

Specification
for
General purpose AC Servo
Power supply cable

Type SC-PWC4CBL□M-OL

mitsubishi electric
system & service co.,ltd

Note

Revision				Drawn	Check	Design	Approved
A	31 Mar.,2017	D	9 Apr.,2019	<i>N. Ito</i>	<i>S. Kariya</i>	<i>M. Yamamura</i>	<i>D. Kubushiro</i>
B	12 Dec.,2017	E	23 Apr.,2020				
C	7 Jun.,2018						
Send to				Date		Dwg	
				27 Apr.,2016		X903703D50052-F12E	
				Order			

1. SCOPE

This specification covers the requirements for the General purpose AC Servo Power supply cable.

- SC-PWC4CBL□M-ML
- SC-PWC4CBL□M-L
- SC-PWC4CBL□M-LL

※ The Products covered in this specification don't include the toxic substances in RoHS (Lead, Mercury, Cadmium, Hexavalent Chromium, PBDE, PBB).

※ UL's Wiring Harnesses Traceability program provides traceability for this cable.

2. CABLE TYPE

SC - PW C4 CBL □ M - ○ L

M - ○ L	Sign	Wire thickness / Bending life
	ML	Thin / Standard (For fixed part)
	L	Standard / Standard (For fixed part)
	LL	Thick / Standard (For fixed part)
□	Sign	Length of cable
	□	Refer to clause 5.
C4	Sign	Applicable servo motor
	C4	Refer to clause 4.
PW	Sign	Application
	PW	Power supply cable for direct connection ※ Refer to clause 4 for applicable cable Amplifier side power supply cable for relay connection ※ When using as a relay, please refer to “When used for relay connection at the amplifier side” in clause 5.

3. APPLICABLE STANDARDS

Wire part : UL standard (UL 758 : AWM)

Wire thickness	UL Style No.	Rated	
ML (Thin)	2586	105°C	600V
L (Standard)	2501	105°C	600V
LL (Thick)			

4. APPLICABLE SERVO MOTOR

Target series	Applicable servo motor type name
MR-J4 series	Refer to MR-J4 APPLICABLE SERVO MOTOR TABLE "R9037020-010022-105".
MR-J5 series	In the choice page of catalogue or our homepage, please confirm it.

5. LENGTH OF CABLE

1 to 30m Specified by 1m unit

When used for relay connection at the amplifier side

When using this cable for relaying at the amplifier side, for the items (1) to (3) below refer to the specification sheet on the motor side relay cable (below table).

(1) Combination

(2) Applicable motor

(3) Cable length

Target series	Bending life	Cable type name	The number of specification sheet
MR-J3, MR-J4 series	Standard (For fixed part)	SC-PWS1JCBL□M-■-L	X903703D50052-F20
		SC-PWC4JCBL□M-L	X903703D50052-F25
		SC-PWC4JCBL□M-■-L	X903703D50052-F26
	Long bending life	SC-PWS1JCBL□M-■-H	X903703D50052-F40
		SC-PWC4JCBL□M-H	X903703D50052-F45
		SC-PWC4JCBL□M-■-H	X903703D50052-F46
MR-J5 series	Please refer to the CABLE LENGTH SELECTION TABLE "R9535021-018028-010" for more information.		

6. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-PWC4CBL□M-○L ×××××××

- ※ □ is a figure from 1 to 30.
- ※ ○ is wire thickness from M, none , L.
- ※ ××××××× are the serial number for seven digits.

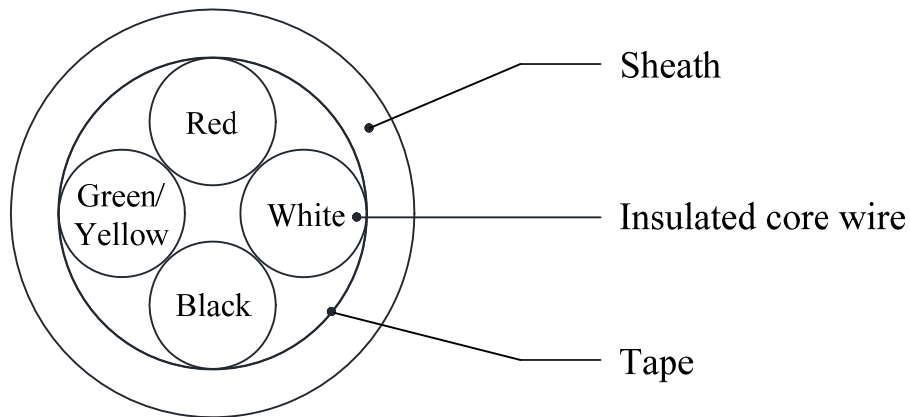
7. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification		
			ML	L	LL
Structure		—	AWG16×4C	AWG14×4C	AWG12×4C
Conductor	Conductor size	—	AWG16	AWG14	AWG12
	Outer diameter	mm	Approx. 1.53	Approx.1.92	Approx.2.48
Insulation	Material	—	PVC		
	Outer diameter	mm	Approx. 3.23	Approx. 3.62	Approx. 4.18
Stranding	Number of insulation core wire	—	4C		
Sheath	Material	—	Flame Retardant PVC		
	Color	—	Black		
Overall diameter		mm	Approx. 9.9	Approx. 12.2	Approx. 13.6
Electrical characteristics	Insulation resistance	MΩ · km	Over 10		
	Withstand voltage	V for 1minute	AC2000*2		
Operating temperature range		°C	-10~+60 (without condensation)		
Minimum radius bend		mm	6 times the overall diameter		
Flame retardant		—	UL1581 VW-1		
Connector	Servo amplifier side		—		
	Servo motor side	Type	ML: DDK Ltd. CE05-6A18-10SD-D-BSS (Straight plug) CE3057-10A-2-D (Waterproof cable clamp)		
			L, LL: DDK Ltd. CE05-6A18-10SD-D-BSS (Straight plug) CE3057-10A-1-D (Waterproof cable clamp)		
	IP rating	IP67*1			

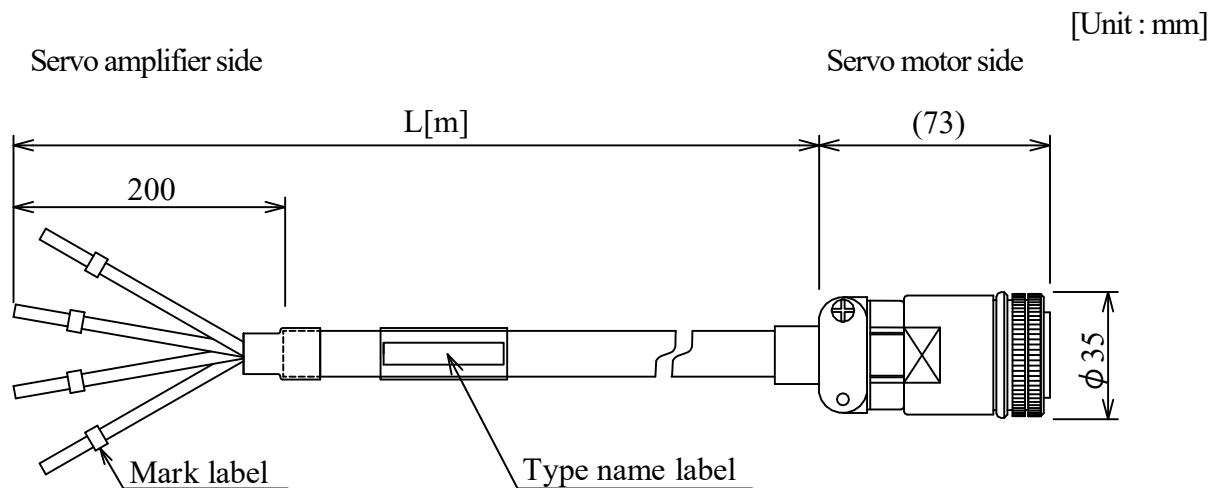
*1 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

*2 In addition, the cable material alone is tested for a withstand voltage of 2000V / 5 minutes.

8. STRUCTURAL DRAWING



9. OUTLINE DRAWING



Refer to the following table for mark label and insulation color.

Mark label	Insulation color
U	Red
V	White
W	Black
E	Green / Yellow