                                     |          | 7 9 0 |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Contact Termination:   | - Crimp                                                       |          |       | 0      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Screw (internal thread)                                     |          |       | 1      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Press Fit                                                   |          |       | 2      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Welding Friction                                            |          |       | 3      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Screw (external thread)                                     |          |       | 4      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Flat Tail                                                   |          |       | 5      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Specific (Mixed)                                            |          |       | 1      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Type of shell:         | - Receptacle, Straight                                        |          |       | 0      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle, Wall Mount 4-Screw, Straight                    |          |       | 1      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle, 4-Screw Straight                                |          |       | 2      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Plug, Straight                                              |          |       | 5      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Plug, Right Angle                                           |          |       | 6      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle, Jam Nut, Straight                               |          |       | 7      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle, Jam Nut, Right Angle                            |          |       | 8      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle, Wall Mount & Jam Nut, Straight                  |          |       | 9      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle, Wall Mount 4-Screw, Right Angle                 |          |       | A      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle 4-Screw Right Angle                              |          |       | B      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle, Wall Mount & Jam Nut, Right Angle               |          |       | C      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle Jam Nut & 4 screw Wall Mount                     |          |       | D      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Receptacle Jam Nut & 4 screw Wall Mount Right Angle         |          |       | E      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Cap for Plug                                                |          |       | P      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Cap for Receptacle                                          |          |       | R      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Screen                 | - Non Shielded:                                               |          |       | 0      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Shielded                                                    |          |       | 1      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Cable Interface:       | - Null                                                        |          |       | 0      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Shrink boot                                                 |          |       | 1      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Cable Gland (metric thread) non shielded                    |          |       | 2      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Cable Gland (metric thread) shielded                        |          |       | 3      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Nb. of                 | 1,2,3,4,5,6,7,8 and 9                                         |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Power                  | - 4 mm <sup>2</sup>                                           | #AWG 12  |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 6 mm <sup>2</sup>                                           | #AWG 10  |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 8 mm <sup>2</sup>                                           | #AWG 8   |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 10 mm <sup>2</sup>                                          | #AWG 7   |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 16 mm <sup>2</sup>                                          | #AWG 5   |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 25 mm <sup>2</sup>                                          | #AWG 4   |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 35 mm <sup>2</sup>                                          | #AWG 2   |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 50 mm <sup>2</sup>                                          | #AWG 0   |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 70 mm <sup>2</sup>                                          | #AWG 2/0 |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 95 mm <sup>2</sup>                                          | #AWG 3/0 |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 120 mm <sup>2</sup>                                         | #AWG 250 |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 150 mm <sup>2</sup>                                         | #AWG 300 |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 185 mm <sup>2</sup>                                         | #AWG 350 |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - 240 mm <sup>2</sup>                                         | #AWG 500 |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Power Contact Type:    | - Pin                                                         |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Socket                                                      |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Nb. of signal contact: | 1,2,3,4,5,6,7,8,9                                             |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | 10                                                            |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | 11                                                            |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | 12                                                            |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | 13                                                            |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Signal Contact Type:   | - Pin                                                         |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Socket                                                      |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Shell plating:         | - Anodic Oxidation                                            |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Black Zink Nickel                                           |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Stainless steel                                             |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Olive Drab Cadmium                                          |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Standard                                                    |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Standard with pilot contacts                                |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - High temperature                                            |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - High temperature with pilot contacts                        |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - According to EN45545 (Fire and smoke toxicity requirements) |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| Color coding ring:     | - No Coding                                                   |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Red                                                         |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Yellow                                                      |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Green                                                       |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Blue                                                        |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|                        | - Orange                                                      |          |       |        |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |





## NOTES



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