Water-proof shielded 220A connector

EV2 Series



■Features

1.The connection is made using a multi-purpose crimp contact.
The EV2 connector replaces conventional screw terminated connections creating a stable electrical connection.

2.Rated current of 220A using 40mm² cables. (Ambient Temperature 25℃)
This product is mainly used for power supply.

3.Resistant to random vibration (ISO 16750-3, JASO D 014-3)

4. Water-proof design, meets IP68
Oil-resistant through use of specialized rubber.

5. Shield design for noise reduction
Designed to connect the braided shield of the cable with the connector body.

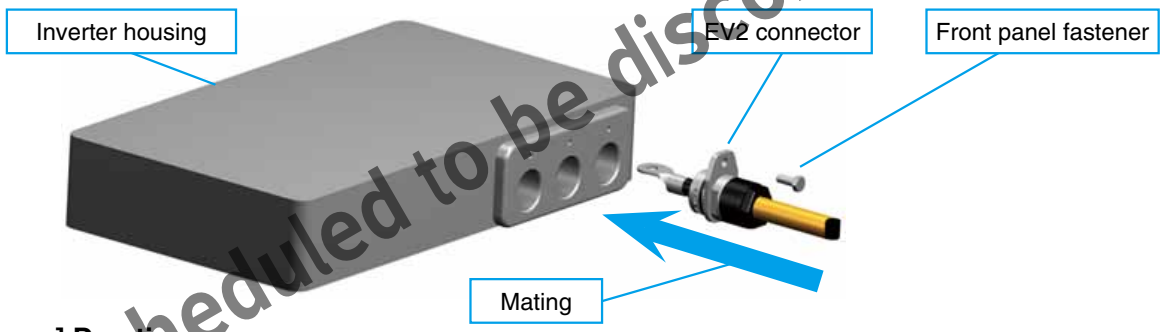
6. TÜV pending

7. RoHS supported.

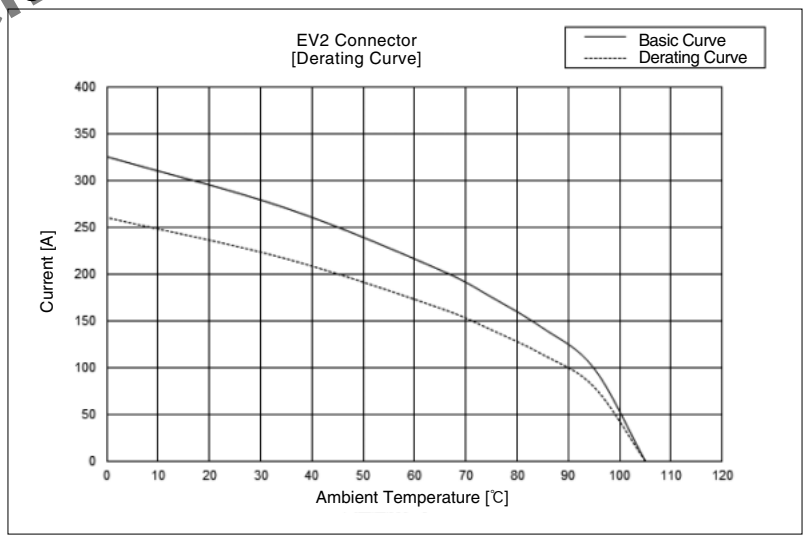
【Scheduled to be discontinued】

■Connector connection is possible.

Using a multi-purpose crimp contact, mating operation and bolt fastening completes the connection.



[Reference] Derating curve



Note 1 : The derating curve is derived from the basic curve multiplied by the derating factor of 0.8.
Note 2 : The value of rated current varies with the ambient temperature. It is recommended to use the product within the derating curve zone.
When using a TÜV approved product, please use the product within the specified range as well as the derating curve aera.
Note 3 : The measurement method of the derating curve is shown below.
Test specimen : This product, unused prior to testing.
Test cable conductor cross sectional area : Receptacle side (38mm²)
Plug side (40mm²)
Test condition : Power supplied while the specimen is in a stationary state and then measured.

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■Applications

Hybrid construction equipment , power conditioners, machine tools, small generators, and other inverter sections.

■Product Specifications

Ratings	Rated voltage	AC 800V, DC 800V	Operating temperature range	-40℃ to +105℃ (Note 1)
	Rated current (Note 3)	220A (Ambient Temperature 25℃)	Storage temperature range	-10℃ to +60℃
TÜV Pending	Rated voltage	AC 1000V, DC 1000V	Operating temperature range	-40℃ to +105℃ (Note 1)
	Rated current (Note 3)	200A	Storage temperature range	-10℃ to +60℃

Note 1 : Including temperature rise due to current carrying.
Note 2 : The value of rated current varies with the ambient temperature. It is recommended to use the product within the derating curve zone. When using a TÜV approved product, please use the product within the specified range as well as the derating curve aera.

Item	Specifications	Conditions
1. Contact resistance	Contact part : 0.5mΩ or less Between the exterior and the cable shield 100mΩ or less	Measured at DC 1A
2. Insulation resistance	1000MΩ or more	Measured at DC 500V
3. Withstanding voltage	No flashover or breakdown	Apply AC 4260V for 1 minute.
4. Repeated operation	①Contact resistance : Maximum of 1mΩ ②Insertion and removal force : Maximum of 200N	30 times of repeated operation
5. Vibration resistance	①No electrical discontinuity of 10μs or more ②No damage, crack or loosened parts.	Testing conditions : frequency range : 10 to 2000Hz, average acceleration 57.9m/s² in 3 directions for 8 hours each (ISO 16750-3, JASO D 014-3)
6. Shock resistance	①No electrical discontinuity of 10μs or more ②No damage, crack or loosened parts.	Testing conditions: acceleration : 490m/s², duration : 11ms, and half-sine wave in 3 directions, 3 cycles for each
7. Temperature cycles	Insulation resistance : Minimum of 100MΩ	-40℃ : 30 minutes → Room temperature : 2 to 3 minutes → 125℃ : 30 minutes → Room temperature : 2 to 3 minutes, 5 cycles
8. Brine spraying	No considerable corrosion impairing electric/mechanical functions.	Left in the brine of 5% concentration for 48 hours.
9. Moisture resistance (Steady state)	Insulation resistance : Minimum of 100MΩ (When dried)	Left at a temperature of 40°C and in humidity of 90 to 95% for 96 hours.
10. Pressure-resistance	While the connector is mated with the applicable panel, apply an air pressure of 17.6kPa in the internals of the connector for 30 seconds.	No air bubbles generated from the internals of the connector.

[Scheduled to be discontinued]

■Materials / Finish

Item	Materials	Finish	Remarks
Resin parts	PPS resin (Black)	————	UL94V-0
Contact spring	Stainless steel	————	————
Conductor section	Copper alloy	Tin plated	————
Nut	Iron	Nickel plated	————
O-ring	Nitrile hydride rubber	————	————
Gasket	Fluororubber	————	————

※Use commercially available M6 bolts, crimp contacts, and electric wires.
Recommended crimping contact : R38-8 manufactured by JST

■Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

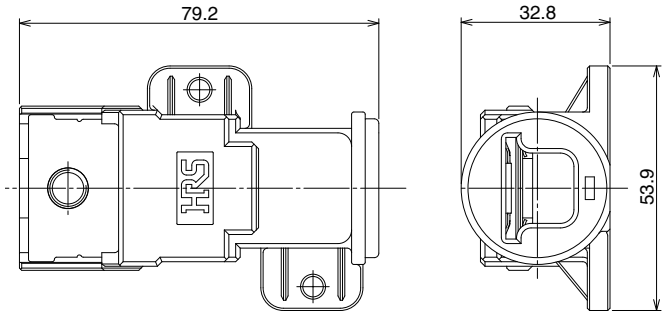
EV2 – 30 R ＊ – 1 S ＊ (＊＊)
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶ Series name : EV2	❺ Number of contacts : 1
❷ Connector size : Indicates the outer diameter of the mated plug section.	❻ Connector structure : S=With a contact spring P=Without contact spring
❸ Connector type : R=Receptacle P=Plug	❼ Contact connection method : B=Screw-fastened connection C=Crimp connection
❹ Serial symbols : Modification types are indicated by A, B, C, ···.	❽ When different types of specifications are provided, attach (01), (02), ···for identification.

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■Receptacle

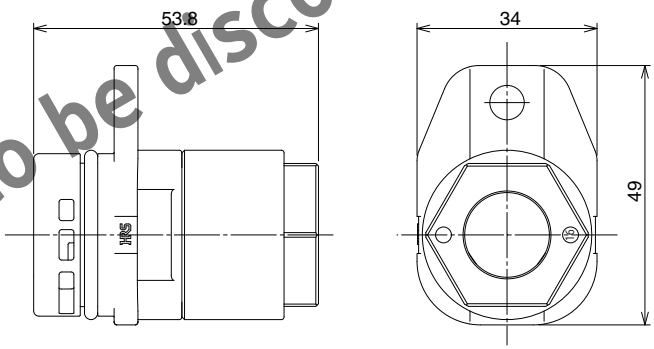




Part No.	HRS No.	Remarks
EV2-30R-1SB	139-0200-7 00	———

■Plug





(Scheduled to be discontinued)

Part No.	HRS No.	Remarks
EV2-30P-1PC	139-0201-0	———

◆Applicable Cable

Electric Cable Manufacturer	Product Name	Support for product inquiries and purchase
NISSEI ELECTRIC CO., LTD.	FM-MY 40mm²	NISSEI ELECTRIC CO., LTD. Electric Dir. Sales Group Machida Sales Dept. Phone +81-42-729-2531

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◆Applicable Tools

Tool / Jig	Part No.	HRS No.	Remarks
Crimp tools for round-form contacts	HT112/REC-Li150	902-1516-5 00	Equivalent product : REC-Li150 made by IZUMI Product Company
Cable crimp tools	EV2-30P-1PC/CKED	902-1521-0 00	———
Cable crimp tools : Crimpers only	EV2-30P-1PC/CKED(61)	902-1521-0 61	———
Cable crimp tools : Anvil only	EV2-30P-1PC/CKED(62)	902-1521-0 62	———
Spring ring pressor jigs	EV2-30P-1PC/PRMD	902-1522-0 10	———

HT112/REC-Li150



EV2-30P-1PC/CKED



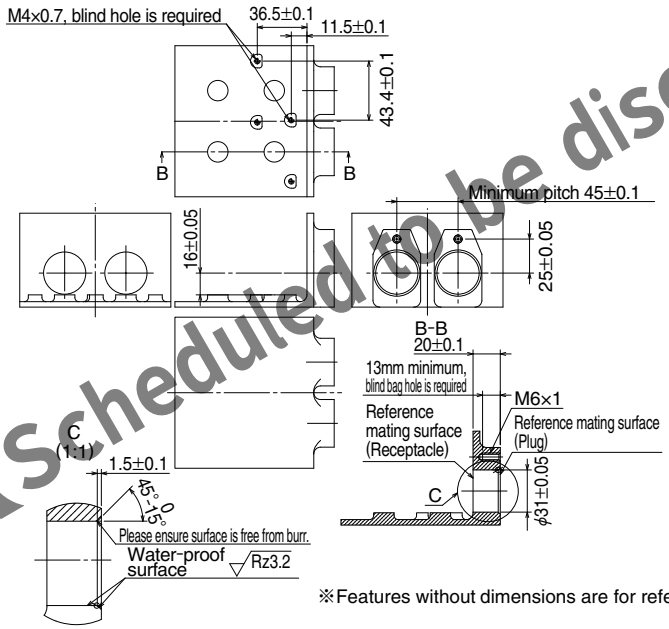
EV2-30P-1PC/PRMD



Note : Please perform maintenance of crimping tools according to the instructions of the tool manufacturer.

◆Diagram of the panel mounting slot dimension

※Please refer to the specification for details.



※Features without dimensions are for reference only.

【Scheduled to be discontinued】

◆Safety Precautions

⚠ Warning

●Do not touch the exposed conductor while it is energized, failing to follow this warning may cause an electric shock and injury. ⚠
●The power should be in the OFF position when inserting or extracting this connector.

⚠ Caution

●Use dedicated tools with applicable cables.
Use of non-applicable items, could lead to an accident due to the insufficient performance.
●Please only use Hirose approved contacts, using unapproved contacts can result in a lowering of the product's performance and cause a serious accident. Please contact your local Hirose representative for additional information.

Creative Links to World Electronics ®
HRS

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The characteristics and the specifications contained herein are for reference purpose. Please refer to the latest customer drawings prior to use.
The contents of this catalog are current as of date of 11/2018. Contents are subject to change without notice for the purpose of improvements.