

I/O Cables



CH Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Diverse cables available for connection to various PLCs and controller
- Customizable cable arrangement
- Diverse cable lengths for various user requirements
- Customizable branching cable types

Ordering Information

This is only for reference.

For selecting the specified model, follow the Autonics website.

Check PLC / SERVO Connector, cable appearance, cable selection and connection to order a product. Optional specifications, needed to contact Autonics

If there is no items you are looking for, please contact Autonics.

CH ① - ② ③ - ④ ⑤ ⑥ ⑦ ⑧ - ⑨

- ① No. of connector pins
Number: Number of connector pins
- ② PLC / SERVO connector
HP: Hirose plug
FP: Fujitsu plug
DP: D-sub plug
DS: D-sub socket
MP: 3M plug (latch)
MQ: 3M plug (bolt)
- ③ Cable length
005: 0.5 m
010: 1 m
015: 1.5 m
020: 2 m
025: 2.5 m
030: 3 m
040: 4 m
050: 5 m
- ④ Position of PLC (SERVO) power connection pin
- ⑤ Signal arrangement
- ⑥ PLC (SERVO) power connection pin
- ⑦ Connection type of PLC (SERVO)
- ⑧ PLC (SERVO) connector direction
- ⑨ Cable branching

Specifications

Series	CH Series
Cable connector	PLC / SERVO side - Terminal block side
PLC / SERVO side	Hirose 20-pin / 40-pin socket Fujitsu 40-pin socket D-Sub 37-pin socket / plug MDR (latch) 20-pin / 26-pin / 50-pin socket MDR (bolt) 26-pin / 50-pin socket
Terminal block side	Hirose 20-pin / 26-pin / 40-pin / 50-pin socket
Wire ⁰¹⁾	UL 20276 TWIST 20C / 40C / 26C / 50C
Conductor characteristics	7 / 0.127 mm (AWG 28) × 20P, 7 / 0.127 mm (AWG 28) × 13P, 7 / 0.127 mm (AWG 28) × 10P, 7 / 0.127 mm (AWG 28) × 25P
Insulation diameter	0.12 mm ²
Cable diameter	∅ 6.3 mm (26C) / ∅ 7.2 mm (40C) / ∅ 8.9 mm (50C)
Rated current	≤ 1 A
Conductor resistance ⁰²⁾	≤ 0.223 Ω/m
Insulation voltage	500 VAC ~ 50/60Hz for 1 min
Insulation resistance	≥ 15 MΩ/km
Ambient temperature	-15 to 55°C, storage: -25 to 65°C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)

01) Color is black.

02) Conductor resistance value is rated at 20 °C.

■ Unit weight : PLC cable

- It excludes the package weight (+ 5 g). Unit weight is different depending on the cable length.

Type	No. of pin	Branching	Model	Weight
Hirose plug	20-pin	Non-branching	CH20-HP□-□	≈ 37 to 298 g
	40-pin	Non-branching	CH40-HP□-□	≈ 58 to 391 g
		2-branching	CH40-HP□-□-2S	≈ 55 to 388 g
		2-branching	CH40-HP□-□-2L	≈ 55 to 388 g
		2-branching	CH40-HP□-□-YS	≈ 58 to 391 g
Fujitsu plug	40-pin	Non-branching	CH40-FP□-□	≈ 85 to 418 g
		2-branching	CH40-FP□-□-2S	≈ 88 to 421 g
		2-branching	CH40-FP□-□-2L	≈ 88 to 421 g
D-Sub plug	37-pin	Non-branching	CH37-DP□-□	≈ 90 to 423 g
		2-branching	CH37-DP□-□-2S	≈ 84 to 417 g
		2-branching	CH37-DP□-□-2L	≈ 84 to 417 g
D-Sub Socket	37-pin	Non-branching	CH37-DS□-□	≈ 90 to 423 g
		2-branching	CH37-DS□-□-2S	≈ 84 to 417 g
		2-branching	CH37-DS□-□-2L	≈ 84 to 417 g

■ Unit weight : SERVO cable

- It excludes the package weight (+ 5 g). Unit weight is different depending on the cable length.



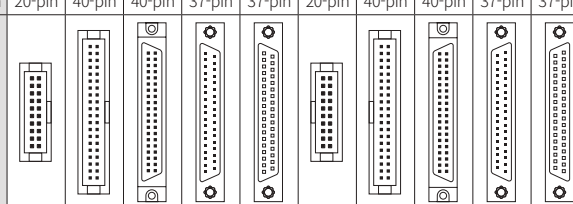
Type	No. of pin	Model	Weight
3M plug (latch)	20-pin	CH20-MP□-□	≈ 46 to 301 g
	26-pin	CH26-MP□-□	≈ 72 to 267 g
	50-pin	CH50-MP□-□	≈ 95 to 587 g
3M plug (bolt)	26-pin	CH26-MQ□-□	≈ 74 to 269 g
	50-pin	CH50-MQ□-□	≈ 98 to 590 g

Connectible Connectors





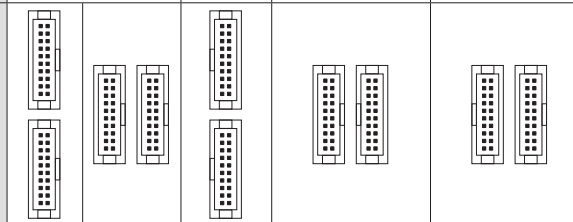
- These are shape and direction of connectors in PLC / SERVO to which CH series cable can be connected.
- These images stand for the direction of cable running down.

■ PLC connector

• Non-branching


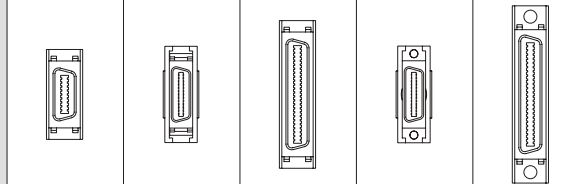
Direction	Right (R) 					Left (L) 				
	Hirose plug	Fujitsu plug	D-Sub plug	D-Sub socket	Hirose plug	Fujitsu plug	D-Sub plug	D-Sub socket		
Type	Hirose plug	Fujitsu plug	D-Sub plug	D-Sub socket	Hirose plug	Fujitsu plug	D-Sub plug	D-Sub socket		
No. of pin	20-pin	40-pin	40-pin	37-pin	37-pin	20-pin	40-pin	40-pin	37-pin	
Shape										

• 2-branching


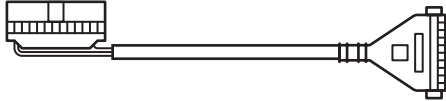


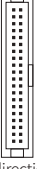
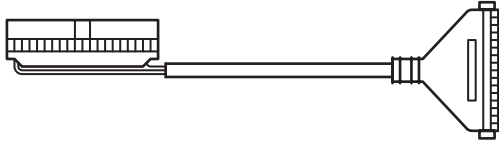



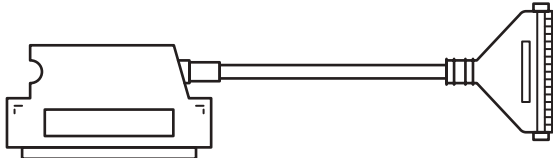



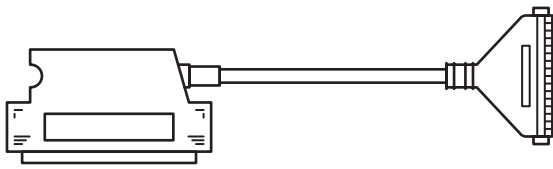

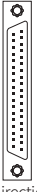

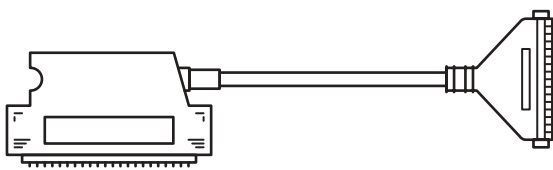


Direction	Right (R) 	Left (L) 	Right + Left (W, X) ⁰¹ 	Left + Right (Y, Z) ⁰¹ 
	Hirose plug	Hirose plug	Hirose plug	Hirose plug
Type	Hirose plug	Hirose plug	Hirose plug	Hirose plug
No. of pin	40-pin	40-pin	40-pin	40-pin
Shape				

01) It is decided according to the pin arrangement. For detailed information, contact Autonics.

■ SERVO connector

Direction	Right (R) 				
Type	3M plug (latch)			3M plug (bolt)	
No. of pin	20-pin	26-pin	50-pin	26-pin	50-pin
Shape					

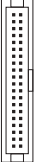
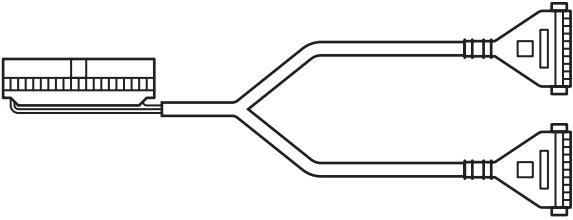




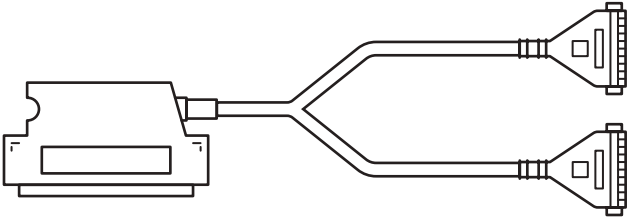




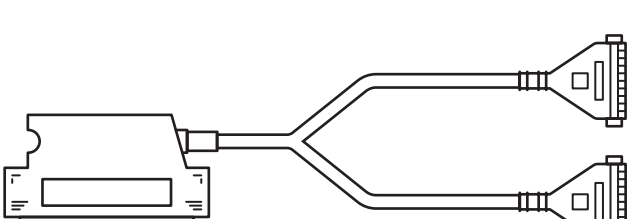




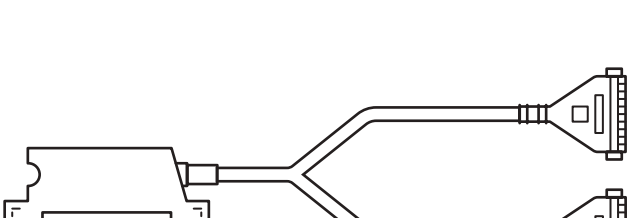

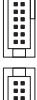

Cable Appearance: Non-branching

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 20-pin plug	 R direction	CH20-HP□-□ R		
	 L direction	CH20-HP□-□ L		
Hirose 40-pin plug	 R direction	CH40-HP□-□ R		
	 L direction	CH40-HP□-□ L		
Fujitsu 40-pin plug	 R direction	CH40-FP□-□ R		
	 L direction	CH40-FP□-□ L		
D-sub 37-pin plug	 R direction	CH37-DP□-□ R		
	 L direction	CH37-DP□-□ L		
D-sub 37-pin socket	 R direction	CH37-DS□-□ R		
	 L direction	CH37-DS□-□ L		


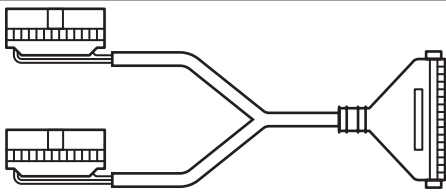

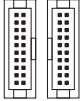
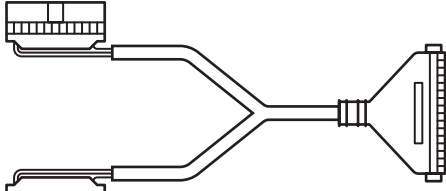

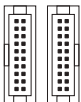
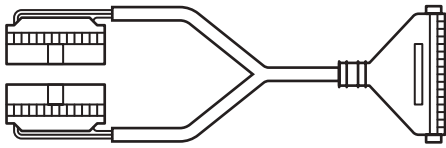

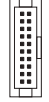
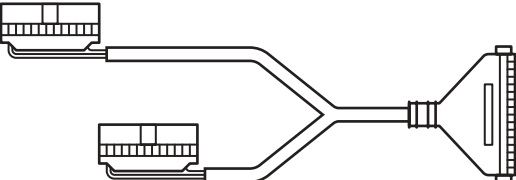

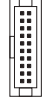
Cable Appearance: Terminal block side 2-branching short type

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 40-pin plug	R direction	CH40-HP□-□R-2S		
	L direction	CH40-HP□-□L-2S		
Fujitsu 40-pin plug	R direction	CH40-FP□-□R-2S		
	L direction	CH40-FP□-□L-2S		
D-sub 37-pin plug	R direction	CH37-DP□-□R-2S		
	L direction	CH37-DP□-□L-2S		
D-sub 37-pin socket	R direction	CH37-DS□-□R-2S		
	L direction	CH37-DS□-□L-2S		


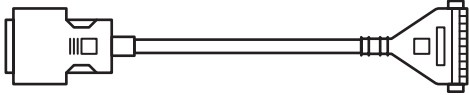


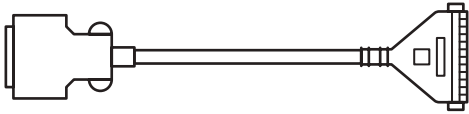


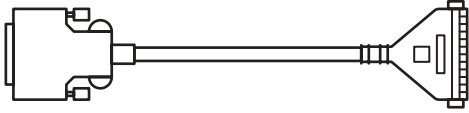

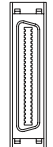
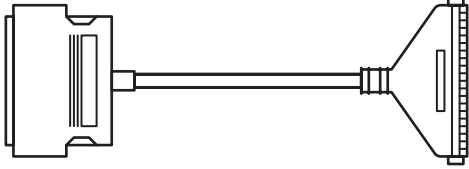

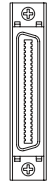
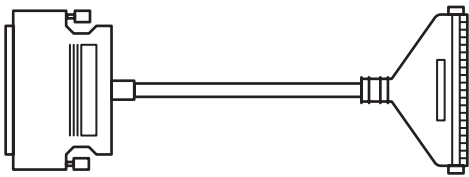

Cable Appearance: Terminal block side 2-branching long type

PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 40-pin plug	 R direction	CH40-HP□-□ R-2L		 
	 L direction	CH40-HP□-□ L-2L		
Fujitsu 40-pin plug	 R direction	CH40-FP□-□ R-2L		 
	 L direction	CH40-FP□-□ L-2L		
D-sub 37-pin plug	 R direction	CH37-DP□-□ R-2L		 
	 L direction	CH37-DP□-□ L-2L		
D-sub 37-pin socket	 R direction	CH37-DS□-□ R-2L		 
	 L direction	CH37-DS□-□ L-2L		

Cable Appearance: PLC side 2-branching short type

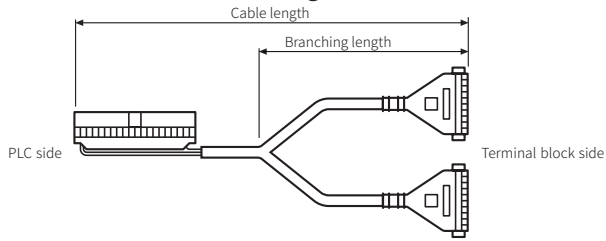
PLC connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
Hirose 20-pin plug	 <p>R direction + R direction</p>	CH40-HP□-□RYS		
	 <p>R direction + L direction</p>	CH40-HP□-□WYS CH40-HP□-□XYS		
	 <p>L direction + R direction</p>	CH40-HP□-□YYS CH40-HP□-□ZYS		
	 <p>R direction + R direction</p>	CH40-HP□-□RFS		
	 <p>L direction + L direction</p>	CH40-HP□-□LFS		

Cable Appearance: SERVO

SERVO connector		Cable model	Cable appearance	Terminal block connector
Type	Direction			
3M 20-pin plug (latch)	 R direction	CH20-MP□-□ R		
3M 26-pin plug (latch)	 R direction	CH26-MP□-□ R		
3M 26-pin plug (bolt)	 R direction	CH26-MQ□-□ R		
3M 50-pin plug (latch)	 R direction	CH50-MP□-□ R		
3M 50-pin plug (bolt)	 R direction	CH50-MQ□-□ R		

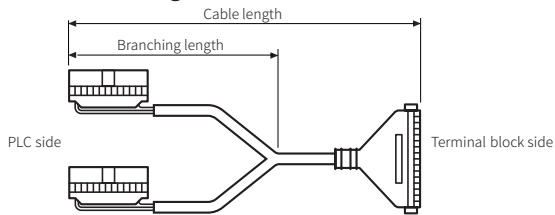
Cable Length of Branching Type Cable

Terminal block side branching cable

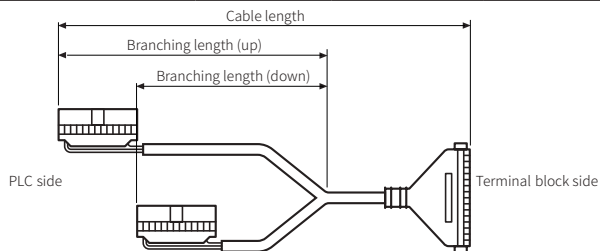


Cable model	Branching	Cable length	Branching length
CH□-□005-□-2S	2-branching short type	0.5 m	0.15 m
CH□-□010-□-2S		1 m	0.15 m
CH□-□015-□-2S		1.5 m	0.15 m
CH□-□020-□-2S		2 m	0.15 m
CH□-□025-□-2S		2.5 m	0.15 m
CH□-□030-□-2S		3 m	0.15 m
CH□-□040-□-2S		4 m	0.15 m
CH□-□050-□-2S	5 m	0.15 m	
CH□-□005-□-2L	2-branching long type	0.5 m	0.3 m
CH□-□010-□-2L		1 m	0.8 m
CH□-□015-□-2L		1.5 m	1.3 m
CH□-□020-□-2L		2 m	1.8 m
CH□-□025-□-2L		2.5 m	2.3 m
CH□-□030-□-2L		3 m	2.8 m
CH□-□040-□-2L		4 m	3.8 m
CH□-□050-□-2L	5 m	4.8 m	

PLC side branching cable



Cable model	Branching	Cable length	Branching length
CH40-HP005-□-YS	2-branching right/left type	0.5 m	0.15 m
CH40-HP010-□-YS		1 m	0.15 m
CH40-HP015-□-YS		1.5 m	0.15 m
CH40-HP020-□-YS		2 m	0.15 m
CH40-HP025-□-YS		2.5 m	0.15 m
CH40-HP030-□-YS		3 m	0.15 m
CH40-HP040-□-YS		4 m	0.15 m
CH40-HP050-□-YS	5 m	0.15 m	



Cable model	Branching	Cable length	Branching length
CH40-HP005-□-FS	2-branching up/down type	0.5 m	Up: 0.15 m Down: 0.09 m
CH40-HP010-□-FS		1 m	
CH40-HP015-□-FS		1.5 m	
CH40-HP020-□-FS		2 m	
CH40-HP025-□-FS		2.5 m	
CH40-HP030-□-FS		3 m	
CH40-HP040-□-FS		4 m	
CH40-HP050-□-FS	5 m		