

PV-Connectors

User Guide



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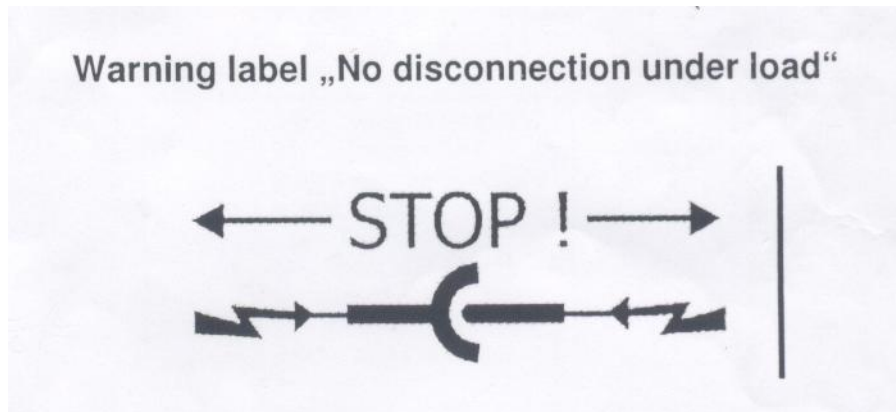
For your safety



During self assembly, connectors and assemble tools except those stated by us are used or if the user's guide here are disregarded then neither safety nor compliance with the technical data can be guaranteed.



PV plug connectors must not be connecting or disconnecting while under load. Disconnected connectors should be protected from water and dirt with cover.



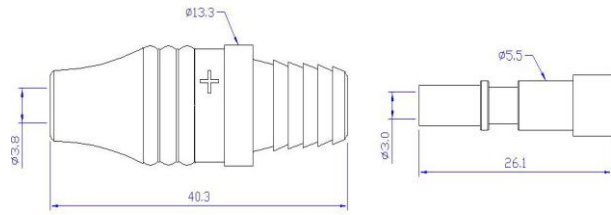
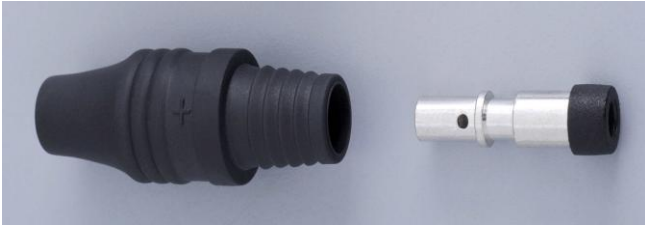
PV plug connectors while connected, must be turned to the end and no gap may be visible between the interconnected connectors.



PV plug connectors after connection, must be fixed together with the cable on the back of the PV-module, it will be prevent any harm or movement between the connectors or cables.

Cable Connector

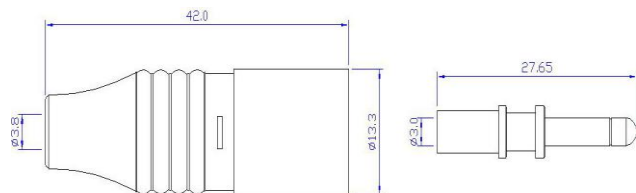
PV-P1



Rated current	20A
Rated voltage	1000V
Rated Impulse voltage	8kV
Overvoltage category	III
Pollution degree	3
Protection class	IP67
Ambient temperature range	-40~+85 °C
Upper limiting temperature	125°C
Contact resistance	0.5 mΩ

Contact material	Cu/Tin plated
Cable outer diameter	Φ5.1-6.4mm
Cable cross section	2.5-4.0 mm ²
Socket insulator	Φ3.0mm
Insulation material	TPE/PA
Insertion force	≤ 50 N
Withdrawal force	≥ 50 N
Safety class	II
Flame class	UL94-HB/UL94-V0

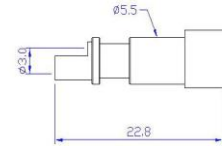
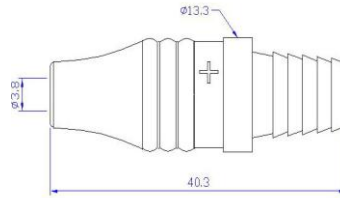
PV-J1



Rated current	20A
Rated voltage	1000V
Rated Impulse voltage	8kV
Overvoltage category	III
Pollution degree	3
Protection class	IP67
Ambient temperature range	-40~+85 °C
Upper limiting temperature	125°C
Contact resistance	0.5 mΩ

Contact material	Cu/Tin plated
Cable outer diameter	Φ5.1-6.4mm
Cable cross section	2.5-4.0 mm ²
Pin insulator	Φ3.0mm
Insulation material	TPE/PA
Insertion force	≤ 50 N
Withdrawal force	≥ 50 N
Safety class	II
Flame class	UL94-HB/UL94-V0

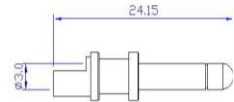
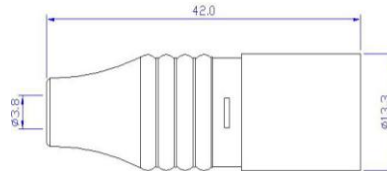
PV-P1B



Rated current	20A
Rated voltage	1000V
Rated Impulse voltage	8kV
Overvoltage category	III
Pollution degree	3
Protection class	IP67
Ambient temperature range	-40~+85 °C
Upper limiting temperature	125°C
Contact resistance	0.5 mΩ

Contact material	Cu/Tin plated
Cable outer diameter	Φ5.1-6.4mm
Cable cross section	2.5-4.0 mm ²
Socket insulator	Φ3.0mm
Insulation material	TPE/PA
Insertion force	≤50 N
Withdrawal force	≥50 N
Safety class	II
Flame class	UL94-HB/UL94-V0

PV-J1B

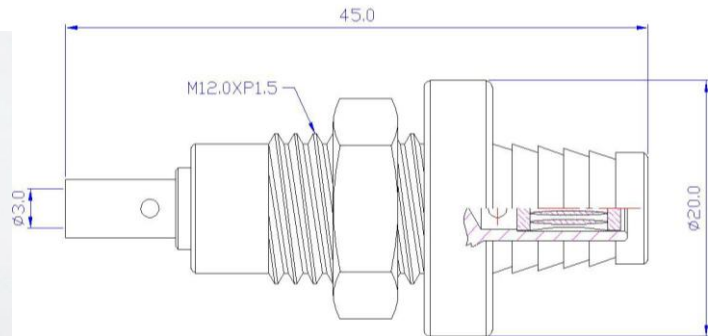


Rated current	20A
Rated voltage	1000V
Rated Impulse voltage	8kV
Overvoltage category	III
Pollution degree	3
Protection class	IP67
Ambient temperature range	-40~+85 °C
Upper limiting temperature	125°C
Contact resistance	0.5 mΩ

Contact material	Cu/Tin plated
Cable outer diameter	Φ5.1-6.4mm
Cable cross section	2.5-4.0 mm ²
Pin insulator	Φ3.0mm
Insulation material	TPE/PA
Insertion force	≤50 N
Withdrawal force	≥50 N
Safety class	II
Flame class	UL94-HB/UL94-V0

Panel Connector

PV-P2

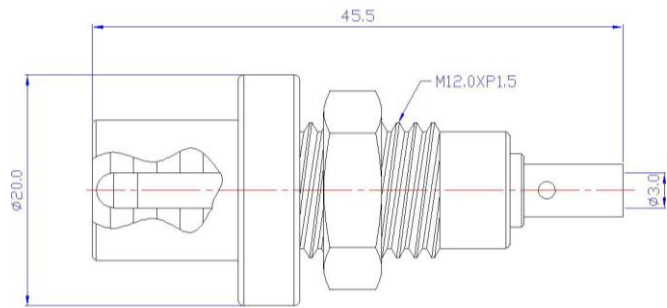


Rated current	20A
Rated voltage	1000V
Rated Impulse voltage	8kV
Overvoltage category/ Pollution degree	III/3
Protection class	IP67*
Ambient temperature range	-40~+85 °C
Upper limiting temperature	125°C
Contact resistance	0.5 mΩ

*to the housing wall

Contact material	Cu/Tin plated
Cable cross section	2.5-4.0 mm ²
Insulation material	PA
Cable connection diameter	Φ3.0mm
Insertion force	≤50 N
Withdrawal force	≥50 N
Safety class	II
Flame class	UL94-V0

PV-J2



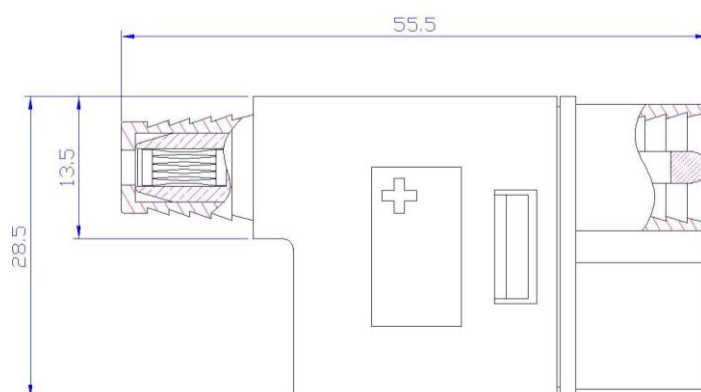
Rated current	20A
Rated voltage	1000V
Rated Impulse voltage	8kV
Overvoltage category/ Pollution degree	III/3
Protection class	IP67*
Ambient temperature range	-40~+85 °C
Upper limiting temperature	125°C
Contact resistance	0.5 mΩ

*to the housing wall

Contact material	Cu/Tin plated
Cable cross section	2.5-4.0 mm ²
Insulation material	PA
Cable connection diameter	Φ3.0mm
Insertion force	≤ 50 N
Withdrawal force	≥ 50 N
Safety class	II
Flame class	UL94-V0

Branch Connector

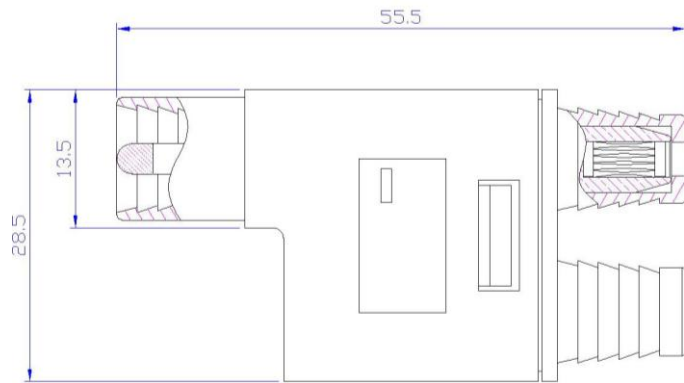
PV-PJS3



Rated current	20A
Rated voltage	1000V
Rated Impulse voltage	8kV
Overvoltage category/ Pollution degree	III/3
Ambient temperature range	-40~+85 °C
Upper limiting temperature	125°C
Contact resistance	0.5 mΩ

Contact material	Cu/Tin plated
Protection class	IP67
Insulation material	PA
Insertion force	≤50 N
Withdrawal force	≥50 N
Safety class	II
Flame class	UL94-V0

PV-PJB3



Rated current	20A
Rated voltage	1000V
Rated Impulse voltage	8kV
Overvoltage category/ Pollution degree	III/3
Ambient temperature range	-40~+85 °C
Upper limiting temperature	125°C
Contact resistance	0.5 mΩ

Contact material	Cu/Tin plated
Protection class	IP67
Insulation material	PA
Insertion force	≤50 N
Withdrawal force	≥50 N
Safety class	II
Flame class	UL94-V0

Assembly Instructions

Cable Connector

Cable preparation and diameter standards

For ensure that the PV connectors is sufficiently waterproof, we used the double insulated cables from U.I Lapp GmbH LAPPTHERM Ölflex SOLAR XL multi 1*2.5mm² , 1*4mm² , because it have enough adhesion between the layers of cables, and the diameter of the connecting cables must be within the ranges standards for the housing, to prevent sliding.

Crimping tools

For ensure the conductors and crimping sleeves is sufficiently strong after crimped, please use crimping tools that is fit for our cable standards.

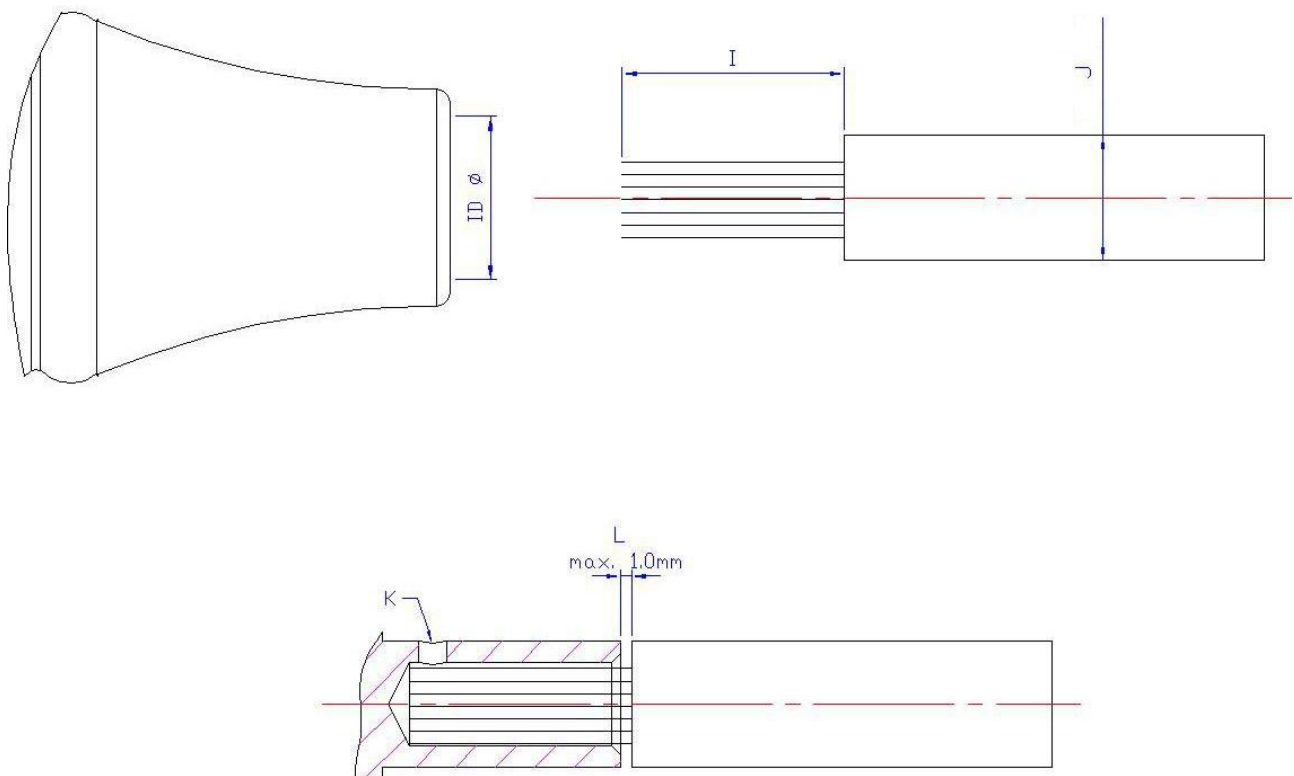


Crimping

Insert conductor into crimping sleeves until stop, the conductor must be visible in the side hole (K).

Make sure all conductor wires are completely inserted into the crimping sleeves end, the dimensions is not over 1 mm between the crimping sleeves and insulated cables.

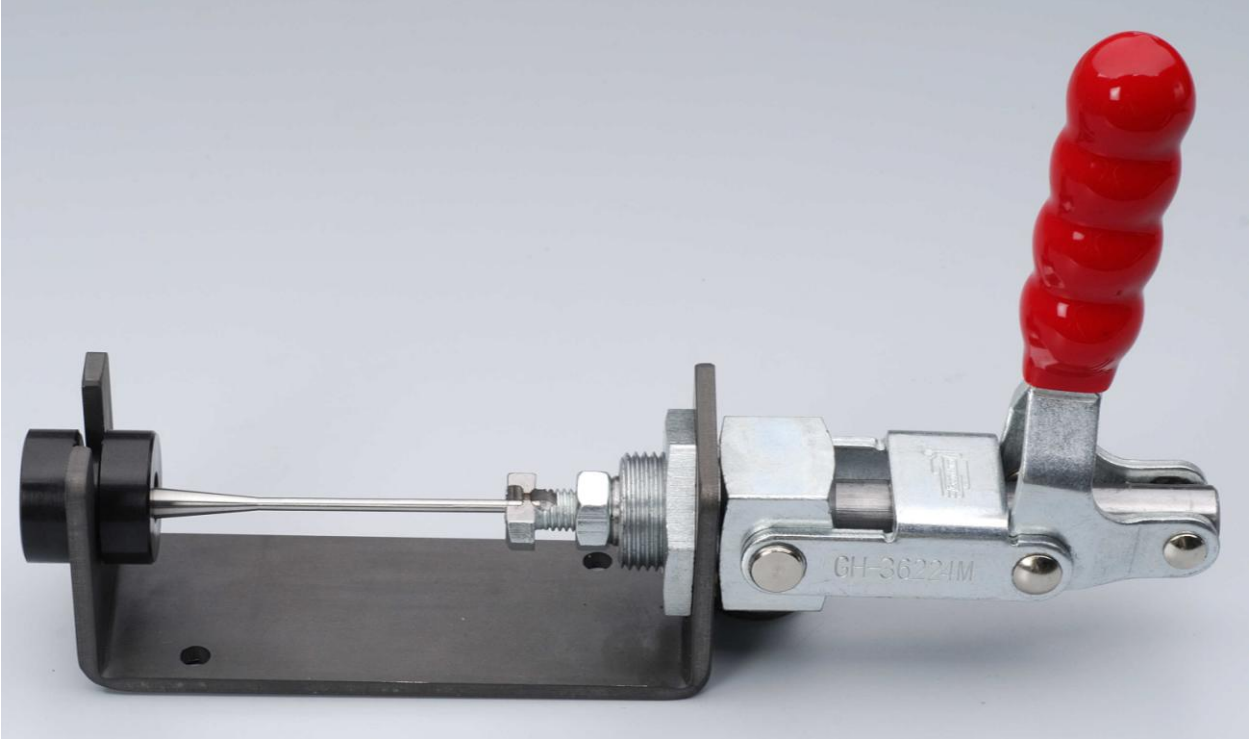
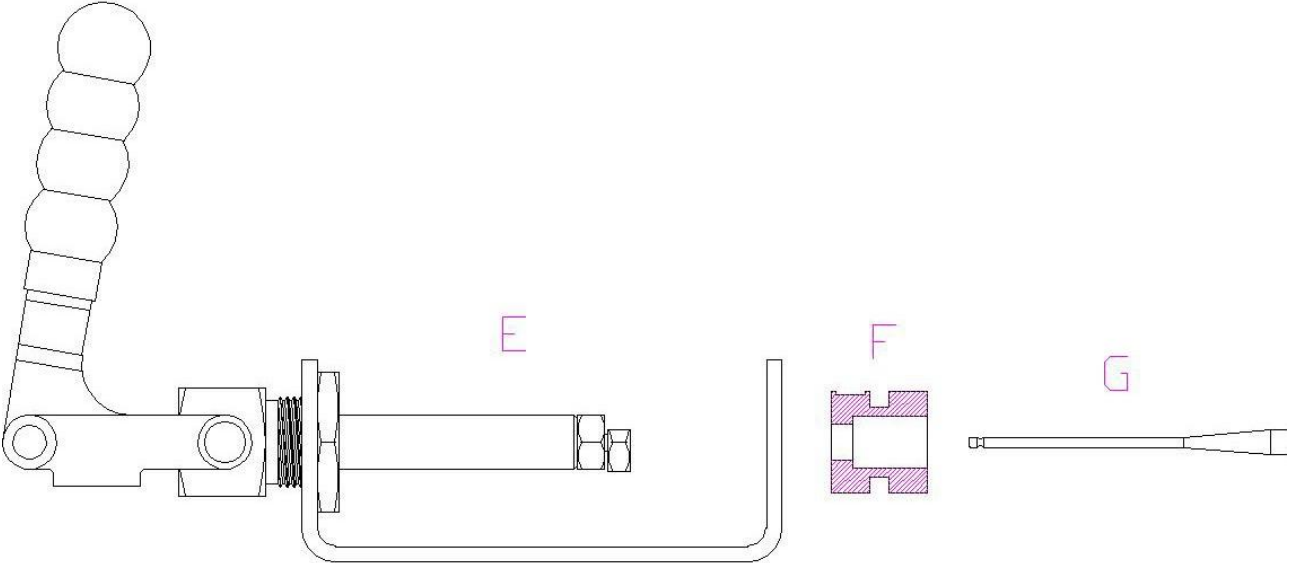
ID	Φ 3.8mm
I	7.0mm~7.5mm
J	5.1mm~6.4mm
conductor	2.5mm ² ~4.0mm ²



Assembly

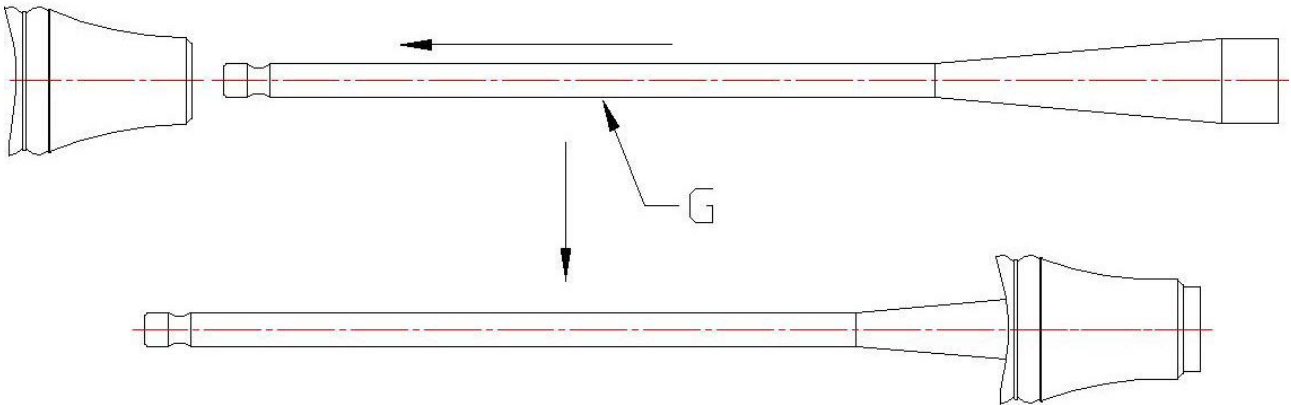
Tool required

Assembly device with assembly tool (E), reversible holder (F), tapered spindle (G).



Step 1 :

Push tapered spindle (G) through housing until the end is nearly flush with housing.

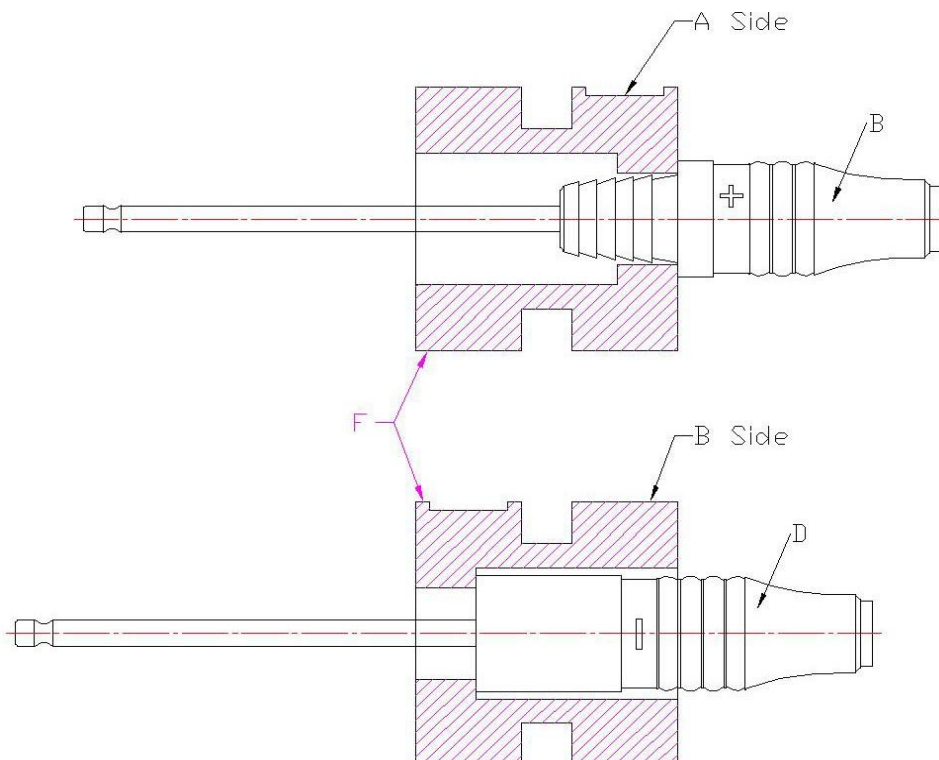


Note:

For easily installation the sockets or pins to the housing, please immerse housing in the industrial alcohol before inserting tapered spindle.

Step 2 :

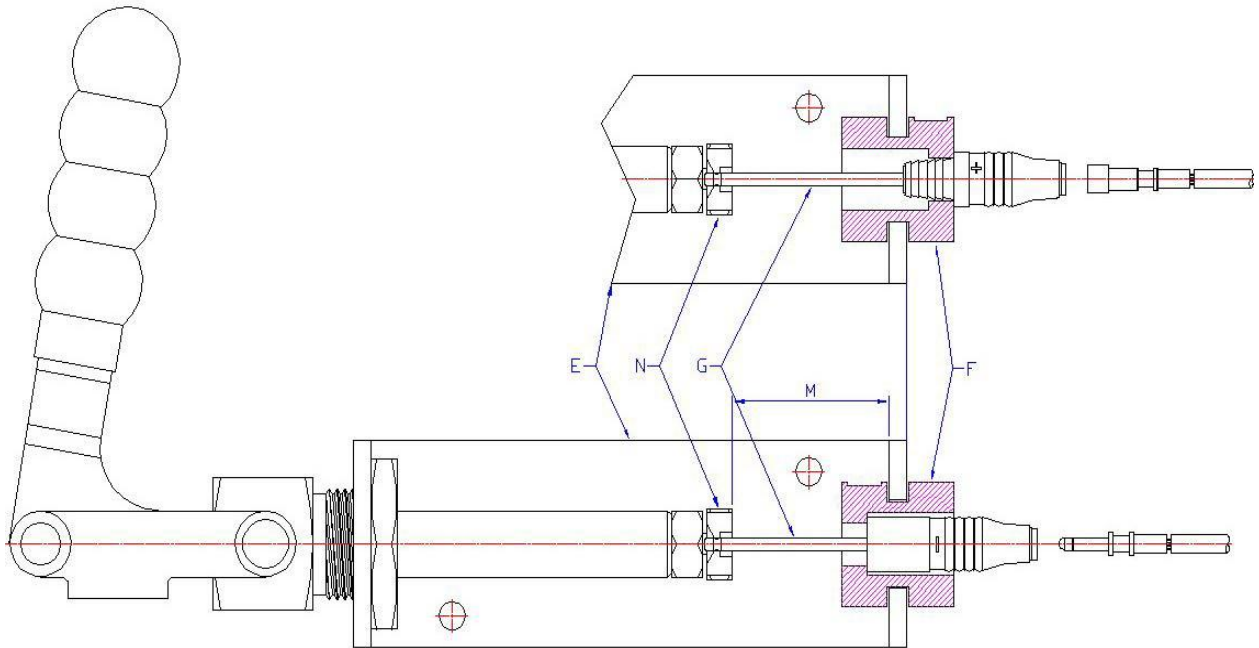
Insert into reversible holder (F) from the front, for housing (B) please use side A to faces the housing. For housing (D) please use side B to faces the housing.



Step 3 :

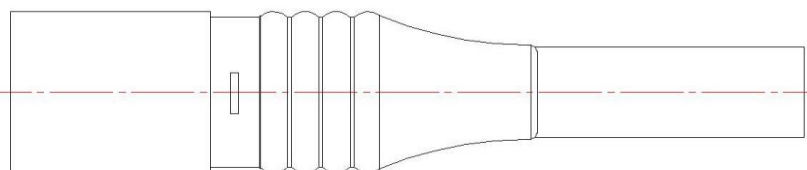
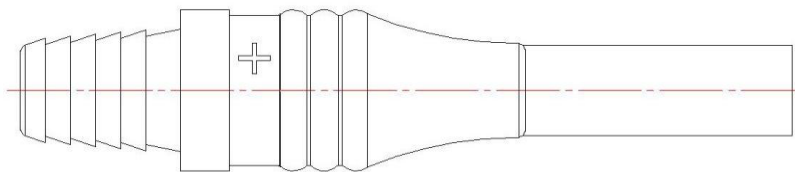
Moving the lever to the top and adjust the pull stick (N) to set the dimension (M) to $23.5 \text{ mm} \pm 1 \text{ mm}$, set the reversible holder (F) on the assembly tool (E) and use the lever to adjust the pull stick (N) until it can reach and hold the tapered spindle (G).

Insert socket or pin into the hole of tapered spindle then applying pressure to push the cable and moving the lever to the end position at same time, pull off the mounted socket or pin with housing.



Step 4 :

Make sure the housing is completely assembled with the socket or pin, if it has been assembled correctly; they will be flush with the end of the housing.



Step 5 :

Please stick the caution label after you assembled



Panel Connector

Cable preparation and diameter standards

For ensure that the PV connectors is sufficiently waterproof, when using the double insulated cables, must have enough adhesion between the layers of cables, and the diameter of the connecting cables must be within the ranges standards for the housing, to prevent sliding.

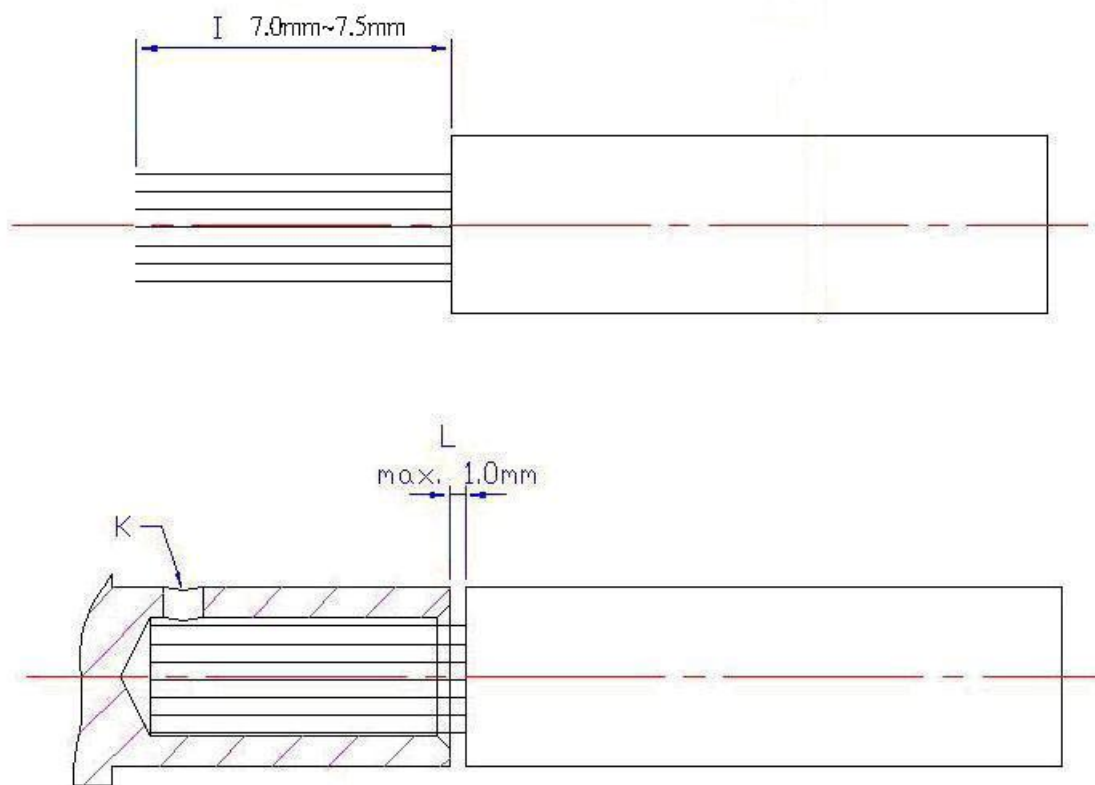
Crimping tools



For ensure the conductors and crimping sleeves is sufficiently strong after crimped, please use crimping tools that is fit for our cable standards.

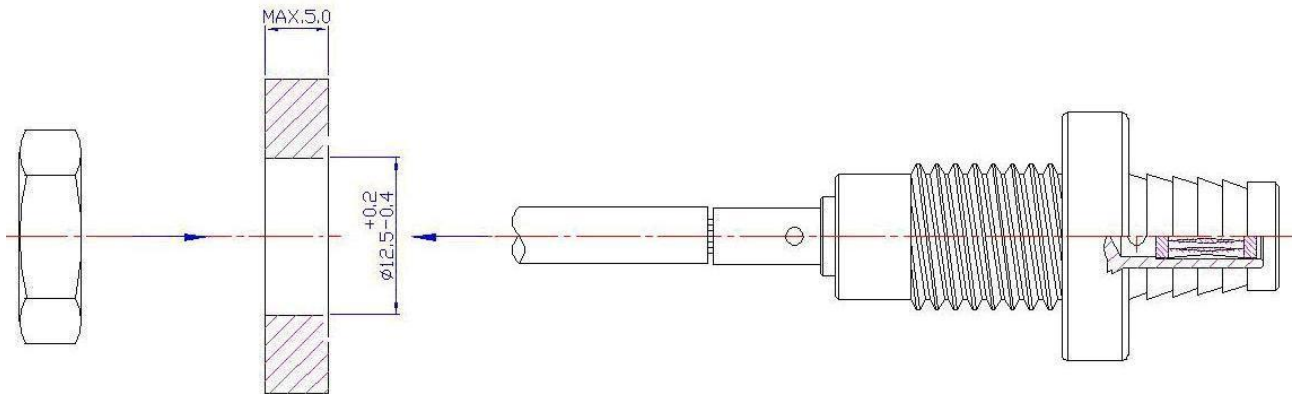
Crimping

Insert conductor into crimping sleeves until stop, the conductor must be visible in the side hole (K). Make sure all conductor wires are completely inserted into the crimping sleeves end, the dimensions is not over 1 mm between the crimping sleeves and insulated cables.



Assembly

Drill the junction box wall. Feed crimped cable with panel receptacles through the drill hole. Screw on the hex. Nut by hand.



Attention

It is important that the panel receptacles are fixed with the delivered plastic nuts.

Branch Connector

By the installation of modules connected in parallel, it is important to observe the correct interconnection of the strings

