



Supports up to 400A, ZERO SCREW terminal blocks **EF2** series

Next generation terminal block with single action

ZERO SCREW™

JIS C 8201-7-1

NECA C 2811 (Old JIS 2811)

Tactile
click



Push type

One-sided screw type

Twist type

HIROSE ELECTRIC CO.,LTD.

The Zero Screw Solution.

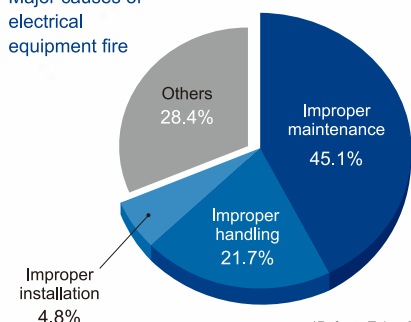
ZERO SCREW™ terminal block achieves enhanced safety and reduced construction time.

ZERO SCREW™ terminal block (EF2 series) can be connected in a single action without screws.
Simply insert the contact to connect.
Since a highly reliable contact can be maintained over a long time period, maintenance work is also reduced.
It is a new choice of terminal block that improves the safety of electric facilities, work quality and construction time.

1 Quick and secure single action positive lock design

Keep stable connection

Major causes of electrical equipment fire



*Refer to Tokyo Fire Department, "Fire Actual Status 2017"

An electrical equipment fire will not only lose the trust of developers, construction companies, and fire source product suppliers but also endangers the lives of building users. About 70% of the cause is poor handling and low maintenance. The cause of the fire is the looseness of the screws. Even with periodic maintenance, it is difficult to completely prevent an accident.

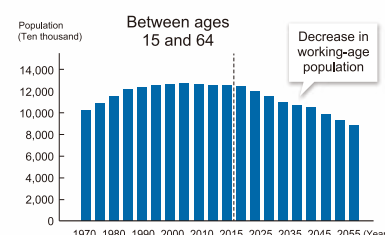
ZERO SCREW™ terminal block maintains a highly reliable connection for a long time with its unique eliminating screws, which reduces fire risk caused by the loose screws of the electric equipment to zero.

2 Solves the shortage of technicians

Simply insert the contact to connect

Screw type terminal blocks cause variations in "screw tightening" and "torque management" by different workers. ZERO SCREW™ terminal block with single insertion achieves stable work quality regardless of workers' ability. Ideal for future staffing where there will be fewer skilled workers.

Data for changes in the working-age population



*Source : Ministry of Internal Affairs and Communications, Japan

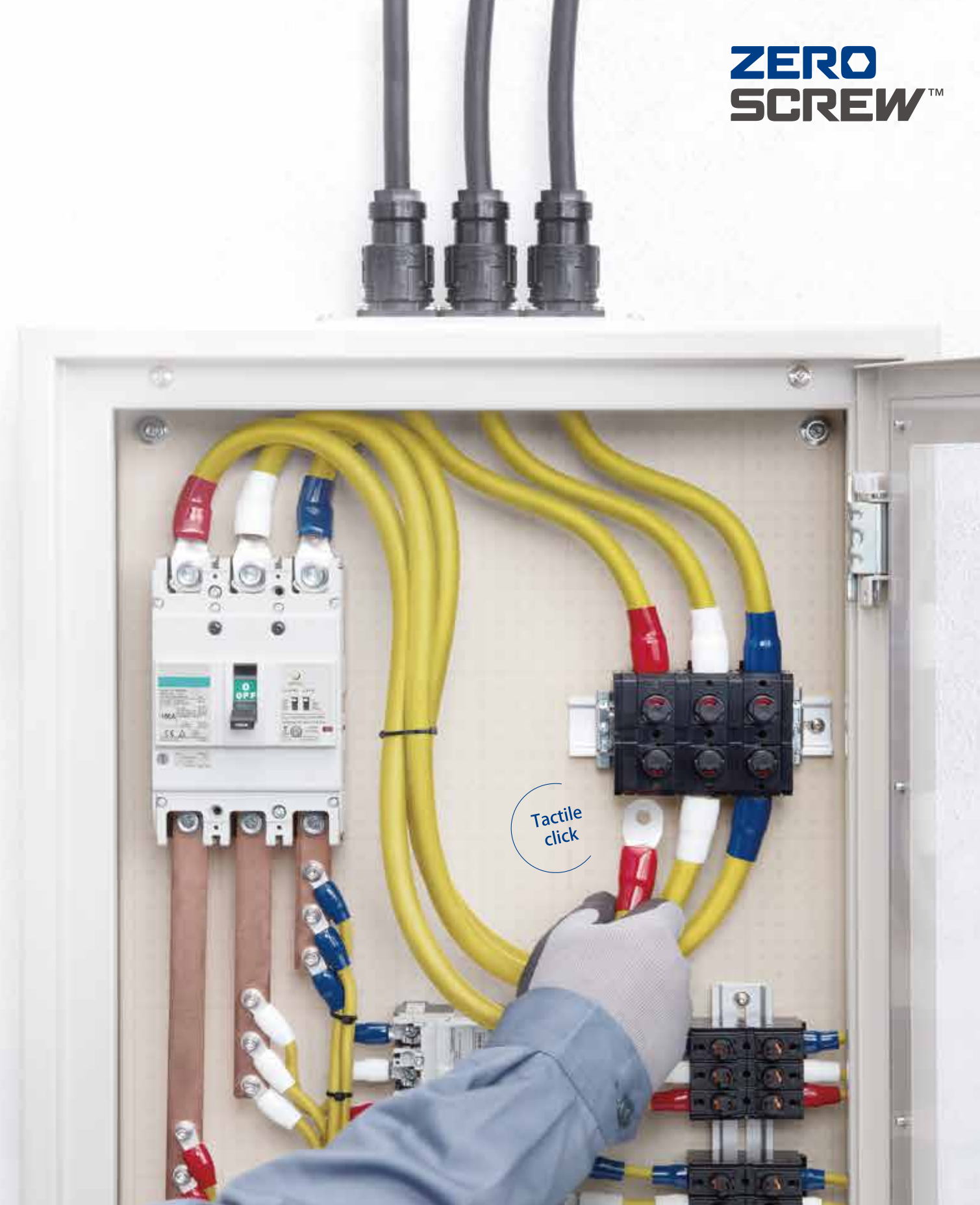
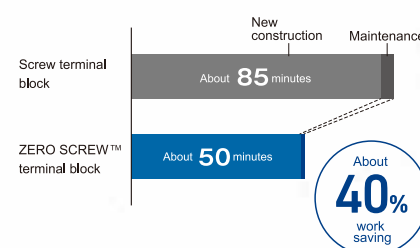
3 Shortens massive construction time

Reduce all process related to screws

With screw type terminal block, it is necessary to screw and unscrew for new construction, and torque check during maintenance. Since the ZERO SCREW™ terminal block has no screws, it is possible to reduce the number of work hours by more than 40% compared to a conventional screw terminal block. It reduces construction time drastically.

Work hours comparison with screw terminal block

* The graph is an example of work hours.
New construction + maintenance =
Work hours for single phase × Three phases × Board (15 Routes)



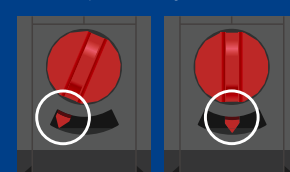
Easy operation

Simply insert to connect without screws.

Quick and secure single action positive lock design. Unlike a conventional screw terminal block, the operator with less experience can easily maintain stable work quality. It is safe because you can visually check the insertion state from the top after mating.



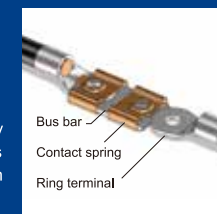
Can visually check the insertion state from the top after mating.



Long-term stable connection

Highly reliable connection with unique contact spring design.

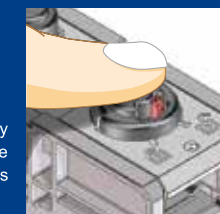
Unique design for pressing the ring terminal directly against the bus bar for connection. Improves contact reliability as well as maintains a long-term stable connection.



Positive lock

When the fully locked state is the standard position.

Always in a locked state when connecting. Safety design enables unlocking without pulling out the crimp terminal while pressing the button. It prevents missing the terminal as well as forgetting to lock.



EF2 Series

Supports up to 400A, ZERO SCREW™ terminal blocks

Product		400	250	200	150	60	30
Part number	Push type	EF2-D400-1	EF2-D250-1	-	EF2-D150-1	EF2-D60-1	EF2-D30-1
	Twist type	EF2A-D400-1 (Under development)	EF2A-D250-1 (Under development)	EF2A-D200-1 (Under development)	EF2A-D150-1 (Under development)	-	-
	One-sided screw type (Push)	EF2-DH400-1 (Under development)	EF2-DH250-1 (Under development)	-	EF2-D150-1 (Under development)	-	-
	One-sided screw type (Twist)	EF2A-DH400-1 (Under development)	EF2A-DH250-1 (Under development)	EF2A-DH200-1 (Under development)	EF2A-DH150-1 (Under development)	-	-
Protect Type		Under development	Under development	Under development	Under development	Under development	Under development
Image							
Rated current		200mm ² =400A (400MCM)	150mm ² =310A (250MCM)	60mm ² =175A (AWG#1/0) 100mm ² =240A (AWG#4/0)	22mm ² =94A (AWG#4) 38mm ² =132A (AWG#2) 60mm ² =175A (AWG#1/0)	5.5mm ² =40A (AWG#10) 8mm ² =50A (AWG#8) 14mm ² =70A (AWG#6)	1.25mm ² =16A (AWG#16) 2mm ² =21A (AWG#14) 3.5mm ² =30A (AWG#12) 5.5mm ² =40A (AWG#10)
Rated voltage		1000V AC, 1500V DC				600V AC/DC	
Withstanding voltage		5000V AC for 1minute				2500 AC for 1minute	
Contact resistance		0.1mΩ max. (1A DC)					1mΩ max. (1A DC)
Operating temperature		-25 to +105°C (Including the temperature rising by current flow.)					
Durability		50 times					
Safety standards		UL, TÜV compliant		UL, TÜV pending	UL, TÜV compliant		
Environmental standards		RoHS2 compliant					
Applicable contact		"R200-12(S)" or "R200-14" from Nichifu or JST, or equivalent contact	R150-12" or "R150-14" from Nichifu or JST, or equivalent contact	"R60-10" or "R100-10" from Nichifu or JST, or equivalent contact	"R22-8", "R22-10", "R38-8", "R38-10", "R60-8" or "R60-10" from Nichifu or JST, or equivalent contact	"R5.5-5", "R8-5", or "R14-5" from Nichifu or JST, or equivalent contact	"R1.25-5", "R2-5", "R3.5-4" or "R5.5-4" from Nichifu or "R1.25", "R2-5", "3.5-R4" or "R5.5-4" from JST, or equivalent contact
Applicable crimp tool		"REC-Li325" from Izumi	"REC-Li150" or "REC-Li325" from Izumi		"9H-60" or "REC-Li150" from Izumi	"214A" or "REC-Li60S" from Izumi	"5N18" or "REC-Li14S" from Izumi

⚠️ *Terminal thickness is important. Using an inappropriate crimp terminal may result in performance degradation and serious accident. Please make sure to use applicable terminals.

Part number configuration				
EF2 - DH150 - 1				
Series name EF2 : Push type EF2A : Twist	Mount type D : DIN rail mount type	Connection type Blank : Single action type H : One-sided screw type	Current capacity sign	Linked quantity (D150 type only)

Material and Finish	COMPONENT	MATERIAL	FINISH	REMARKS
	Housing	m-PPE	Black	UL94V-0
	Lock	PBT	Black/Red/Orange	UL94V-0
	Bus bar	Brass	Tin plating	-
	Spring	SUS	-	-

Dimensions

Unit : mm

Part number	HRS No.	A	B	C	D
EF2-D400-1	142-0102-0 00	111	87.5	5.55	55
EF2-D250-1	142-0101-0 00	111	80.45	5.55	19.6
EF2-D150-1	142-0100-0 00	71	53.45	5.5	40.5
EF2-D60-1	142-0104-0 00	68.2	46.35	5.5	21
EF2-D30-1	142-0103-0 00	62.2	41.69	5.5	17.5

Safety Precautions

⚠️ Warnings

- Do not touch the exposed conductor while it is energized. Failure to follow this warning could result an electric shock and injury.
- The power to be turned off when inserting or extracting the crimp terminal.
- After mating the crimp terminal, pull the cable gently to confirm that it will not be disconnected. If it is not mated correctly, the cable will be removed.

ZERO SCREW™ Terminal block (EF2 series) special site

ZERO SCREW

Search



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Please contact your nearest regional office, as listed. More information is available at

<https://www.hirose.com/>

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