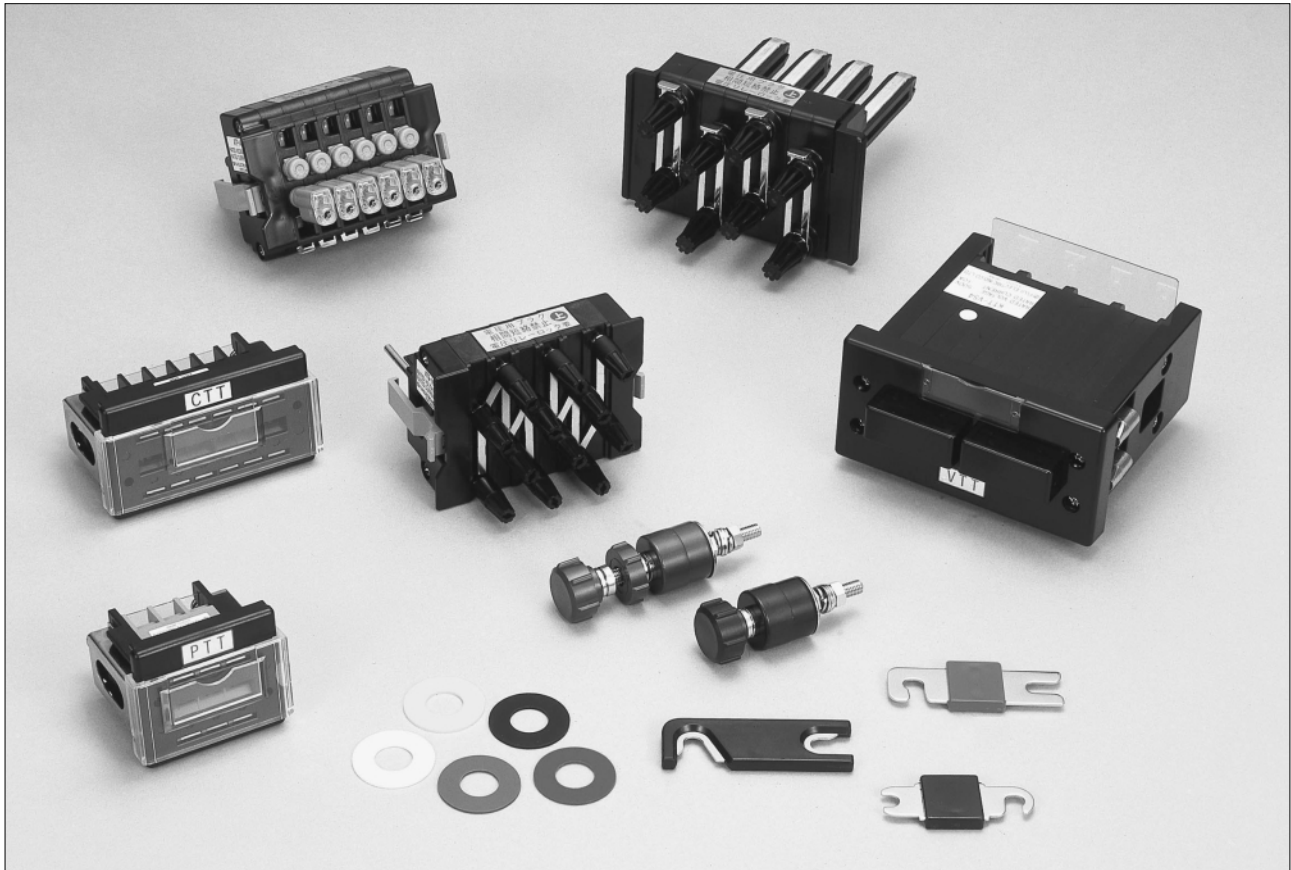


TEST TERMINALS



FEATURES

■ Simplified calibration and testing procedures

Our test terminals allow you to perform calibration and testing procedures with instrument and relays connected in place, resulting in great labor saving.

■ Broad range of applications

Our test terminals are available in a broad range of types including the stud type and insertion type to meet your current capacity requirements ranging from 5 to 30 A and your applications.

■ Safe structure

Our test terminals for CT circuits are designed to prevent the circuit from being opened. Both of the insertion type

test terminals for PT and CT circuits assure safety with their structure that prevents wrong insertion.

■ High insulation and inflammability

For the housing material, high-performance engineering plastics is used to provide high insulation, inflammability, and impact resistance.

■ Protective treatment for use in tropical regions

To ensure high durability in harsh use under climatic conditions of tropical regions, special protective treatment is applied to some products, which are available in the same ratings, performance, and dimensions as those of the standard products.

SPECIFICATION (RATINGS AND PERFORMANCE)

Specification	Type	B-TYPE	K-TYPE	A-TYPE
Rated insulation voltage		600 VDC, AC	500 VDC, AC	250 VDC, AC
Rated current		30 A	10 A	5 A
Max. connectable wire		8 mm ²	5.5 mm ²	2 mm ²
Withstand voltage		1 minute at 2,500 VAC		1 minute at 2,000 VAC
Lightning impulse		±7,000 V min. 1.2/50 μs		±3,000 V min. 1.2/50 μs
Operating ambient temperature		-25 to 50°C		-5 to 40°C
Insulation resistance		Insulation-resistance meter (1,000 VDC) 1,000 MΩ min.		Insulation-resistance meter (500 VDC) 1,000 MΩ min.
Overload capacity		1 second at 200 A AC		

DIRECTIONS FOR ORDERING

Please refer to the type organization.

TYPE ORGANIZATION

[B-type test terminal]

B-PTT B

Basic type

Symbol	Structure/use	Symbol	Color (Munsell-like)
PTT	Single-contactor structure	4/1.5	7.5BG4/1.5
CTT	Dual-contactor structure	3/3.5	7.5BG3/3.5
C	Cover (colorless transparent)	R	7.5R4.5/14
SV	Short bar	Y	2.5Y8/12
SB		B	N1.5
LB			

[K-type test terminal]

K TT-A W 3 B

Basic type

Test terminal

Symbol	Contactor structure	Symbol	Color (Munsell-like)
A	For current	4/1.5	7.5BG4/1.5
V	For voltage	B	N1.5
S	Mono-structured contactor (only test terminals for voltage)		
W	Dual-structured contactor		

Symbol	No. of poles	Symbol	No. of poles
1	1 pole ^(*)	4	4 poles
2	2 poles	6	6 poles
3	3 poles	8	8 poles ^(*)

(*): only test terminals for current

[K-type test plug]

K TP-A 3 H AG

Basic type

Symbol	Test plug	Symbol	Color (Munsell-like)
TP	Test plug	4/1.5	7.5BG4/1.5
TQ	Test plug	B	N1.5
A	For current		
V	For voltage		

Symbol	No. of poles	Symbol	No. of poles
1	1 pole ^(*)	4	4 poles
2	2 poles	6	6 poles
3	3 poles	8	8 poles ^(*)

(*): only test terminals for current

[A-type test terminal or plug]

A TT-A 3

Basic type

Symbol	Test terminal/plug	Symbol	Color (Munsell-like)
TT	Test terminal	4/1.5	7.5BG4/1.5
TP	Test plug	B	N1.5
TQ	Test plug (screw-type)		
A	For current		
V	For voltage		
VL	For voltage (circuit disconnection prevention)		

Symbol	No. of poles	Symbol	No. of poles
2	2 poles	6	4 poles
3	3 poles	8	6 poles
4	4 poles		

● STUD TYPE

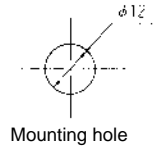
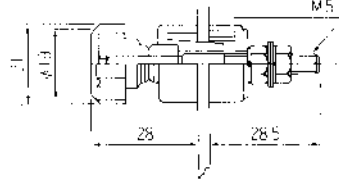
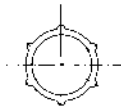


TEST TERMINALS

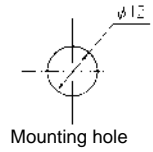
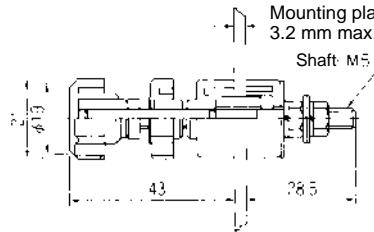
B-TYPE

STANDARD MODELS

B-PTT



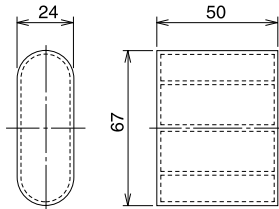
B-CTT



ACCESSORIES

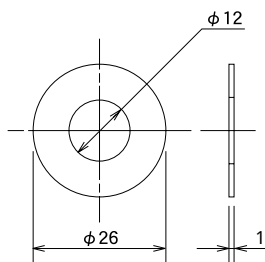
Protective cover

● B-cover [B-C]



* The B-cover is applicable when test terminals are mounted at pitches of 40 mm.
If the B-LB short bar is mounted, the B-cover cannot be used.

Color rings



Color	Model
Blue	B color ring BL
White	B color ring W
Red	B color ring R
Yellow	B color ring Y
Black	B color ring B

(Ordering unit: 100 pieces)

Short bars

● B-SV



Model	Symbol	Color (Munsell-like)
B-SV	4/1.5	7.5BG4/1.5
	3/3.5	7.5BG3/3.5
	R	7.5R4.5/14
	Y	2.5Y8/12
	B	N1.5

● B-SB



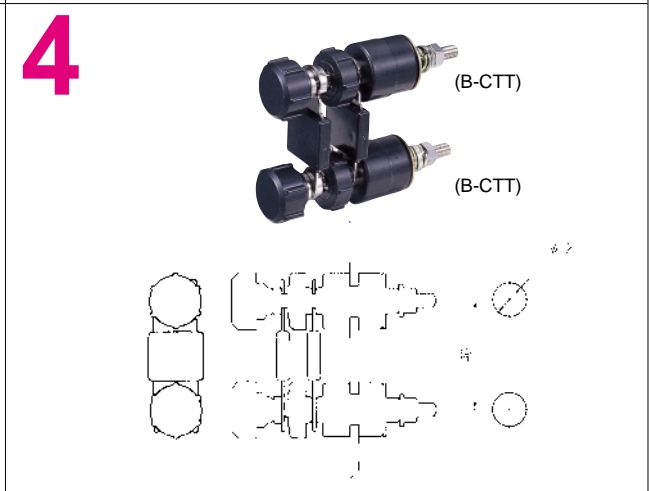
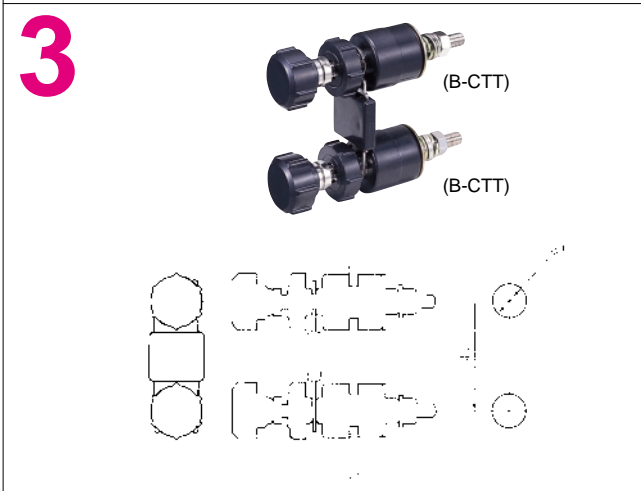
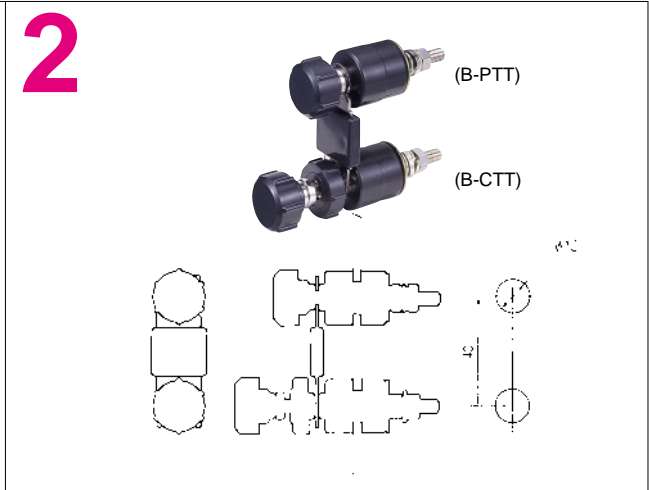
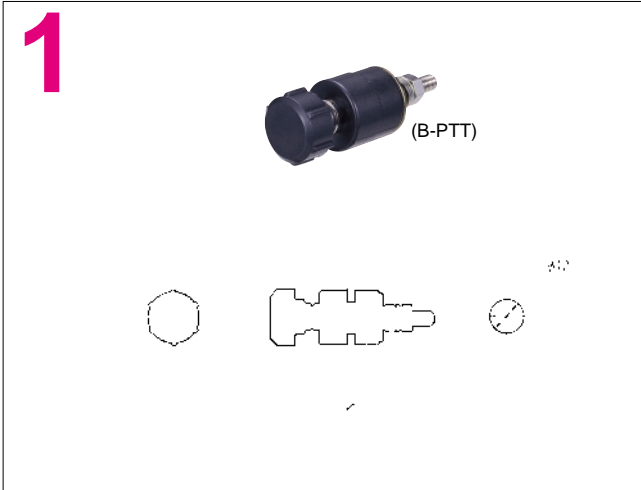
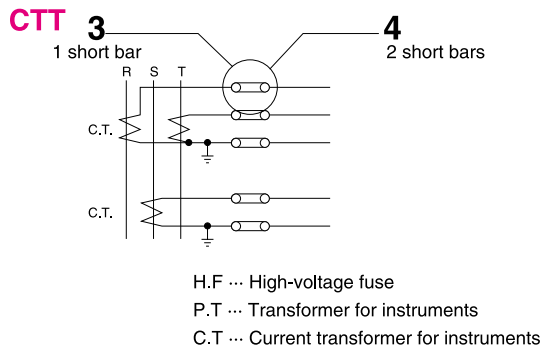
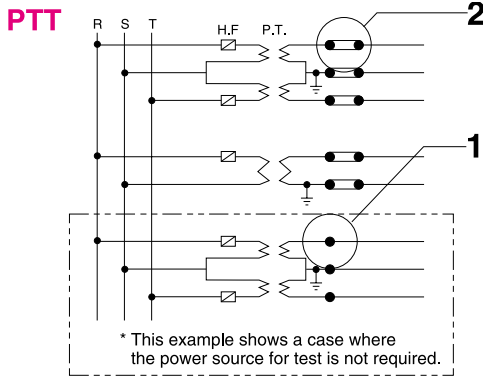
Model	Symbol	Color (Munsell-like)
B-SB	4/1.5	7.5BG4/1.5
	3/3.5	7.5BG3/3.5
	R	7.5R4.5/14
	Y	2.5Y8/12
	B	N1.5

● B-LB



Model	Symbol	Color (Munsell-like)
B-LB	4/1.5	7.5BG4/1.5
	3/3.5	7.5BG3/3.5
	R	7.5R4.5/14
	Y	2.5Y8/12
	B	N1.5

TYPICAL EXAMPLES OF USES



● INSERTION TYPE



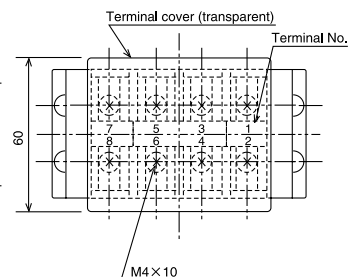
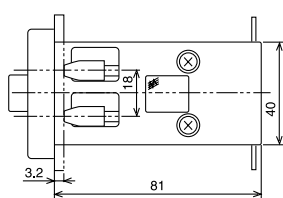
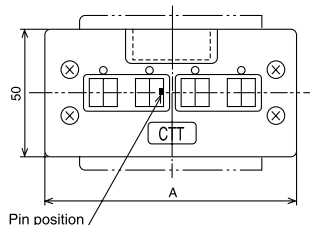
TEST TERMINALS

K-TYPE

STANDARD MODELS (TERMINALS)

KTT-AW Number of poles - Color (For current)

– Circuit disconnection prevention type –

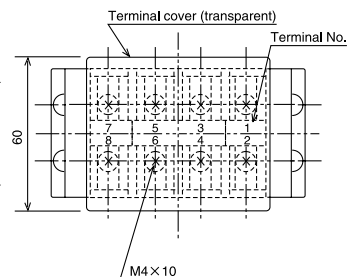
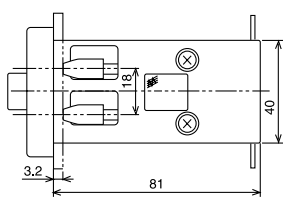
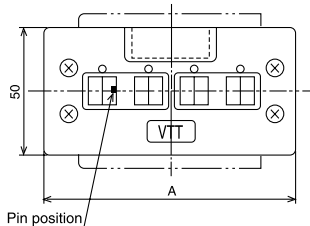


No. of poles	1	2	3	4	6	8
A-size	44	62	80	98	134	170

● Combinations with plugs
KTQ-A□H
KTP-A□H

KTT-VW Number of poles - Color (For voltage)

– Circuit disconnection prevention type –

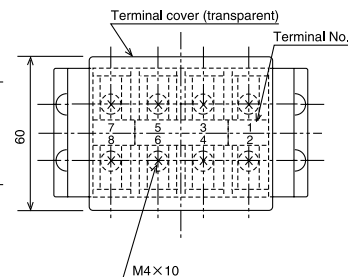
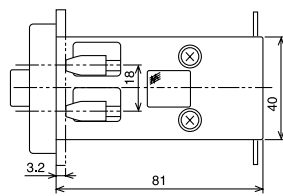
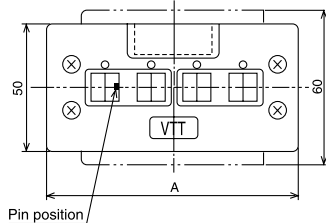


No. of poles	2	3	4	6
A-size	62	80	98	134

● Combinations with plugs
KTQ-V□H

KTT-VS Number of poles - Color (For voltage)

– Power-source contact prevention type –



No. of poles	2	3	4	6
A-size	62	80	98	134

● Combinations with plugs
KTP-V□H

■ Combinations of test terminals and plugs, and applications

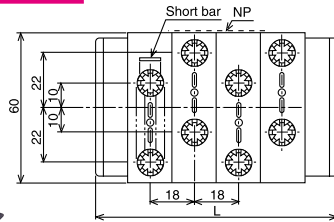
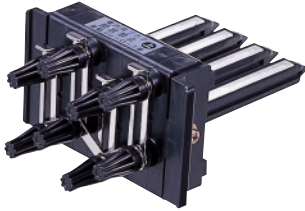
Test terminal	Test plug	Application
KTT-AW□	KTQ-A□H	Combination of circuit disconnection prevention types (highly reliable)
	KTP-A□H	Combination of circuit disconnection prevention types (highly reliable)
KTT-VW□	KTQ-V□H	Combination of circuit disconnection prevention types (highly reliable)
KTT-VS□	KTP-V□H	Combination of power-source contact prevention types

⚠ Precautions on use

- To insert a test plug, be sure to lock the relay.
- If another power source is used when a voltage circuit is tested, select the combination of KTT-VS□ and KTP-V□H to prevent any contact with the test power source.
- In order to prevent any contact with the test power source, be sure to turn OFF the power switch when inserting a plug.
- For the purpose of preventing a current circuit from momentary disconnection, KTT-AW□ and KTQ-A□H are combined for 2-point contact resulting in improved reliability.

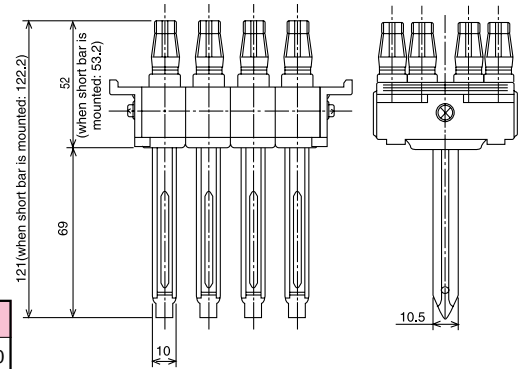
STANDARD MODELS (PLUGS)

KTP-A Number of poles H AG (For current)

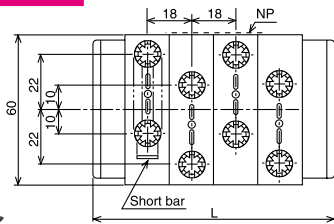
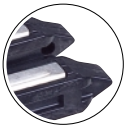


● Combinations with terminals
KTT-AW□

No. of poles	1	2	3	4	6	8
L-size	44	62	80	98	134	170

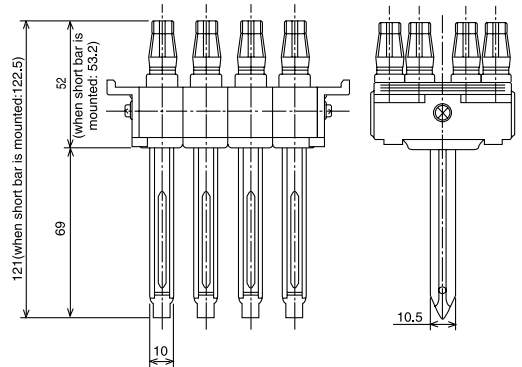


KTP-V Number of poles H AG (For voltage)

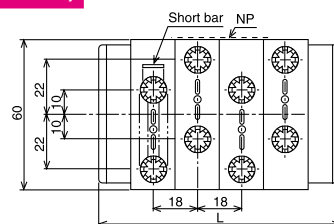
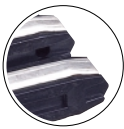


● Combinations with terminals
KTT-VS□

No. of poles	2	3	4	6
L-size	62	80	98	134

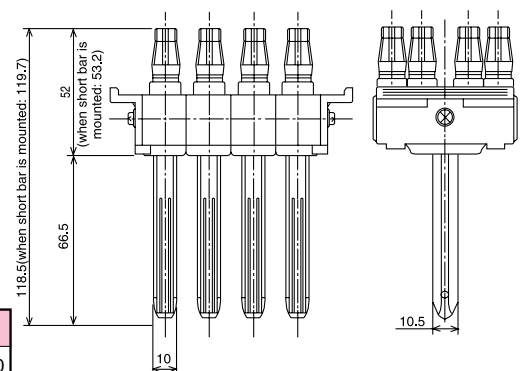


KTQ-A Number of poles H AG (For current)

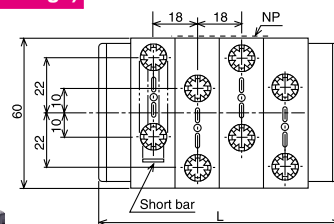
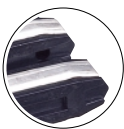


● Combinations with terminals
KTT-AW□

No. of poles	1	2	3	4	6	8
L-size	44	62	80	98	134	170

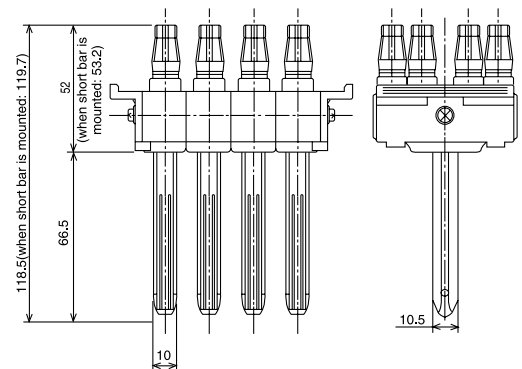


KTQ-V Number of poles H AG (For voltage)



● Combinations with terminals
KTT-VW□

No. of poles	2	3	4	6
L-size	62	80	98	134





K-TYPE

SHORT BARS SUPPLIED WITH TEST PLUGS



KT short bar A KT short bar B

The quantities of short bars supplied are as shown below:

Model Short bar	No. of poles	KTP-A/KTQ-A						KTP-V/KTQ-V			
		1P	2P	3P	4P	6P	8P	2P	3P	4P	6P
KT short bar A	—	2	3	4	6	8	2	3	4	6	
KT short bar B	—	1	2	3	5	7	—	—	—	—	

ACCESSORIES

Box set

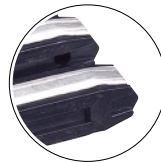


Box set for KTPB plugs



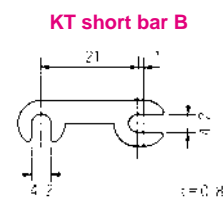
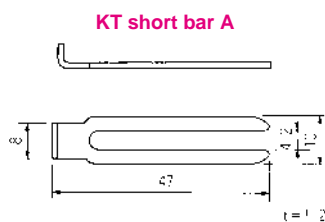
Model	Description
KTPB-A2-V2	Combination of KTP-A2H and KTP-V2H; Each 4 pieces of red and white lead wires
KTPB-A2-V2	Combination of KTP-A3H and KTP-V3H; Each 4 pieces of red, white and blue lead wires
KTPB-A4-V4	Combination of KTP-A4H and KTP-V4H; Each 4 pieces of red, black, white and blue lead wires
KTPB-A6	KTP-A6H; Each 4 pieces of red, white and blue lead wires
KTPB-V6	KTP-V6H; Each 4 pieces of red, white and blue lead wires
KTPB-A8	KTP-A8H; Each 4 pieces of red, black, white and blue lead wires

Box set for KTQB plugs



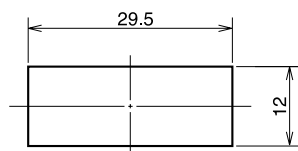
Model	Description
KTQB-A2-V2	Combination of KTQ-A2H and KTQ-V2H; Each 4 pieces of red and white lead wires
KTQB-A3-V3	Combination of KTQ-A3H and KTQ-V3H; Each 4 pieces of red, white and blue lead wires
KTQB-A4-V4	Combination of KTQ-A4H and KTQ-V4H; Each 4 pieces of red, black, white and blue lead wires
KTQB-A6	KTQ-A6H; Each 4 pieces of red, white and blue lead wires
KTQB-V6	KTQ-V6H; Each 4 pieces of red, white and blue lead wires
KTQB-A8	KTQ-A8H; Each 4 pieces of red, black, white and blue lead wires

Short bars



● Short bars are shipped in the state of being assembled to plugs.

Usage ID seal [common to KTT and ATT]

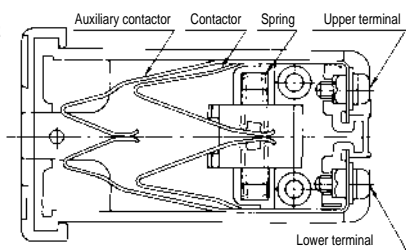


● The material is single-side coated paper (white). (Ordering unit: 100 pieces)

Marking	CT secondary	PT secondary	GPT secondary	GPT third	CT2RY
		PT2RY	VT2RY	GPT2RY	GPT3RY

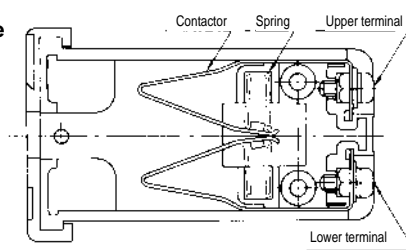
STRUCTURES AND ACTION OCCURRING IN EACH COMBINATION

**Illustration of
contactor for current
(KTT-AW□)**



When a plug is inserted and the auxiliary contactor is opened, the main contactor will not be opened. The auxiliary contactor closes before the plug releases the main contactor. Either the auxiliary contactor or the main contactor always remains closed, preventing the CT circuit from being disconnected.

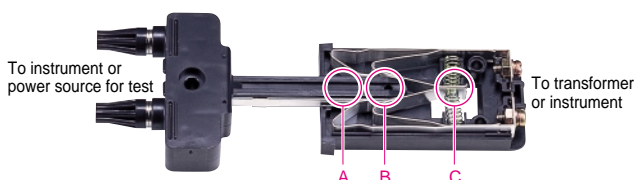
**Illustration of
contactor for voltage
(KTT-VS□)**



When the plug is inserted, the contactor is opened. This state will be maintained until the contactor makes contact with the contact point of the plug. This eliminates the possibility of making contact with the power source.

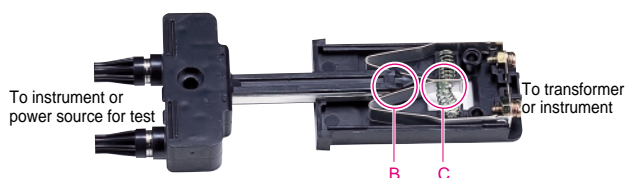
■ Combination of KTT-AW and KTQ

The KTT-AW terminal has a dual-contactor structure consisting of main and auxiliary contactors. In addition, the KTQ plug has a long conductive part for contact up to its leading end. Therefore, when the plug is inserted, the contact is completed at two contacts (A) and (B) before the contact (C) of the terminal is opened. Thus, this combination provides excellent function for preventing the circuit from being opened.



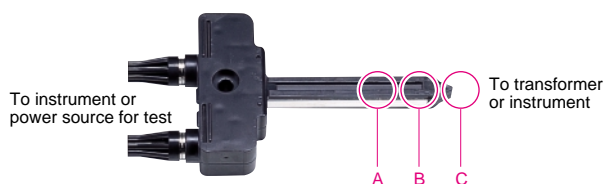
■ Combination of KTT-VS and KTP

The KTT-VS has a single-contactor structure consisting of a main contactor only. The KTP has a long conductive part for contact up to 10 mm before its leading end (the leading 10 mm part is an insulator). When the plug is inserted, the contact (C) of the terminal is opened before the contact (B) is closed. Therefore, even if another power source is inserted from the plug when the plug is inserted or removed, there will be no possibility of making contact with the power source. However, when the circuit voltage is measured with a test instrument, the relay will malfunction due to the momentary disconnection of the circuit. For this reason, the relay must be locked.



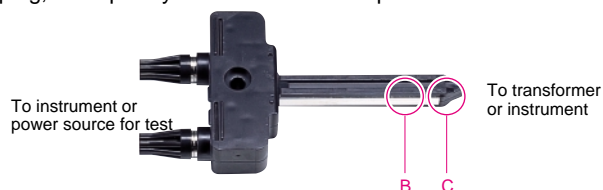
■ Combination of KTT-AW and KTP

The KTT-AW has a dual-contactor structure consisting of main and auxiliary contactors. The KTP plug has a shorter conductive part for contact than the KTQ. However, when it is inserted, the contact (A) of the terminal is closed before the contact (C) is opened (the contact (B) starts being closed after the contact (C) has been opened).

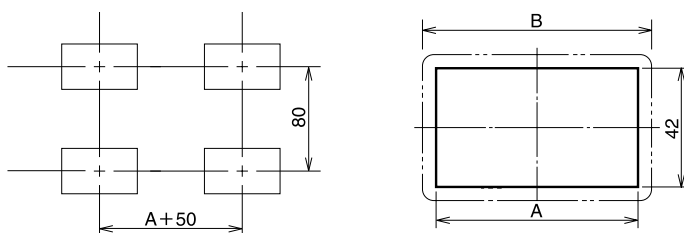


■ Combination of KTT-VS and KTQ (special combination)

The KTT-VS has a single-contactor structure consisting of a main contactor only. However, the KTQ has a long conductive part for contact up to its leading end. Therefore when the plug is inserted, the contact (B) of the terminal is closed before the contact (C) is opened. This ensures that the circuit never be opened when the plug is inserted or removed. Therefore, when the circuit voltage is measured using a test instrument, the relay will not malfunction due to the momentary disconnection of the circuit. However, if you try to insert another power source from the plug, a temporary connection with the power source will occur.



PANEL CUTOUT DIMENSIONS



(Min. mounting pitch)

Size	1P	2P	3P	4P	6P	8P
A	36	54	72	90	126	162
B	44	62	80	98	134	170

● INSERTION TYPE

TEST TERMINAL

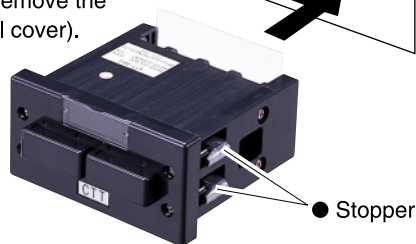


K-TYPE

DIRECTIONS FOR HANDLING

■ Mounting procedure

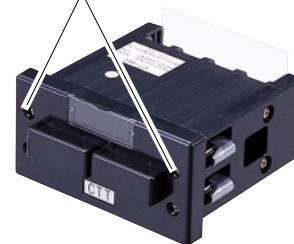
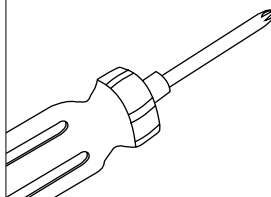
- Mount the test terminal from the front of the panel (remove the terminal cover).



(Take care so that the stoppers do not make contact with any panel edge.)

- Tighten the mounting screws by turning them clockwise with a Philips screwdriver.

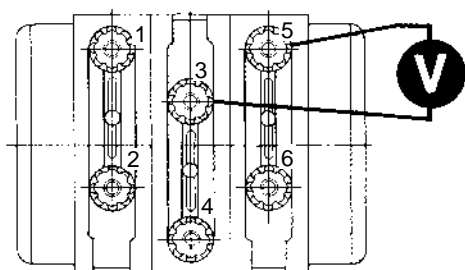
- Mounting screw



HANDLING AND TESTING

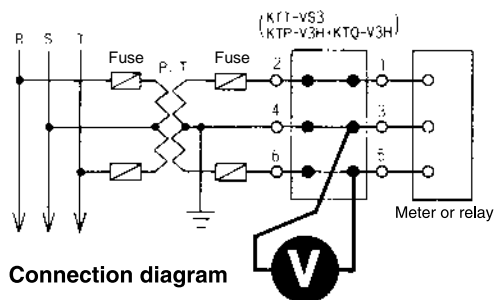
■ Measuring current and voltage

Measuring voltage



1. Short-circuit each phase (each set of the upper and lower terminals represents the same phase) with the KT short bar A.
2. Connect a voltmeter circuit between the phases to be measured.
3. After the connection has been completed, insert the plug into the terminal.

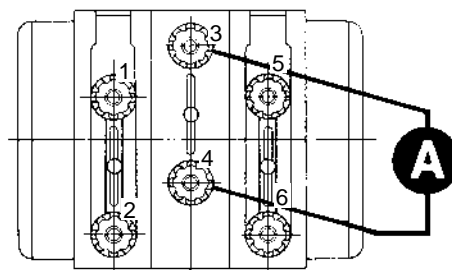
Note: Short-circuiting the PT secondary circuit creates a dangerous situation. Therefore, take care not to insert the plug when different phases are short-circuited by mistake. The KT short bar B (for short-circuiting different phases) does not come with the KTP-V and KTQ-V.



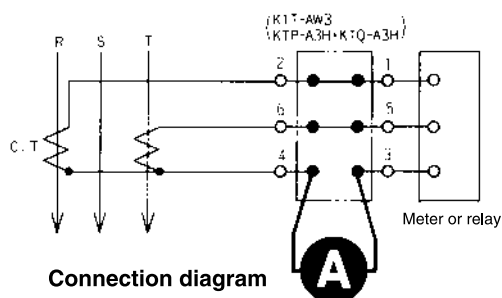
Connection diagram

* When inserting the plug, take care not to let the plug make contact with the short bar or other.

Measuring current

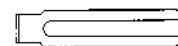


1. Connect an ammeter circuit between the poles to be measured.
 2. Short-circuit the other phases with the KT short bar A.
 3. After the connection has been completed, insert the plug.
- Note: Opening the CT circuit creates a dangerous situation. Be sure to avoid inserting the plug without ensuring the proper connection.



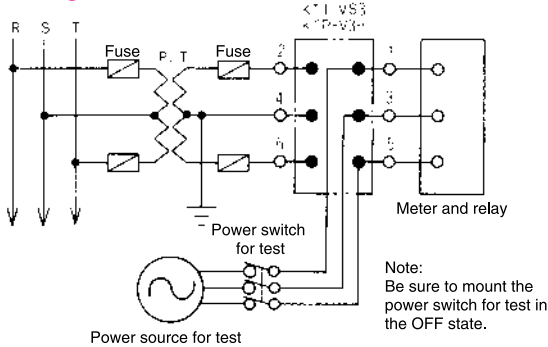
Connection diagram

KT short bar A



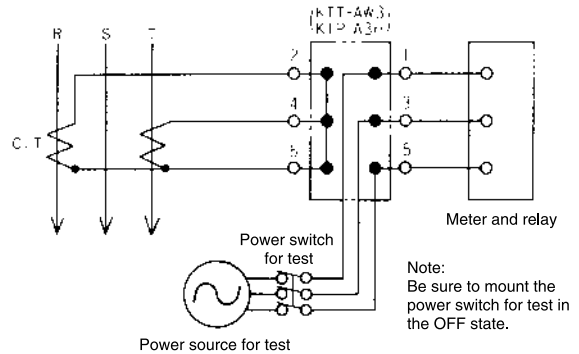
Calibrating a meter and testing a relay with the test power source

For voltage meter



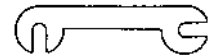
1. Connect the power source for test to the upper terminal screw on the plug for voltage.
2. Connect nothing to the lower terminal to keep it open.
3. After the connection has been completed, insert the plug into the test terminal and then carry out calibration and others.

For current meter



1. Connect the power source for test to the upper terminal screw on the plug for current.
2. Connect the KT short bar B to the lower terminal to prevent the CT circuit from being opened.
3. After the connection has been completed, insert the plug into the test terminal and then carry out calibration and others.

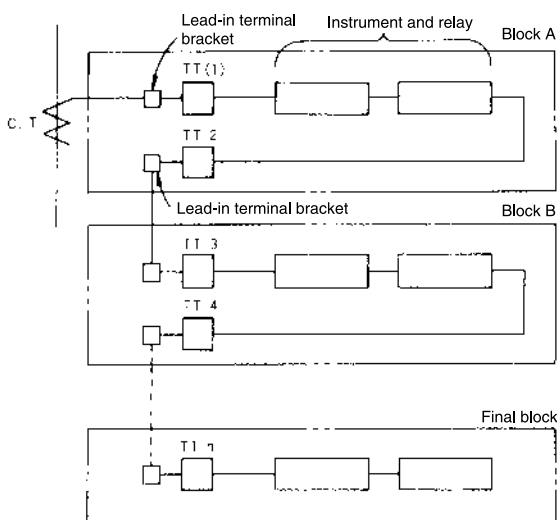
KT short bar B



Note: Before connecting the power source for test, carefully check that it is being connected to the correct terminals (not the vertically reverse ones). To insert the plug, be sure to turn OFF the power switch.

Checking for electrical discontinuity or breakdown in internal wiring of switchboard

Secondary side of current transformer



1. Connect an insulation-resistance meter between the test plugs TP(1) and TP(2).
2. Insert the connected plug into the test terminal TT(1) and TT(2), and then measure the block A.
3. Similarly, measure the block B through the final block.
4. The result will clarify the insulation resistance in each block.

Note: Before inserting the plugs, short-circuit all the terminals on the entire primary side of the current transformer with the KT short bar B.

● INSERTION TYPE

TEST TERMINALS

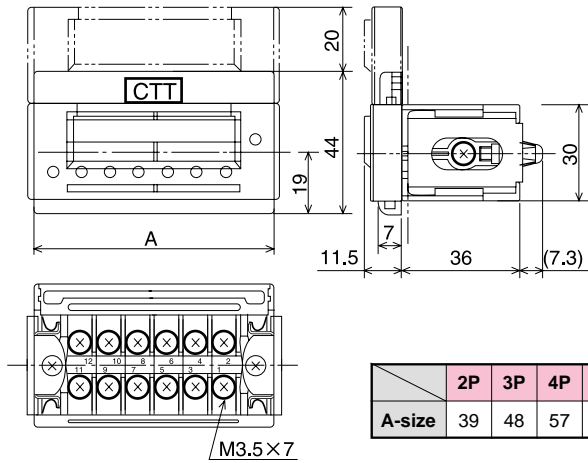
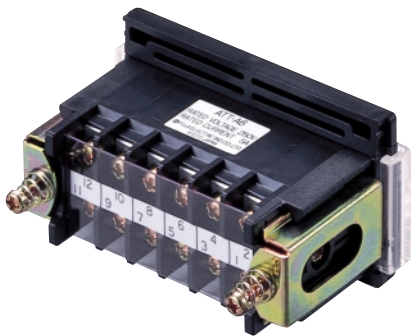


A-TYPE

STANDARD MODELS (TERMINALS)

ATT-A Number of poles (For current)

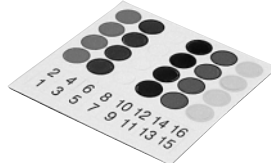
– Circuit disconnection prevention type –



	2P	3P	4P	6P	8P
A-size	39	48	57	75	93

● Item supplied together

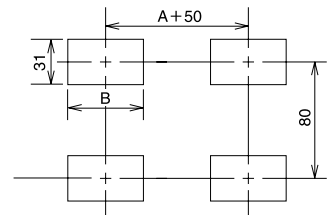
ATP color NP



ø5 (red, blue, white, black, green, and yellow) ×1
×2 (6P, 8P)

● Combinations with plugs
ATP-A□, ATQ-A□

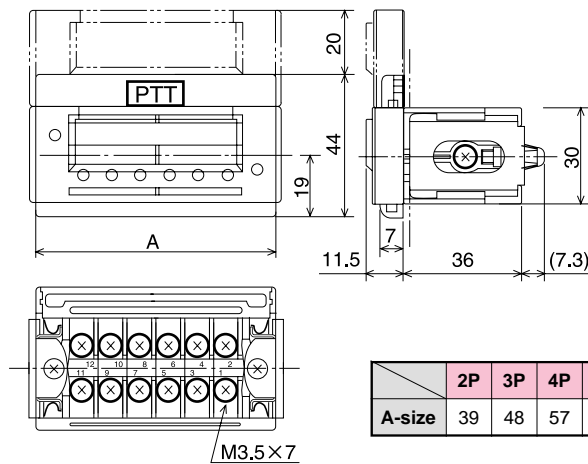
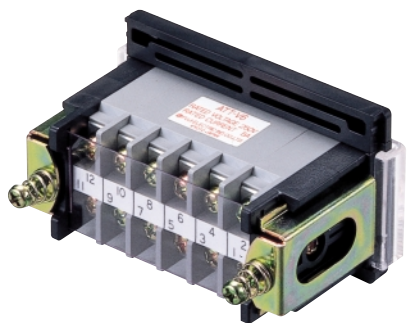
● Panel cutout dimensions



	2P	3P	4P	6P	8P
B-size	35	44	53	71	89

ATT-V Number of poles (For voltage)

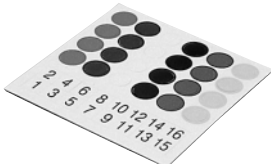
– Power-source contact prevention type –



	2P	3P	4P	6P	8P
A-size	39	48	57	75	93

● Item supplied together

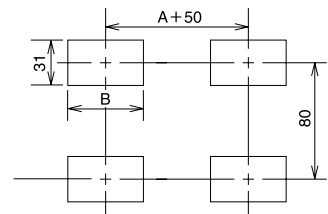
ATP color NP



ø5 (red, blue, white, black, green, and yellow) ×1
×2 (6P, 8P)

● Combinations with plugs
ATP-V□, VL□, ATQ-V□, VL□

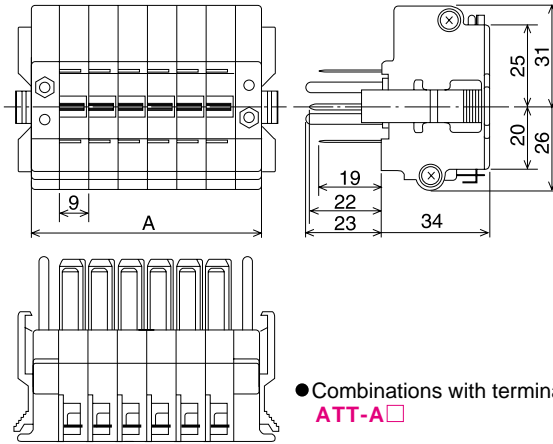
● Panel cutout dimensions



	2P	3P	4P	6P	8P
B-size	35	44	53	71	89

STANDARD MODELS (PLUGS)

ATP-A Number of poles (For current)



● Combinations with terminals
ATT-A □

	2P	3P	4P	6P	8P
A-size	35	44	53	71	89

● Item supplied together

ATP lead plug



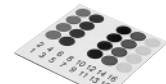
× No. of poles

ATP short jack



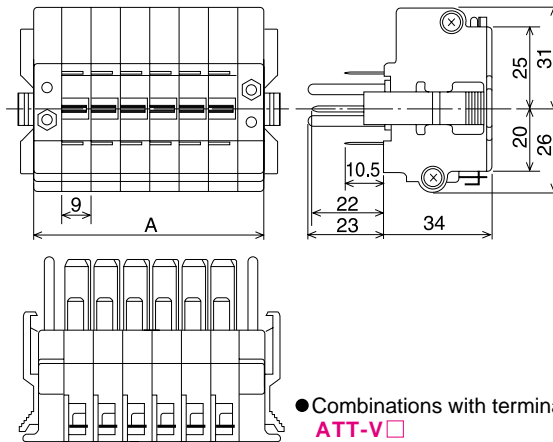
× No. of poles

ATP color NP



× 1
× 2 (6P, 8P)

ATP-V Number of poles (For voltage)



● Combinations with terminals
ATT-V □

	2P	3P	4P	6P	8P
A-size	35	44	53	71	89

● Item supplied together

ATP lead plug



× No. of poles

ATP short jack



× No. of poles

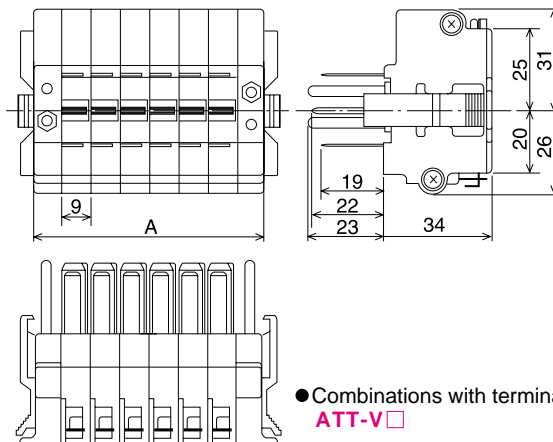
ATP color NP



× 1
× 2 (6P, 8P)

ATP-VL Number of poles (For voltage)

– Circuit disconnection prevention type –



● Combinations with terminals
ATT-V □

	2P	3P	4P	6P	8P
A-size	35	44	53	71	89

● Item supplied together

ATP lead plug



× No. of poles

ATP short jack



× No. of poles

ATP color NP



× 1
× 2 (6P, 8P)

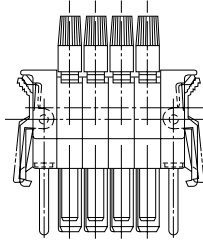
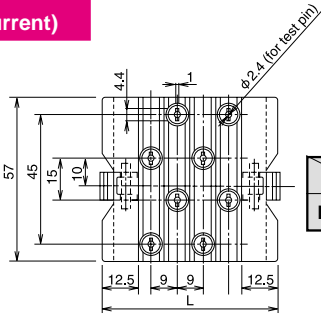
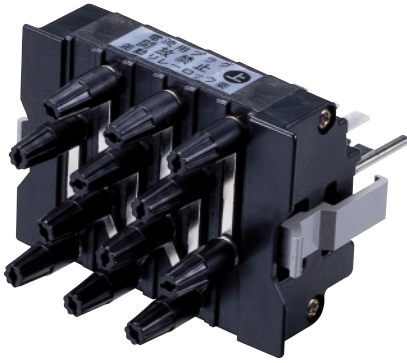
● INSERTION TYPE
TEST TERMINALS



A-TYPE

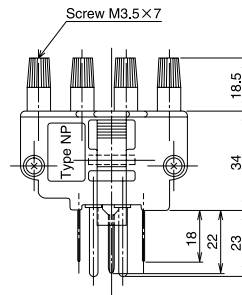
STANDARD MODELS (PLUGS)

ATQ-A Number of poles (Screw type for current)



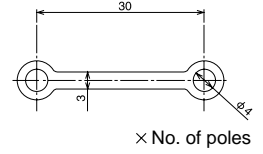
● Combinations with terminals
ATT-A□

	2P	3P	4P	6P	8P
L-size	43	52	61	79	97

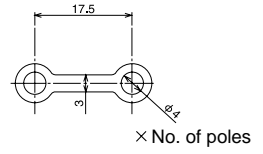


● Item supplied together

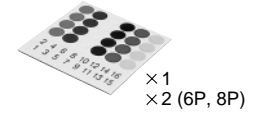
ATQ shot bar A



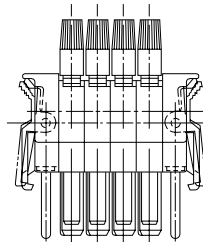
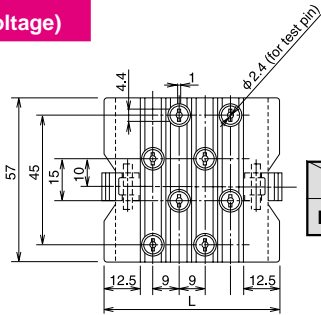
ATQ shot bar B



ATP color NP

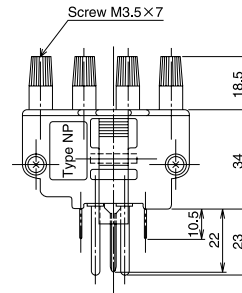


ATQ-V Number of poles (Screw type for voltage)



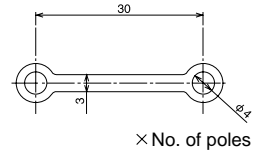
● Combinations with terminals
ATT-V□

	2P	3P	4P	6P	8P
L-size	43	52	61	79	97

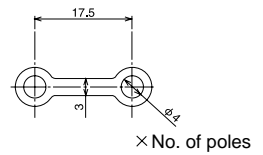


● Item supplied together

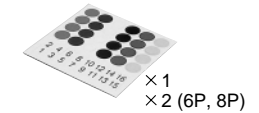
ATQ shot bar A



ATQ shot bar B

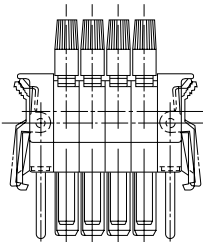
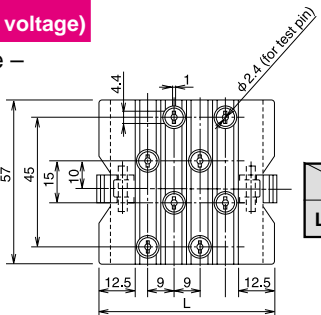


ATP color NP



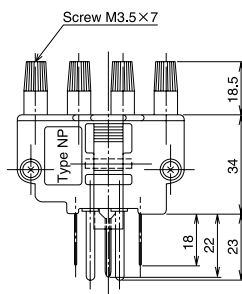
ATQ-VL Number of poles (Screw type for voltage)

– Circuit disconnection prevention type –



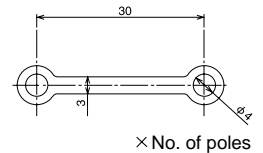
● Combinations with terminals
ATT-V□

	2P	3P	4P	6P	8P
L-size	43	52	61	79	97

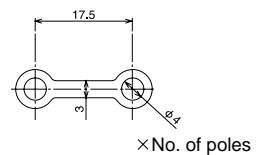


● Item supplied together

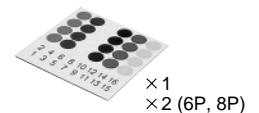
ATQ shot bar A



ATQ shot bar B



ATP color NP

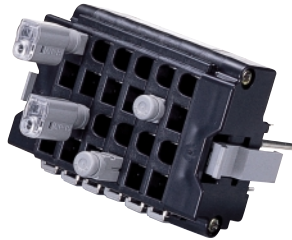


STRUCTURES AND FEATURES

PLUGS

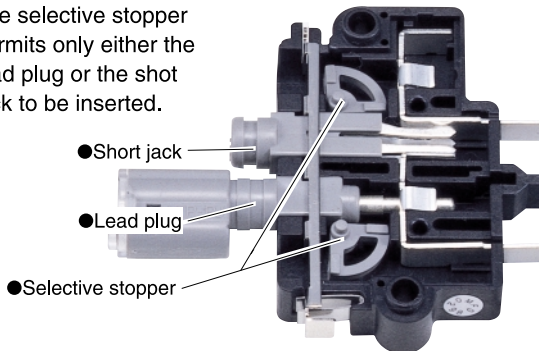
Plug-in type eliminating hot-line work (ATP type)

The conventional short bar connection type has been changed to the plug-in type, which provides a safer structure eliminating dangerous hot-line work.



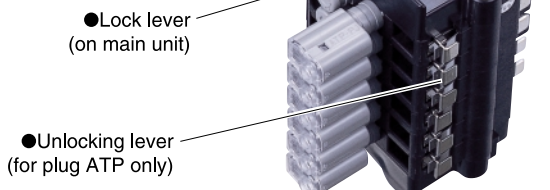
Short-circuit preventive structure against wiring mistakes (ATP type)

The selective stopper permits only either the lead plug or the short jack to be inserted.



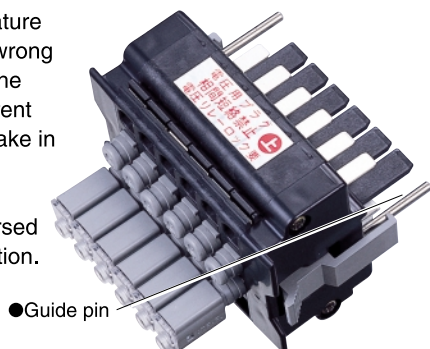
Locking structure to prevent disconnection

The locking structure prevents any disconnection between the lead plug, short jack, and terminal.



Guide pins for safe insertion

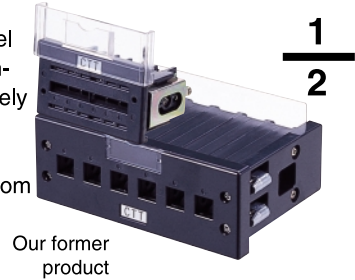
This safety feature prevents any wrong insertion into the voltage or current plug, any mistake in the number of poles, and the vertically reversed wrong connection.



TERMINALS

Compact design with a completely new internal structure

The size of the panel rear has been downsized to approximately a half of our former one by isolating the separable section from the jointed section.



Our former product

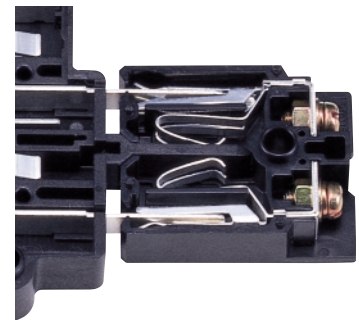
Sliding protective cover free from misplacement

The protective cover, which was often misplaced, has been redesigned as a sliding type to enable work without removing it.



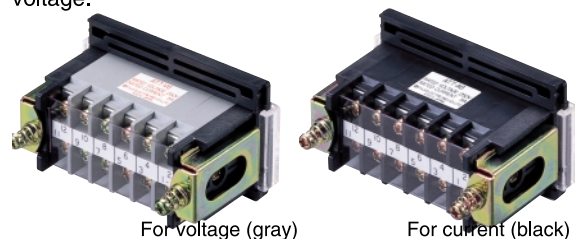
Highly reliable dual-contactor structure

The dual-contactor structure has been adopted for contact in the terminal. The triple-contactor structure has been used to provide more reliable contact between the terminal and the plug.



Chromatic discrimination between units for current and voltage

The units for current are colored in black and those for current in gray to discriminate them. This allows you to carry out wiring while identifying the units for current and voltage.





A-TYPE

ACCESSORIES

Box sets of ATPB plugs



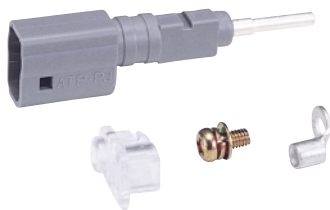
Model	ATPB-A2-V2	ATPB-A3-V3	ATPB-A4-V4	ATPB-A6-V6	ATPB-A8	ATPB-V8	ATPB-A8-V8
Items included	ATP-A2 ATP-V2 4 lead plugs 4 short jacks 2 color NP (ATPB box)	ATP-A3 ATP-V3 6 lead plugs 6 short jacks 2 color NP (ATPB box)	ATP-A4 ATP-V4 8 lead plugs 8 short jacks 2 color NP (ATPB box)	ATP-A6 ATP-V6 12 lead plugs 12 short jacks 4 color NP (ATPB box)	ATP-A8 ————— 8 lead plugs 8 short jacks (ATPB box)	ATP-V8 ————— 8 lead plugs 8 short jacks 2 color NP (ATPB box)	ATP-A8 ATP-V8 16 lead plugs 16 short jacks 4 color NP (ATPB box)

Box sets of ATQB plugs



Model	ATQB-A2-V2	ATQB-A3-V3	ATQB-A4-V4	ATQB-A6-V6	ATQB-A8	ATQB-V8	ATQB-A8-V8
Items included	ATQ-A2 ATQ-V2 4 short bar A 4 short bar B 2 color NP (ATPB box)	ATQ-A3 ATQ-V3 6 short bar A 6 short bar B 2 color NP (ATPB box)	ATQ-A4 ATQ-V4 8 short bar A 8 short bar B 2 color NP (ATPB box)	ATQ-A6 ATQ-V6 12 short bar A 12 short bar B 4 color NP (ATPB box)	ATQ-A8 ————— 8 short bar A 8 short bar B 2 color NP (ATPB box)	ATQ-V8 ————— 8 short bar A 8 short bar B 2 color NP (ATPB box)	ATQ-A8 ATQ-V8 16 short bar A 16 short bar B 4 color NP (ATPB box)

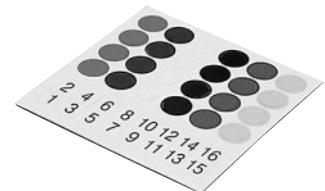
ATP lead plug



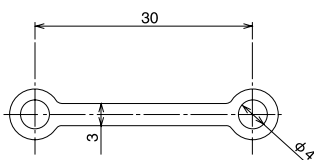
ATP short jack



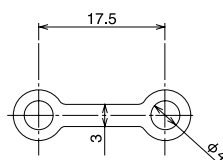
ATP color NP



ATQ short bar A



ATQ short bar B



ATQ knob



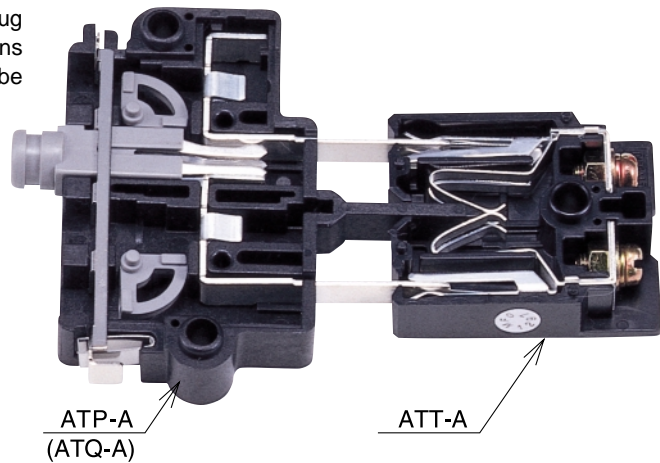
Combinations of test terminals and plugs, and their descriptions

Test terminal	Test plug	Description
ATT-A <input type="checkbox"/>	ATP-A <input type="checkbox"/> ATQ-A <input type="checkbox"/>	Combination of circuit disconnection prevention types
ATT-V <input type="checkbox"/>	ATP-V <input type="checkbox"/>	Combination of power-source contact prevention types
	ATQ-V <input type="checkbox"/>	
	ATP-VL <input type="checkbox"/> ATQ-VL <input type="checkbox"/>	Combination of circuit disconnection prevention types (lap types)

ACTION THAT OCCURS IN EACH COMBINATION WHEN PLUG IS INSERTED

Combination of ATT-A and ATP-A or ATQ-A

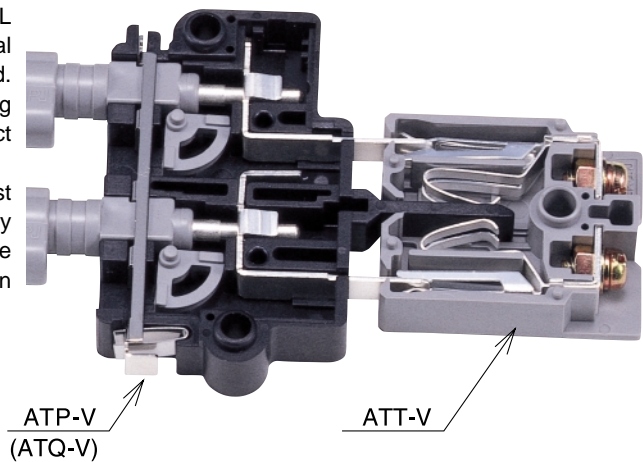
The ATP-A plug has such a long plug terminal that the plug terminal closes before the contact of the ATT-A terminal opens when the plug is inserted. Therefore, the CT circuit never be opened when the plug is inserted or removed.



Combination of ATT-V and ATP-V or ATQ-V

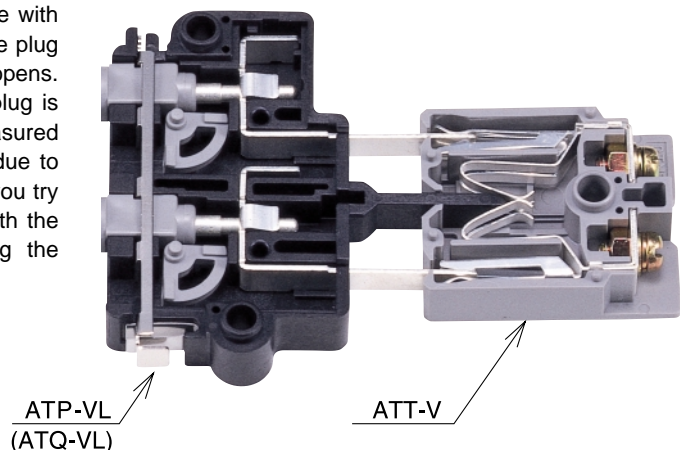
The ATP-V plug has a shorter plug terminal than the ATP-VL plug. Therefore, when the plug is inserted, the plug terminal closes after the contact of the ATT-V terminal has opened. Thus, even if another power source is inserted from the plug when the plug is inserted or removed, there will be no contact with the power source.

However, when the circuit voltage is measured using a test instrument, the relay malfunctions due to the momentary disconnection of the circuit and therefore requires itself to be locked in advance. This combination should be chosen according to your application.



Combination of ATT-V and ATP-VL or ATQ-VL

The ATP-VL plug has a long plug terminal as in the case with the ATP-A plug. Therefore, when the plug is inserted, the plug terminal closes before the contact of the ATT-V terminal opens. For this reason, the circuit never be opened when the plug is inserted or removed. When the circuit voltage is measured using a test instrument, the relay does not malfunction due to the momentary disconnection of the circuit. However, if you try to insert another power source from the plug, contact with the power source will occur temporarily. Before inserting the external power source, therefore, be sure to turn it OFF.



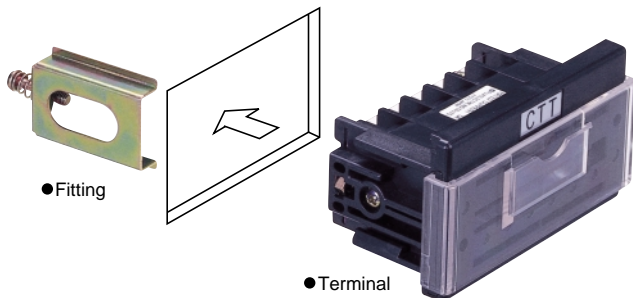


A-TYPE

DIRECTIONS FOR HANDLING

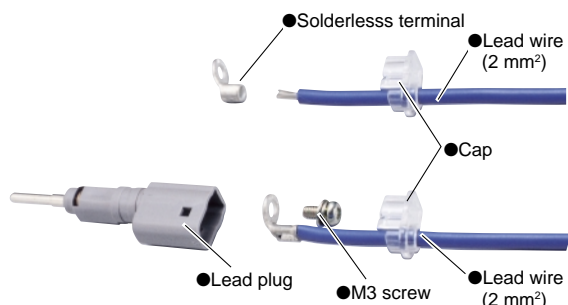
■ Mounting onto panel (ATT)

- 1) Remove two fittings from the terminal.
- 2) Insert the terminal into the mounting slot from the panel front, and then lock it with the fittings.



■ Connecting lead wire to lead plug (ATP)

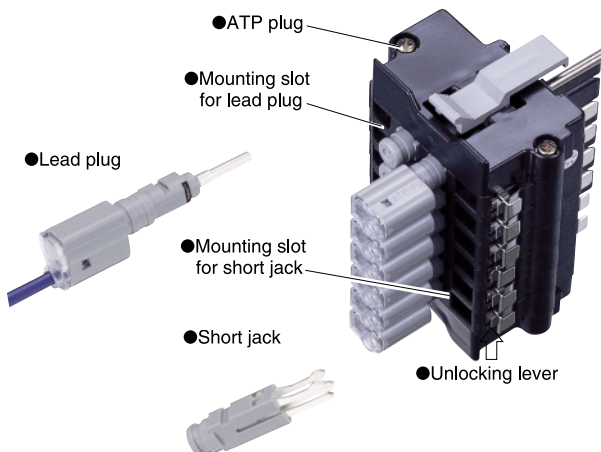
- 1) Insert a transparent cap into the leading end of the lead wire of 2 mm² (to be purchased separately).
- 2) Strip off the leading end of the lead wire and then clamp the supplied L-shaped solderless terminal on it.
- 3) Retain the clamped lead wire to the plug jack using the supplied M3 screw.
- 4) Fit the transparent cap to the plug jack.



■ Mounting and removing short jack and lead plug

- 1) Mount the short jack and lead plug in place while holding down the unlocking lever with your finger. After mounting them, check that they will not fall off or otherwise loosen.

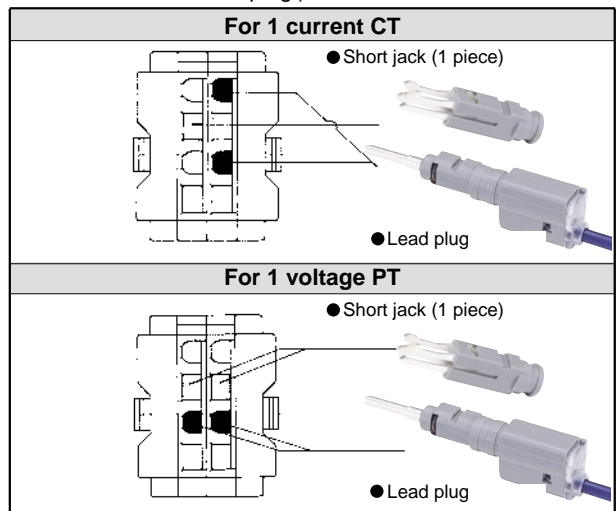
* For connecting a circuit, refer to the typical procedures for connections and the typical procedure for use.



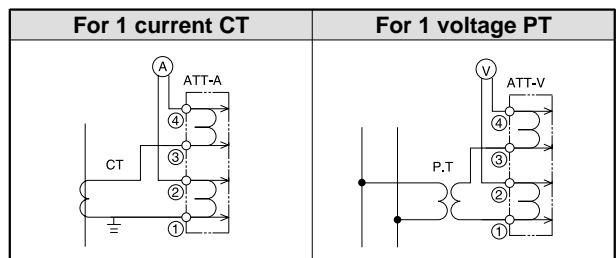
■ Typical procedure for use (ATP)

To measure current or voltage, use the test plug (ATP) for the test terminal (ATT).

- 1) Slide the front transparent cover on the test terminal upward until it clicks, so that it is locked.
- 2) Insert the short jack and lead plug into the slots indicated in the following figures. (In this case, before inserting them, be sure to press the unlocking lever that can be found below the test plug.)



- 3) Connect a measurement instrument using the lead wire connected to the lead plug.
- 4) After the connection has been completed, insert the test plug into the test terminal and then start the test. For the connections including those for the test terminal, see the following diagrams:



⚠ Precautions on use

- A connection mistake can result in an accident. Before the test, carefully check the connections.
- Before use, be sure to check that the lead wires are free from any anomaly such as electrical discontinuity.
- Do not pull the protective cover toward the front.
- To insert or remove the test terminal or plug, carefully do it in parallel with the test terminal.
- After inserting the plug, take care not to give force to the lead wire.
- Never open the CT circuit, which would otherwise result in creating a dangerous situation.
- Be sure to close the protective cover in normal cases other than a test using the test plug.
- Purchase usage ID seals separately.
- To store the connection plug, take care that its contactors are not bent or otherwise deformed.
- The test plug is available in two types, V (power-source contact prevention type) and VL (circuit disconnection prevention type), which should be chosen according to your applications.

TYPICAL PROCEDURES FOR CONNECTIONS (USING ATT AND ATP)

●Connections for measuring voltage and current (be sure to lock relays)

●Connections for calibrating voltmeter and ammeter (turn OFF the power switch at insertion)

For voltage For 1 PT	For current For 1 CT
<p>●Plug not inserted</p>	<p>●Plug not inserted</p>
<p>●Plug inserted</p>	<p>●Plug inserted</p>
For 2 PT	For 2 CT
<p>●Plug not inserted</p>	<p>●Plug not inserted</p>
<p>●Plug inserted</p>	<p>●Plug inserted</p>
For 3 PT	For 3 CT
<p>●Plug not inserted</p>	<p>●Plug not inserted</p>
<p>●Plug inserted</p>	<p>●Plug inserted</p>

For voltage For 1 PT	For current For 1 CT
<p>●Plug not inserted</p>	<p>●Plug not inserted</p>
<p>●Plug inserted</p>	<p>●Plug inserted</p>
For 2 PT	For 2 CT
<p>●Plug not inserted</p>	<p>●Plug not inserted</p>
<p>●Plug inserted</p>	<p>●Plug inserted</p>
For 3 PT	For 3 CT
<p>●Plug not inserted</p>	<p>●Plug not inserted</p>
<p>●Plug inserted</p>	<p>●Plug inserted</p>