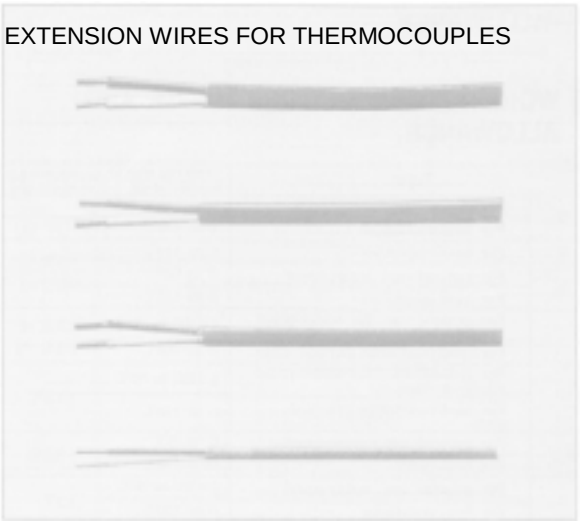
EXTENSION WIRES FOR TEMPERATURE SENSORS

PS PERFORMANCE SPECIFICATION CHINO

EXTENSION WIRES
CONNECTING WIRES FOR RESISTANCE THERMOMETERS
CONNECTING TIPS

EXTENSION WIRES FOR THERMOCOUPLES



Type	Standard type		Thin type			Precision type		Thin precision type	
	Water proof	Heat resistance	General use	Heat resistance	External shield	Water proof	Heat resistance	General use	Heat resistance
R	RXV	RXH	RXI	RXJ					
K	VXV	WXH	VXI	WXJ	WXA	KXVS	KXHS	KXIS	KXJS
E	EXV	EXH	EXI	EXJ	EXA				
J	JXV	JXH	JXI	JXJ	JXA				
T	TXV		TXI	TXJ	TXA				
W		NXH							
B	BXV	BXH	BXI	BXJ					
S		SXH							

EXTENSION WIRES FOR RESISTANCE THERMOMETERS

Sheath materials	3-core	4-core	6-core	8-core
Vinyl	WV38	WV46	WV61	
Heat-resisting vinyl	WP3□			WP81
Cold-resisting vinyl	WY3□			
Vinyl with internal shield	WG38			
Silicone rubber	WS3□	WS44	WS68	
Neoprene rubber	WN38		WN61	
Lead covered by neoprene rubber	WL31		WL61	
Teflon and glass wool braided	WM34			
Teflon	WF32			

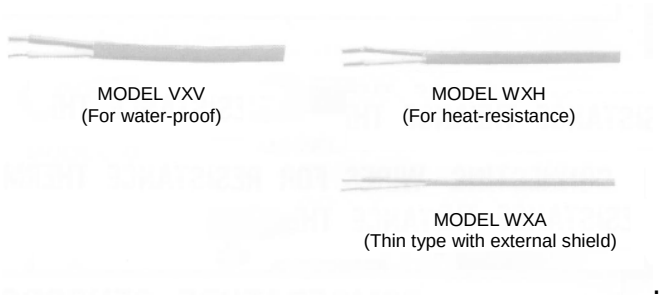
(Note): □ indicates the finished outer diameter. A real figure shows that its corresponding wire has one finished outer diameter only.

CONNECTION TIPS

Classification	For termination				For connection
Code	G	Y	U	F	B
Outer shape					

EXTENSION WIRES

The extension wires are a pair of insulated lead wires, of which the EMF characteristics are similar to the characteristics of the thermocouple to be combined in the appropriate temperature range including the room temperature. The wires are used for connecting thermocouple terminals and reference junctions of instruments to compensate an error that may be produced by a temperature change at the thermocouple terminals.



MODEL VXV
(For water-proof)

MODEL WXH
(For heat-resistance)

MODEL WXA
(Thin type with external shield)

■ MODELS

□ X □ □

Type

R: For R thermocouple
K: For K thermocouple
T: For T thermocouple
S: For S thermocouple
V: For K thermocouple
E: For E thermocouple
N: For W thermocouple
W: For K thermocouple
J: For J thermocouple
B: For B thermocouple

Application

V: For water-proof
H: For heat-resistance
I: For general use (thin type)
J: For heat-resistance (thin type)
A: For heat-resistance with external shield (thin type)

Class

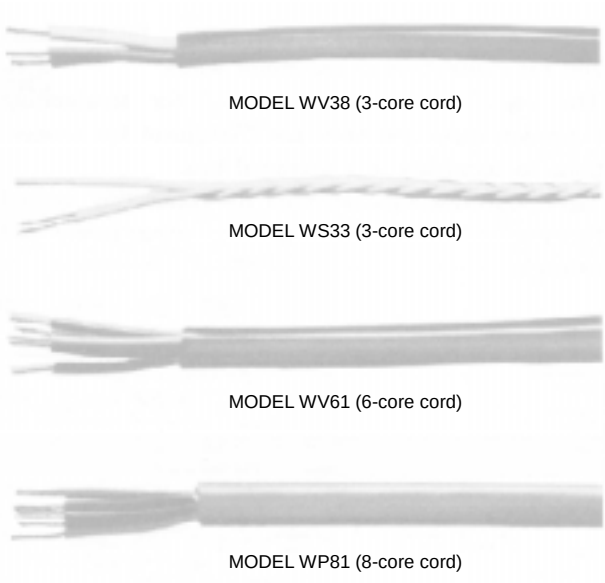
Blank: Normal class
S: Precision class (for K only)

■ GENERAL SPECIFICATIONS

Type		Applications	Code	Composition of core (mm)		Sheath		Electric resistance (Ω/m)	Working temperature (ºC)	Allowance of error (μV)	Finished outer diameter (mm)
				+ side	- side	Material	Color				
R		For heat-resistance	RXH	Copper 0.65 x 7	Copper alloy 0.65 x 7	Glass wool braided	Black	0.03	0 to 150	±60	4 x 6.5
		For water-proof	RXV			Vinyl			0 to 90	±30	5 x 8
		Thin type for heat-resistance	RXJ	Copper 0.3 x 7	Copper alloy 0.3 x 7	Glass wool braided		0.13	0 to 150	±60	2.4 x 4
		Thin type for general use	RXI			Vinyl			0 to 90	±30	3 x 4.9
K	Precision class	For heat-resistance	KXHS	Chromel 0.65 x 7	Alumel 0.65 x 7	Glass wool braided	Blue	0.43	0 to 150	±100	4 x 6.5
		For water-proof	KXVS			Vinyl			(-)20 to 90		5 x 8
		Thin type for heat-resistance	KXJS	Chromel 0.32 x 7	Alumel 0.32 x 7	Glass wool braided		1.94	0 to 150		3 x 4.9
		Thin type for general use	KXIS			Vinyl			(-)20 to 90		2.4 x 4
	Normal class	For heat-resistance	WXH	Iron 0.65 x 7	Constantan 0.65 x 7	Glass wool braided		0.38	0 to 150	±60	5 x 6.5
		Thin type for heat-resistance	WXJ	Iron 0.3 x 7	Constantan 0.3 x 7	Glass wool braided		1.25	0 to 150		2.4 x 4
		Thin type for general use	VXI	Copper 0.3 x 7		Vinyl		1.25	(-)20 to 90		3 x 4.9
		For water-proof	VXV	Copper 0.65 x 7	Constantan 0.65 x 7	Vinyl		0.22	0 to 90		5 x 8
		With external shield	WXA	Iron 0.3 x 7	Constantan 0.3 x 7	Stainless steel braided		1.25	0 to 150		2.8 x 4.5
E		For heat-resistance	EXH	Chromel 0.65 x 7	Constantan 0.65 x 7	Glass wool braided	Purple	0.51	0 to 150	±200	4 x 6.5
		For water-proof	EXV			Vinyl			(-)20 to 90		5 x 8
		Thin type for heat-resistance	EXJ	Chromel 0.3 x 7	Constantan 0.3 x 7	Glass wool braided		2.45	0 to 150		2.4 x 4
		Thin type for general use	EXI			Vinyl			(-)20 to 90		3 x 4.9
		With external shield	EXA			Stainless steel braided			0 to 150		2.8 x 4.5
J		For heat-resistance	JXH	Iron 0.65 x 7	Constantan 0.65 x 7	Glass wool braided	Yellow	0.38	0 to 150	±140	3.4 x 6.2
		For water-proof	JXV			Vinyl			(-)20 to 90		5 x 8
		Thin type for heat-resistance	JXJ	Iron 0.3 x 7	Constantan 0.3 x 7	Glass wool braided		1.25	0 to 150		2.4 x 4
		Thin type for general use	JXI			Vinyl			(-)20 to 90		3 x 4.9
		With external shield	JXA			Stainless steel braided			0 to 150		2.8 x 4.5
T		For water-proof	TXV	Copper 0.65 x 7	Constantan 0.65 x 7	Vinyl	Brown	0.22	(-)20 to 90	±60	5 x 8
		Thin type for heat-resistance	TXJ	Copper 0.3 x 7	Constantan 0.3 x 7	Glass wool braided		1.05	0 to 150		2.4 x 4
		Thin type for general use	TXI			Vinyl			(-)20 to 90		3 x 4.9
		With external shield	TXA			Stainless steel braided			0 to 150		2.8 x 4.5
W		For heat-resistance	NXH	Copper alloy 0.5 single wire	Copper alloy 0.5 single wire	Glass wool braided	White	3.10	(-)20 to 150	--	2 x 3
B		For heat-resistance	BXH	Copper 0.65 x 7	Copper 0.65 x 7	Glass wool braided	Gray	0.014	0 to 150	--	3.4 x 6.2
		For water-proof	BXV			Vinyl			0 to 90		5 x 8
		Thin type for heat-resistance	BXJ	Copper 0.3 x 7	Copper 0.3 x 7	Glass wool braided		0.068	0 to 150		2.4 x 4
		Thin type for general use	BXI			Vinyl			0 to 90		3 x 4.9
S		For heat-resistance	SXH	Copper 0.65 x 7	Copper alloy 0.65 x 7	Glass wool braided	Black	0.045	0 to 150	±60	4 x 6.5

EXTENSION WIRES FOR RESISTANCE THERMOMETER

When a 3-wire type resistance thermometer is connected to instrument terminals, an error occurs, unless these 3 wires have the same resistance value.
The 3-core cords can minimize this possible error caused by difference of wire resistance values.
The 6-core cord is suitable to connect a dual-type resistance thermometer or a temperature/humidity transmitter (R320).
The 8-core cord is suitable to connect a temperature/humidity transmitter (R220).



MODEL WV38 (3-core cord)

MODEL WS33 (3-core cord)

MODEL WV61 (6-core cord)

MODEL WP81 (8-core cord)

■ MODELS

W □ □ □

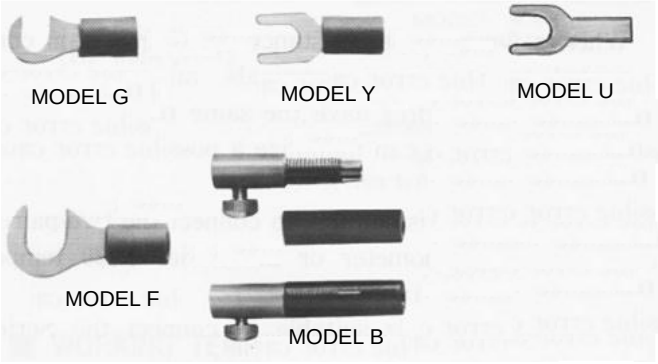
- Sheath material
  - V: Vinyl
  - P: Heat-resisting vinyl
  - Y: Cold-resisting vinyl
  - G: Vinyl with internal shield
  - S: Silicone rubber
  - N: Neoprene rubber
  - L: Neoprene rubber covered by lead
  - M: Teflon and glass wool braided
  - F: Teflon
- Type
  - 3: 3-core cord
  - 4: 4-core cord
  - 6: 6-core cord
  - 8: 8-core cord
- APPROX. EXTERNAL DIAMETER (mm)
  - Exception:
  - The code is “1” for 10mm diameter.

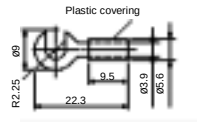
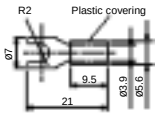
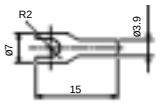
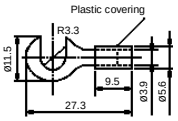
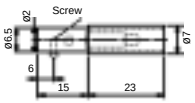
■ GENERAL SPECIFICATIONS

Type	Code	Electric resistance (at 1m)	Allowable temperature (ºC)	Sheath material	Finished outer diameter (mm)
3-core code	WV38	0.025Ω	(-)20 to 60	Vinyl	Ø8
	WP38	0.025Ω	(-)20 to 100	Heat-resisting vinyl	Ø8
	WP35	0.055Ω	(-)20 to 100	Heat-resisting vinyl	Ø5
	WP33	0.11Ω	(-)20 to 100	Heat-resisting vinyl (3-twisted single wire)	About Ø3.5
	WS33	0.11Ω	(-)60 to 250	Silicone rubber (3-twisted single wire)	About Ø3.5
	WS36	0.037Ω	(-)60 to 250	Silicone rubber	Ø6
	WN38	0.037Ω	(-)40 to 70	Neoprene rubber	Ø8
	WM34	0.037Ω	(-)50 to 250	Teflon and glass wool braided	About Ø4
	WF32	0.11Ω	(-)180 to 250	Teflon (3-twisted single wire)	About Ø2.2
	WY3.4	0.055Ω	(-)40 to 60	Cold-resisting vinyl	About Ø3.8
	WY36	0.037Ω	(-)40 to 60	Cold-resisting vinyl	Ø6
	WL31	0.037Ω	(-)40 to 70	Neoprene rubber covered by lead	Ø10
	WG38	0.025Ω	(-)20 to 60	Vinyl with internal shield	Ø8
4-core code	WV46	0.037Ω	(-)20 to 60	Vinyl	Ø5.5
	WS44	0.11Ω	(-)60 to 250	Silicone rubber	Ø4
6-core code	WV61	0.037Ω	(-)20 to 60	Vinyl	Ø10
	WN61	0.037Ω	(-)40 to 70	Neoprene rubber	Ø10
	WS68	0.037Ω	(-)60 to 250	Silicone rubber	Ø8
	WL61	0.037Ω	(-)40 to 70	Neoprene rubber covered by lead	Ø12
8-core code	WP81	0.037Ω	(-)20 to 100	Heat-resisting vinyl	Ø10

CONNECTION TIPS

Two types of connection tips, for terminals and for relaying, are available.
The tips for terminals are used for terminating extension wires and are convenient for connections to instrument terminals.
The tips for relaying are used for connecting a thermocouple and a corresponding extension wire.



Classification	For connection to terminals				For relaying
Application	For instrument terminals		For sensor terminals	For EB series recorders	For connection of thermocouple and extension wire
Code	**G**	**Y**	**U**	**F**	**B**
Specification					
Covering color	+: Red -: White	+: Red -: White		+: Red -: White	+: Red -: Black

Unit: mm

Specifications subject to change without notice. Original 2002.11

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