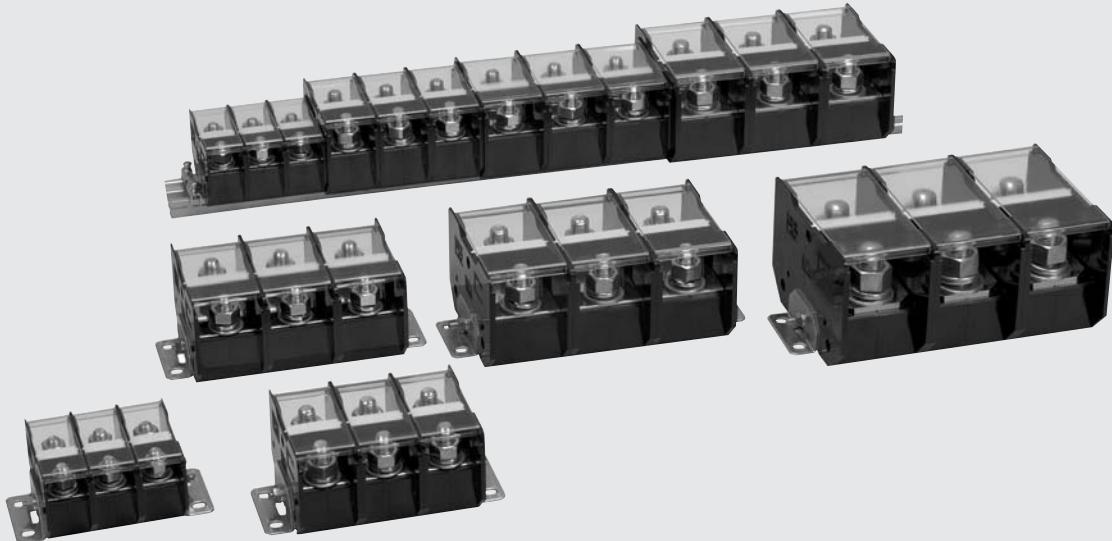


Stud terminal block

Cope to 175A~600A

TSH Series



□ Features

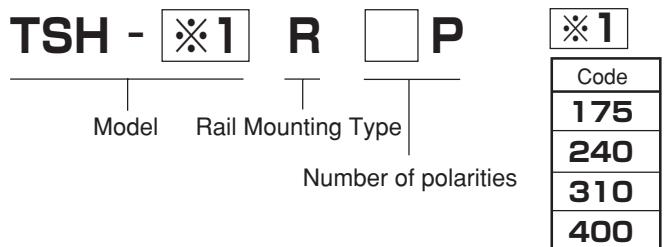
- Terminal block, termination and terminal cover incombustibility grade UL94V-0.
- Rated insulation voltage is 600V. Perfect for high withstand voltage and high insulation use.
- Since denatured PPE resin is used as the insulation material, correspondence to mechanical vibration and shock is excellent.
- Mounting and dismounting of terminal cover and name tag are simple.
- Rail-mounting and bolt assembly systems are available (However, TSH-600 is bolt system only.)
- Rail is high strength type AR-FH.
- JISC 2805 (Crimp terminal for copper wire) standard compliant

NOTICE

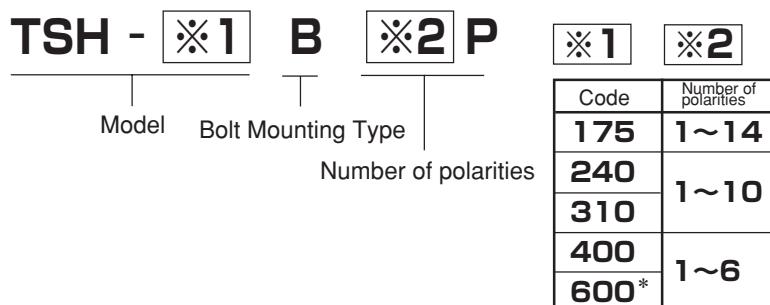
- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

❖ Model Designation

■ Rail-mounted Finished Product (with terminal protection cover)

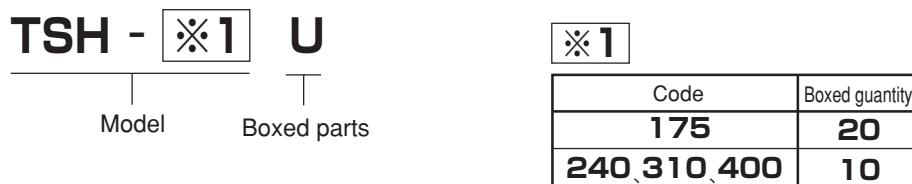


■ Bolt Mounted Finished Product (with terminal protection cover)



* The TS-600 are sold as bolt assembly finished product only.

■ Boxed parts model designation



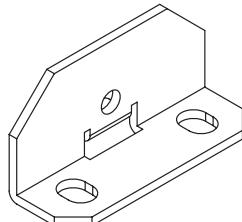
■ Stand alone model designation



● Bolt type Metal fitting

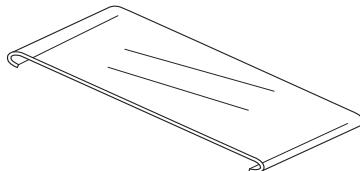
Model Item	TSH-SB				
Matching Terminal Block	TSH-175B	TSH-240B	TSH-310B	TSH-400B	TSH-600B
Thickness			17mm		
Sales Unit			10 pieces		
Weight (per pcs)			25.3 g		

※Use M5 assembly stud.



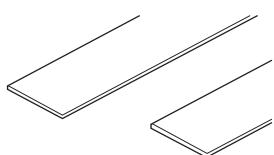
● Terminal Protection Cover

Model Item	TSH-C175	TSH-C240	TSH-C310	TSH-C400	TSH-C600
Matching Terminal Block	TSH-175	TSH-240	TSH-310	TSH-400	TSH-600
Length			1 piece for one polarity		
Sales Unit			10 pieces		
Weight (1 pieces)	2.9 g	4.3g	5.3 g	10.1g	13.7g



● Legend Tag

▼ TS-M800F (Flat)



Width X Length / 10mm X 900mm
Thickness / 0.5mm
Sales Unit / 10 pieces
Weight (per 1 piece) / 6g

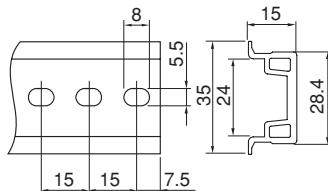
▼ TS-M800W (Roll)



Width X Length / 10mm X 25m
Thickness / 0.5mm
Sales Unit / 1roll
Weight (per 1 piece) / 192g

● Rail

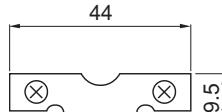
▼ AR-FH



Length / 1000mm
Sales Unit / 5 pieces
Weight (per 1 piece) / 365g

● Metal Fitting

▼ MF-THC



Sales Unit / 10 pieces
Weight (per 1 piece) / 11g



❖ Specifications

Model Item	TSH-175	TSH-240	TSH-310	TSH-400	TSH-600
Ratings	Insulation Voltage	600V			
	Current Capacity	175A	240A	310A	400A
Matching Wire	60mm ²		100mm ²	150mm ²	200mm ²
Connectable Wire and Current Capacity by Size	38mm ² — 150A 22mm ² — 90A	38mm ² — 150A 22mm ² — 90A	100mm ² — 240A 60mm ² — 175A	150mm ² — 310A 100mm ² — 240A	200mm ² — 400A 150mm ² — 310A
Terminal Screw and Bolt	Hexagonal bolt M8×18 Recommended torque: (8.9~10.8 N·m)	Hexagonal bolt M10×25 Recommended torque: (18~23 N·m)	Hexagonal bolt M10×25 Recommended torque: (18~23 N·m)	Hexagonal bolt M12×30 Recommended torque: (31.5~39.5 N·m)	Hexagonal bolt M16×40 Recommended torque: (78.5~98 N·m)
Matching Crimp	Max. Diameter	22.8mm	30mm	38mm	45mm
Contact	Min. Inside Diameter	φ 8.4mm	φ 10.5mm	φ 10.5mm	φ 13mm
Pitch between Terminals	27mm		36mm	44mm	53mm
Number in Package	As many as 20 polarities		As many as 10 polarities		—
Weight (per 1 P)	85.5g		175.7g	214.4g	349.1g
Standard Conformity	JIS C 2811 Industrial Terminal Blocks				

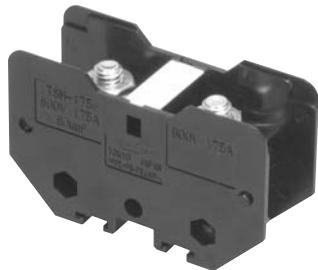
❖ Specifications

Insulation Resistance	Between live parts and ground 500MΩ or more measured by 500V DC megohmmeter
Withstand Voltage	Between live parts and ground 2500V AC for 1 minute
Operating Environment	Temperature:—10~50°C, Humidity:45~85%RH (No freezing or condensation)

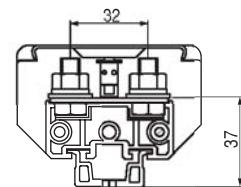
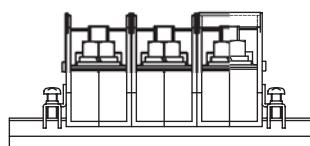
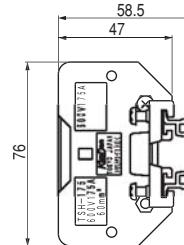
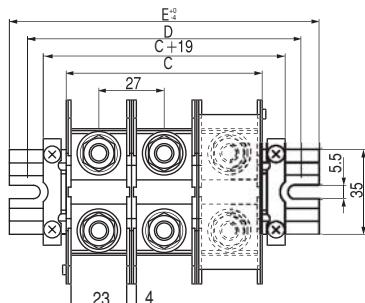
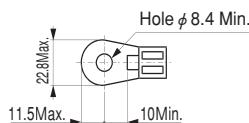
❖ Materials

Model Item	TSH-175	TSH-240	TSH-310	TSH-400	TSH-600
Insulation Holder	Poly phenylene ether resin (black)				UL94V-0
Terminal Metal	Copper bus bar (Nickel plated)				
Hexagonal bolt	Carbon steel (galvanized and chromate treatment)				
Terminal Metal B	Cold-finished steel plate (galvanized and chromate treatment)				
Terminal Protection Cover	Polycarbonate resin (transparent)				UL94V-0
Legend Tag	Vinyl chloride resin (white) 10mm wide				UL94V-0
Metal End	Cold-finished steel plate (galvanized and chromate treatment)				
Rail	Aluminum				

TSH-175R□P	Matching Wire	175A:60mm ²	Terminal Screws	M8/Hexagonal bolt	With cover /name tag
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• Applicable crimp terminal



Rated insulation voltage	600V
Connectable wire and conduction current by size	60mm ² —175A/38mm ² —150A 122mm ² —60A
Recommended terminal screw tightening torque	8.9~10.8N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks

● Accessories table (See N-10)

*Amount required is when name tag length is 900mm or less.

		Required * amount
Terminal Protection Cover TSH-C175	Sales Unit:10 pcs/ Weight (per pc):2.9g	1
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm/Thickness:0.5mm Sales Unit:10 pcs/ Weight (per pc):6g	1
Legend Tag (Roll) TS-M800W	Width× Length:10mm×25m/Thickness:0.5mm Sales Unit:1 Roll/ Weight:192g	—
FH type DIN rail AR-FH	Length:1m/Sales Unit:5 pcs/ Weight (per pc):365g	1
Terminal hardware for LH/FH type DIN rail MF-THC	Sales Unit:10pcs/ Weight (per pc):11g	2

● “D、E”dimensions (dimension:mm)

Number of polarities	D	E ⁺⁰ ₋₄
1P	60	75
2P	90	105
3P	120	135
4P	135	150
5P	165	180
6P	195	210
7P	225	240
8P	225	270
9P	270	285
10P	300	315
11P	330	345
12P	360	375
13P	390	405
14P	405	420
15P	435	450

Number of polarities	D	E ⁺⁰ ₋₄
16P	465	480
17P	495	510
18P	525	540
19P	540	555
20P	570	585

● TSH-175R dimensions computation expression (units:mm)

Basic expression: $27P+26$

P: Number of polarities

D dimension (mounting dimension): Multiple of 15 larger than value obtained from basic expression

E dimension (total length of aluminum rail): $D+15$

*This computational expression is up to 20P. For 21P and greater, please consult us separately.

Please see page N-21 for the D and E dimensions computational expressions when multiple types (TSH-175R+TSH-240R, etc.) were assembled on one rail.

● TSH-175R weight computational expression (units: g)

$99P+50$

P: Number of polarities

NOTICE

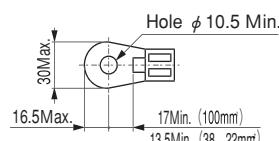
- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

TSH-240R□P

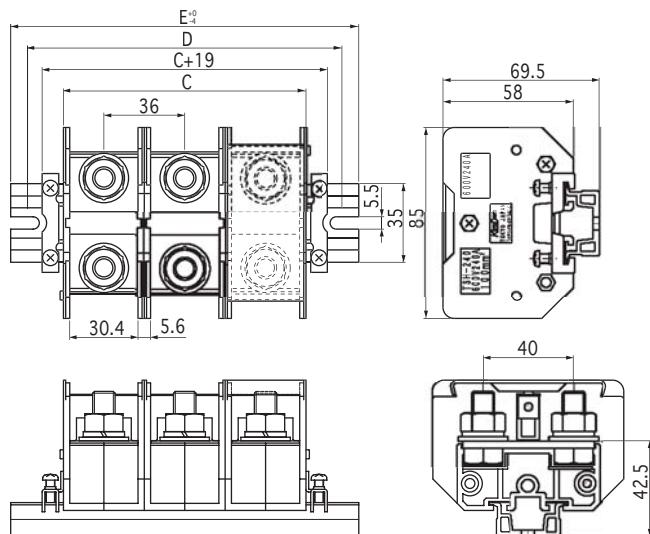
Matching Wire 240A:100mm² Terminal Screws M10/Hexagonal bolt With cover /name tag



• Applicable crimp terminal



Rated insulation voltage	600V
Connectable wire and conduction current by size	100mm ² —240A/38mm ² —150A 22mm ² —90A
Recommended terminal screw tightening torque	18~23N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks



● Accessories table (See N-10)

*Amount required is when name tag length is 900mm or less.

Required * amount	
Terminal Protection Cover TSH-C240	Sales Unit:10 pcs/ Weight (per pc):4.3g
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm/Thickness:0.5mm Sales Unit:10 pcs/ Weight (per pc):6g
Legend Tag (Roll) TS-M800W	Width X Length:10mm×25m/Thickness:0.5mm Sales Unit:1 Roll/ Weight:192g
FH type DIN rail AR-FH	Length:1m/Sales Unit:5 pcs/ Weight (per pc):365g
Terminal hardware for LH/FH type DIN rail MF-THC	Sales Unit:10pcs/ Weight (per pc):11g

● “D、E”dimensions (dimension:mm)

Number of polarities	D	E ⁺⁰ ₋₄
1P	75	90
2P	105	120
3P	135	150
4P	180	195
5P	210	225
6P	255	270
7P	285	300
8P	315	330
9P	360	375
10P	390	405
11P	435	450
12P	465	480
13P	495	510
14P	540	555
15P	570	585

Number of polarities	D	E ⁺⁰ ₋₄
16P	615	630
17P	645	660
18P	675	690
19P	720	735
20P	750	765

● TSH-240R dimensions computation expression (units:mm)

Basic expression: $36 \times P + 26$

P: Number of polarities

D dimension (mounting dimension): Multiple of 15 larger than value obtained from basic expression

E dimension (total length of aluminum rail): $D + 15$

*This computational expression is up to 20P. For 21P and greater, please consult us separately.

Please see page N-21 for the D and E dimensions computational expressions when multiple types (TSH-175R+TSH-240R, etc.) were assembled on one rail.

● TSH-240R weight computation expression (units: g)

$195 \times P + 50$

P: Number of polarities

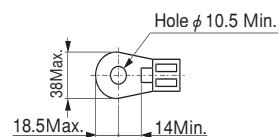
NOTICE

- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

TSH-310R□P	Matching Wire	310A:150mm ²	Terminal Screws	M10/Hexagonal bolt	With cover /name tag
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• Applicable crimp terminal

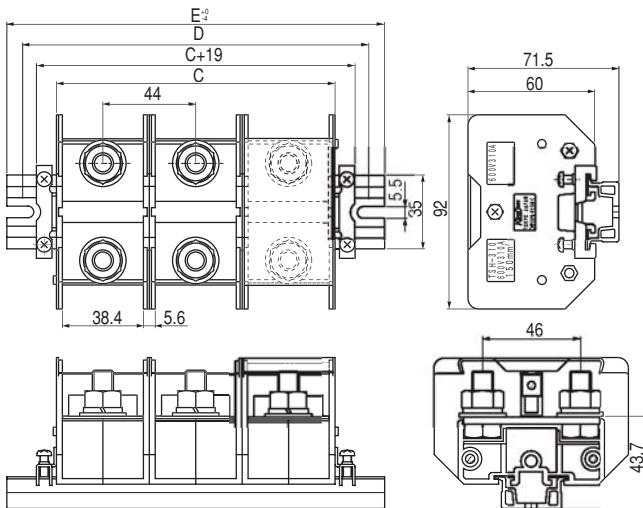


Rated insulation voltage	600V
Connectable wire and conduction current by size	150mm ² —310A/100mm ² —240A 60mm ² —175A
Recommended terminal screw tightening torque	18~23N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks

● Accessories table (See N-10)

*Amount required is when name tag length is 900mm or less.

		Required * amount
Terminal Protection Cover TSH-C310	Sales Unit:10 pcs/ Weight (per pc):5.3g	1
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm/Thickness:0.5mm Sales Unit:10 pcs / Weight (per pc):6g	1
Legend Tag (Roll) TS-M800W	WidthX Length:10mm×25m/Thickness:0.5mm Sales Unit:1 Roll/Weight:192g	—
FH type DIN rail AR-FH	Length:1m/Sales Unit:5 pcs/ Weight (per pc):365g	1
Terminal hardware for LH/FH type DIN rail MF-THC	Sales Unit:10pcs/ Weight (per pc):11g	2



● “D、E”dimensions (dimension:mm)

Number of polarities	D	E ⁺⁰ ₋₄
1P	75	90
2P	120	135
3P	165	180
4P	210	225
5P	255	270
6P	300	315
7P	345	360
8P	390	405
9P	435	450
10P	480	495
11P	525	540
12P	555	570
13P	600	615
14P	645	660
15P	690	705

● TSH-310R dimensions computation expression (units:mm)

Basic expression: $44 \times P + 26$

P: Number of polarities

D dimension (mounting dimension): Multiple of 15 larger than value obtained from basic expression

E dimension (total length of aluminum rail): $D + 15$

*This computational expression is up to 15P. For 16P and greater, please consult us separately.

Please see page N-21 for the D and E dimensions computational expressions when multiple types (TSH-175R+TSH-240R, etc.) were assembled on one rail.

● TSH-310R weight computational expression (units: g)

$237 \times P + 50$

P: Number of polarities

NOTICE

- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

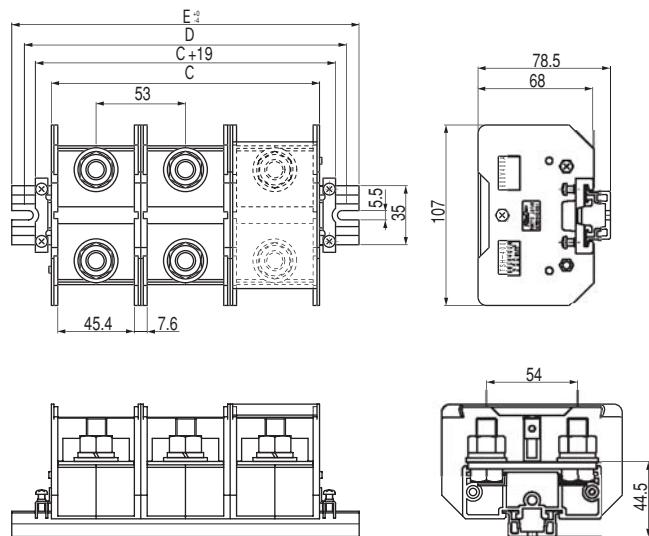
TSH-400R□P

Matching wire 400A:200mm² Terminal Screws M12/Hexagonal bolt

With cover /name tag



- Applicable crimp terminal



Rated insulation voltage	600V
Connectable wire and conduction current by size	200mm ² —400A/150mm ² —310A 100mm ² —240A
Recommended terminal screw tightening torque	31.5~39.5N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks

● Accessories table (See N-10)

*Amount required is when name tag length is 900mm or less.

		Required * amount
Terminal Protection Cover TSH-C400	Sales Unit:10 pcs/ Weight (per pc):10.1g	1
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm/Thickness:0.5mm Sales Unit:10 pcs/ Weight (per pc):6g	1
Legend Tag (Roll) TS-M800W	Width X Length:10mm×25m/Thickness:0.5mm Sales Unit:1 Roll/ Weight:192g	—
FH type DIN rail AR-FH	Length:1m/Sales Unit:5 pcs/ Weight (per pc):365g	1
Terminal hardware for LH/FH type DIN rail MF-THC	Sales Unit:10pcs/ Weight (per pc):11g	2

● “D, E” dimensions (dimension:mm)

Number of polarities	D	E ⁺⁰ ₋₄
1P	90	105
2P	135	150
3P	195	210
4P	240	255
5P	300	315
6P	345	360
7P	405	420
8P	450	465
9P	510	525
10P	570	585

● TSH-400R dimensions computation expression (units:mm)

Basic expression: $53 \times P + 26$

P: Number of polarities

D dimension (mounting dimension): Multiple of 15 larger than value obtained from basic expression

E dimension (total length of aluminum rail): $D + 15$

*This computational expression is up to 10P. For 11P and greater, please consult us separately.

Please see page N-21 for the D and E dimensions computational expressions when multiple types (TSH-175R+TSH-240R, etc.) were assembled on one rail.

● TSH-400R weight computational expression (units: g)

380XP+50

P: Number of polarities

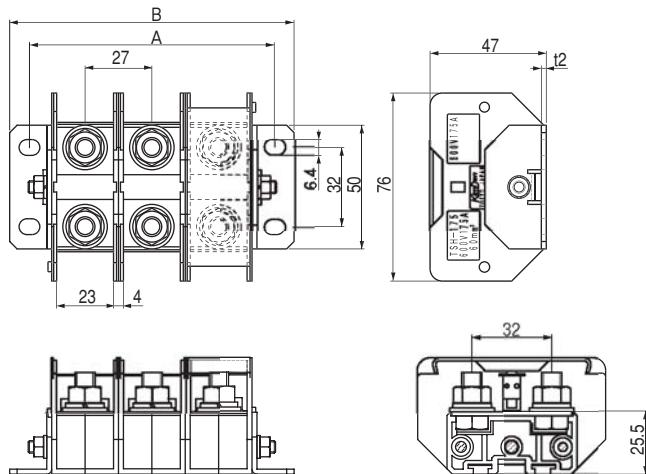
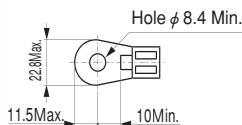
NOTICE

- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

TSH-175B□P	Matching Wire 175A:60mm ²	Terminal Screws M8/Hexagonal bolt	With cover /name tag
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- Applicable crimp terminal



Rated insulation voltage	600V
Connectable wire and conduction current by size	60mm ² — 175A / 38mm ² — 150A 122mm ² — 60A
Recommended terminal screw tightening torque	8.9~10.8N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks

● Accessories table (See N-10)

Terminal Protection Cover TSH-C175	Sales Unit:10 pcs/ Weight (per pc):2.9g
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm/Thickness:0.5mm Sales Unit:10 pcs/ Weight (per pc):6g
Legend Tag (Roll) TS-M800W	Width X Length:10mm×25m/Thickness:0.5mm Sales Unit:1 Roll/Weight:192g
Bolt type Terminal Metal TSH-SB	Thickness:17mm/Sales Unit:10pcs/ Weight (per pc):25.3g

● "A,B" dimensions (dimension:mm)

Number of polarities	A	B
1P	45	61
2P	72	88
3P	99	115
4P	126	142
5P	153	196
6P	180	196
7P	207	223
8P	234	250
9P	261	277
10P	288	304
11P	315	331
12P	342	358
13P	369	385
14P	396	412

● Bolt assembly finished product weight computational expression (units: g)
 $94 \times P + 65$

P: Number of polarities

NOTICE

- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

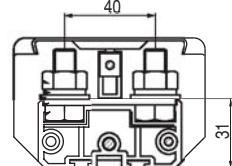
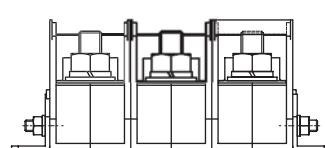
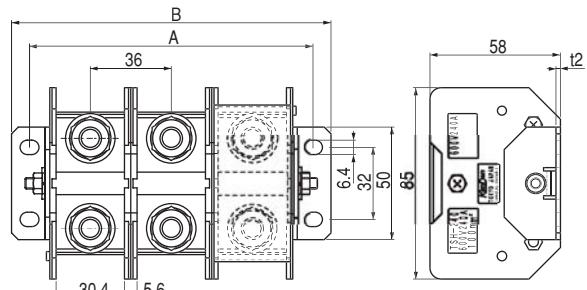
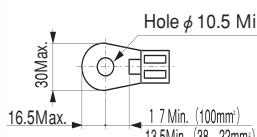
TSH-240B□PMatching
Wire240A:100mm²Terinal
Screws

M10/Hexagonal bolt

With cover /name tag



• Applicable crimp terminal



Rated insulation voltage	600V
Connectable wire and conduction current by size	100mm ² —240A/38mm ² —150A 22mm ² —90A
Recommended terminal screw tightening torque	18~23N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks

● Accessories table (See N-10)

Terminal Protection Cover TSH-C240	Sales Unit:10 pcs/ Weight (per pc):4.3g
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm/Thickness:0.5mm Sales Unit:10 pcs/ Weight (per pc):6g
Legend Tag (Roll) TS-M800W	WidthX Length:10mm×25m/Thickness:0.5mm Sales Unit:1 Roll/Weight:192g
Bolt type Terminal Metal TSH-SB	Thickness:17mm/Sales Unit:10pcs/ Weight (per pc):25.3g

● “A,B”dimensions (dimension:mm)

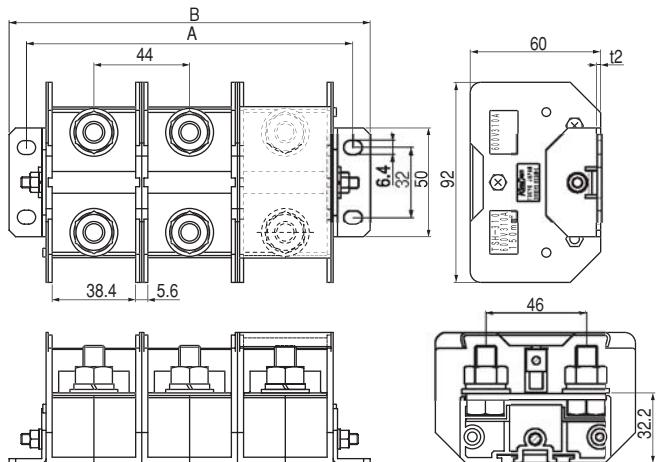
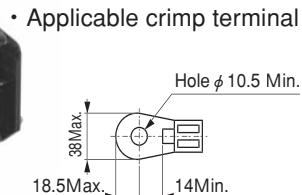
Number of polarities	A	B
1P	54	70
2P	90	106
3P	126	142
4P	162	178
5P	198	214
6P	234	250
7P	270	286
8P	306	322
9P	342	358
10P	378	394

● Bolt assembly finished product weight computational expression (units: g)
 $190 \times P + 65$ P: Number of polarities

NOTICE

- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

TSH-310B□P	Matching Wire 310A:150mm ²	Terminal Screws M10/Hexagonal bolt	With cover /name tag
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Rated insulation voltage	600V
Connectable wire and conduction current by size	150mm ² —310A／100mm ² —240A 60mm ² —175A
Recommended terminal screw tightening torque	18~23N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks

● Accessories table (See N-10)

Terminal Protection Cover TSH-C310	Sales Unit:10 pcs／ Weight (per pc):5.3g
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm／Thickness:0.5mm Sales Unit:10 pcs／Weight (per pc):6g
Legend Tag (Roll) TS-M800W	Width× Length:10mm×25m／Thickness:0.5mm Sales Unit:1 Roll／Weight:192g
Bolt type Terminal Metal TSH-SB	Thickness:17mm／Sales Unit:10pcs／ Weight (per pc):25.3g

● “A, B”dimensions (dimension:mm)

Number of polarities	A	B
1P	62	78
2P	106	122
3P	150	166
4P	194	210
5P	238	254
6P	282	298
7P	326	342
8P	370	386
9P	414	430
10P	458	474

● Bolt assembly finished product weight computational expression (units: g)
 $232 \times P + 65$

P: Number of polarities

NOTICE

- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

TSH-400B□P

Matching Wire

400A:200mm²

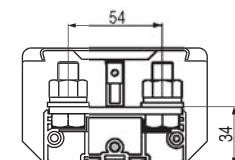
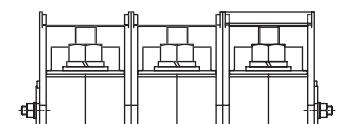
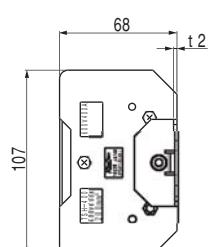
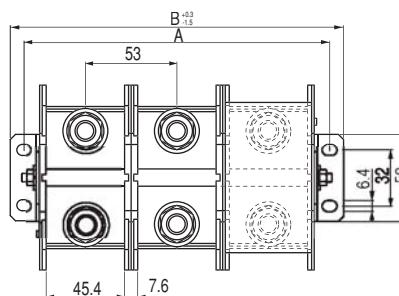
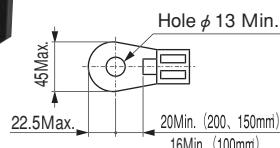
Terinal Screws

M12/Hexagonal bolt

With cover /name tag



• Applicable crimp terminal



Rated insulation voltage	600V
Connectable wire and conduction current by size	200mm ² —400A/150mm ² —310A 100mm ² —240A
Recommended terminal screw tightening torque	31.5~39.5N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks

● Accessories table (See N-10)

Terminal Protection Cover TSH-C400	Sales Unit:10 pcs/ Weight (per pc):10.1g
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm/Thickness:0.5mm Sales Unit:10 pcs/ Weight (per pc):6g
Legend Tag (Roll) TS-M800W	Width X Length:10mm×25m/Thickness:0.5mm Sales Unit:1 Roll/Weight:192g
Bolt type Terminal Metal TSH-SB	Thickness:17mm/Sales Unit:10pcs/ Weight (per pc):25.3g

● “A、B”dimensions (dimension:mm)

Number of polarities	A	B
1P	71	87
2P	124	140
3P	177	193
4P	230	246
5P	283	299
6P	336	352

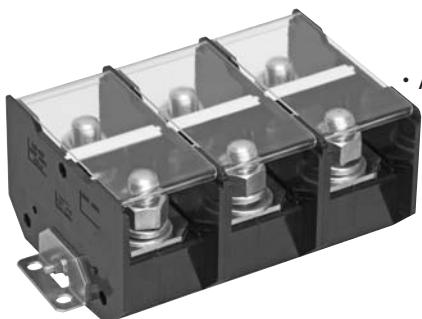
● Bolt assembly finished product weight computational expression (units: g)

$$375 \times P + 65$$
 P: Number of polarities

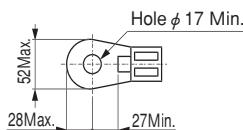
NOTICE

- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

TSH-600B□P	Matching Wire	600A:325mm ²	Terminal Screws	M16/Hexagonal bolt	With cover /name tag
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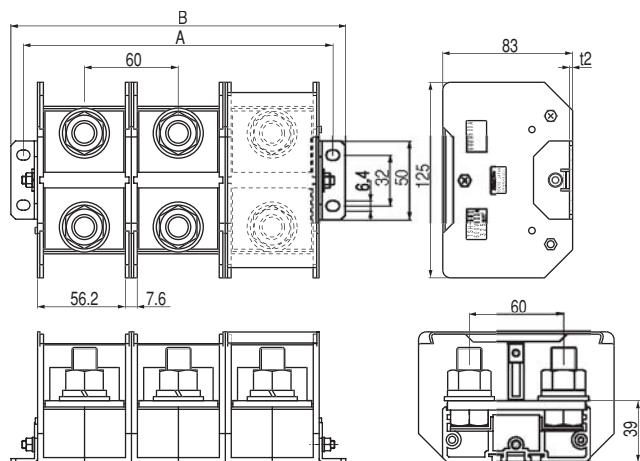
• Applicable crimp terminal



Rated insulation voltage	600V
Connectable wire and conduction current by size	325mm ² —600A / 200mm ² —400A 310mm ² — 150A
Recommended terminal screw tightening torque	78.5~98N·m
Standard Conformity	JIS C 2811 Industrial Terminal Blocks

● Accessories table (See N-10)

Terminal Protection Cover TSH-C600	Sales Unit:10 pcs/ Weight (per pc):13.1g
Legend Tag (Flat) TS-M800F	Width x length:10mm×900mm /Thickness:0.5mm Sales Unit:10 pcs / Weight (per pc):6g
Legend Tag (Roll) TS-M800W	Width X Length:10mm×25m /Thickness:0.5mm Sales Unit:1 Roll / Weight:192g
Bolt type Terminal Metal TSH-SB	Thickness:17mm / Sales Unit:10pcs/ Weight (per pc):25.3g



● “A, B”dimensions (dimension:mm)

Number of polarities	A	B
1P	78	94
2P	138	154
3P	198	214
4P	258	274
5P	318	334
6P	378	394

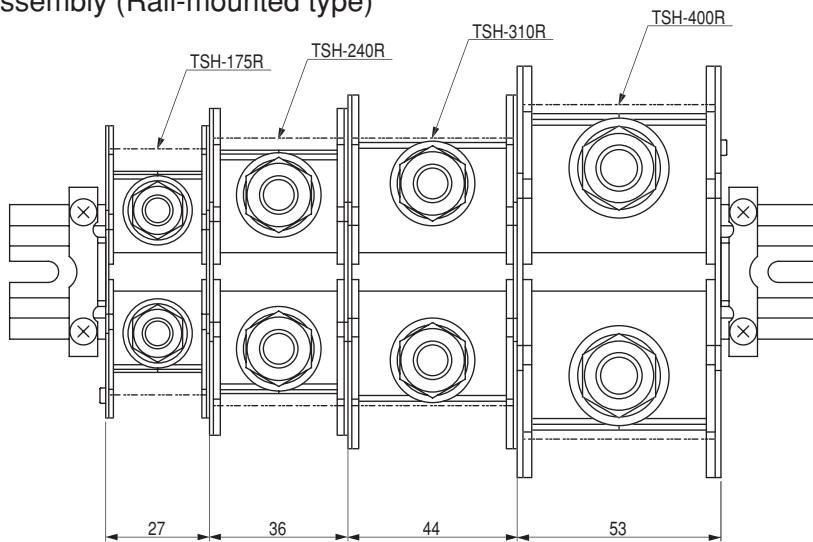
● Bolt assembly finished product weight computational expression (units: g)

$$669 \times P + 65$$
 P: Number of polarities

NOTICE

- The conduction current of the terminal block is different depending on the usage conditions (type of electric wire, number of strands, ambient temperature, etc.).

● Example of assembly (Rail-mounted type)



● Rail-mounted finished product dimensions computational expression

- Mounting dimension (D) is an integral multiple of 15mm.

$D \geq (\text{length of one terminal block pole} \times \text{number of poles}) + (\text{length of terminating TS-S} \square \text{X}2) + (\text{terminal block stacking error})^*1 + (\text{surplus length of terminating hardware})^*2$

*1:1mm per 10 poles *2:26mm

- Computation example: Computing the TSH-175R-15P+TSH-310-3P+TSH-240R-3P aluminum rail total length.

$$(27 \times 15) + (44 \times 3) + (36 \times 3) + 2 + 26 = 673$$

$673 \div 15 = 44.87$ Rounded off at least significant digit

$$45 \times 15 \text{mm} = 675 \text{mm} (\text{D dimension})$$

- Total length of aluminum rail (E) $E = D + 15 \text{mm}$

*The total length of the AR-LH aluminum rail is 690mm.

● Weight of rail-mounted unit

P: Number of polarities (dimension unit: g)

Model	TSH-175R	TSH-240R	TSH-310R	TSH-400R
Weight	$99 \times P + 50$	$195 \times P + 50$	$237 \times P + 50$	$380 \times P + 50$

● Weight of bolt-mounted unit

P: Number of polarities (dimension unit: g)

Model	TSH-175B	TSH-240B	TSH-310B	TSH-400B	TSH-600B
Weight	$94 \times P + 65$	$190 \times P + 65$	$232 \times P + 65$	$375 \times P + 65$	$669 \times P + 65$