

Specification
for
General purpose AC Servo
Power supply cable

Type SC-PWC503C □ M-SB ○ L

MITSUBISHI ELECTRIC
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
A	6 Sep.,2022			<i>N.Ito</i>	<i>S.Kariya</i>	<i>T.Kasahara</i>	<i>D.Fukushima</i>
Send to				Date		Dwg	
				10 May, 2019		X953503D70003-E24A	
				Order			

1. SCOPE

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

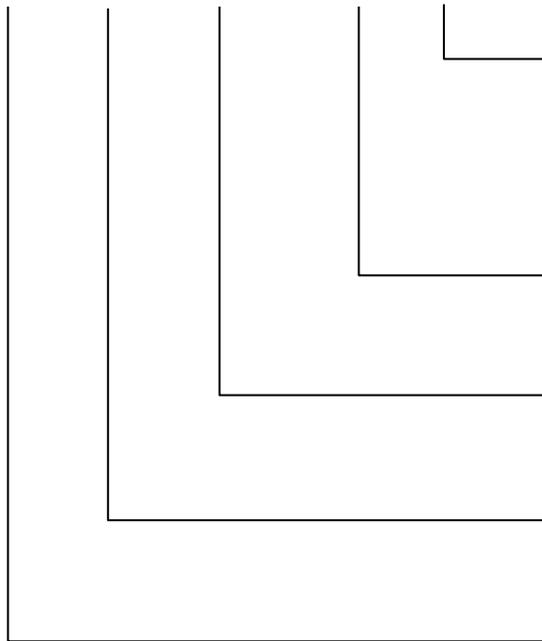
- SC-PWC503C□M-SBML
- SC-PWC503C□M-SBL
- SC-PWC503C□M-SBLL

※ The Products covered in this specification don't include the toxic substances in RoHS.

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

2. CABLE TYPE

SC - PWC5 03 C □ M - SB ○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	With or without shield
SB	With shield

Sign	Length of cable
□	Refer to clause 4

Sign	Connector specifications
03	One-touch locking plug

Sign	Application
PWC5	Power supply cable

3. APPLICABLE STANDARDS

Wire part : UL standard (UL 758 : AWM)

UL Style No.	Rated	
2586	105°C	600V

4. APPLICABLE SERVOMOTOR / LENGTH OF CABLE

1 to 100m

※ The maximum cable length differs depending on the motor.

Refer to the CABLE LENGTH SELECTION TABLE "R9535021-018028-010"
for more information.

Refer to the CABLE SELECTION TABLE "R9535021-018028-015" for applicable motors.

5. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-PWC503C□M-SB○L ×××××××

※ □ is a figure from 1 to 100.

※ ○ is wire thickness from M , none , L.

※ ××××××× are the serial number for seven digits.

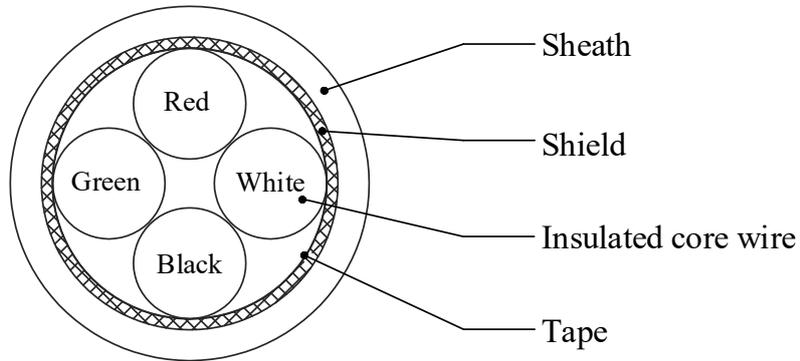
6. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification		
			ML	L	LL
Wire					
Structure		—	AWG14×4C	AWG12×4C	AWG10×4C
Conductor	Conductor size	—	AWG14	AWG12	AWG10
	Outer diameter	mm	Approx.2.0	Approx.2.5	Approx.3.1
Insulation	Material	—	PVC		
	Outer diameter	mm	Approx.3.7	Approx.4.2	Approx.4.8
Twisted	Number of insulated core wire	—	4C		
Shield	Material	—	Tin coated copper braid		
Sheath	Material	—	Flame resisting PVC		
	color	—	Black		
Overall diameter		mm	Approx. 11.5	Approx. 12.9	Approx. 14.5
Cable weight		kg/km	220	290	400
Electrical characteristics	Insulation resistance	MΩ · km	Over 10		
	Withstand voltage	V / for 5 min	AC2000		
Minimum bend radius		mm	6 times the overall diameter		
Flame retardant		—	UL1581 VW-1		
Connector					
Amplifier side		—			
Motor side	Type	ML: Japan Aviation Electronics Industry, Ltd. JL10-6A22-22SE-EB (Straight plug) JL04-2022CK(12)-R (Waterproof cable clamp)			
		L, LL: Japan Aviation Electronics Industry, Ltd. JL10-6A22-22SE-EB (Straight plug) JL04-2022CK(14)-R (Waterproof cable clamp)			
	IP rating	IP67*1			
Cable harness					
Environment	Ambient temperature	°C	0 to 60 (Without freezing)		
	Ambient humidity	%RH	5 to 95 (Without condensation)		
	Ambience	—	Indoors (no direct sunlight), no corrosive gas, inflammable gas, oil mist, or dust		
Electrical characteristics	Insulation resistance	MΩ · km	Over 10		
	Withstand voltage	V/for 1 min	AC2000		

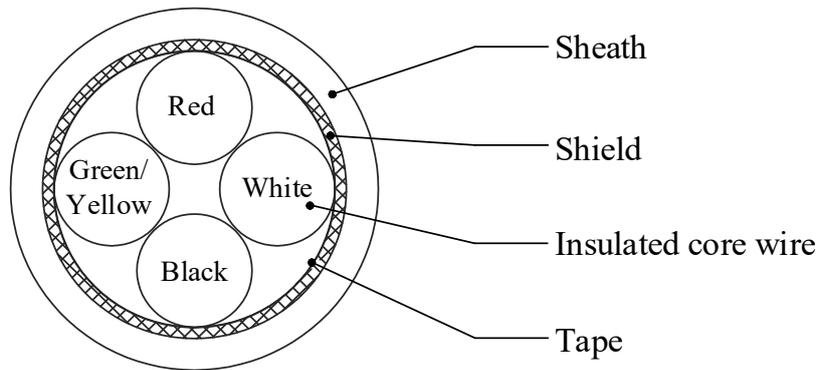
*1 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

7. STRUCTURAL DRAWING

(1) SC-PWC503C□M-SBML

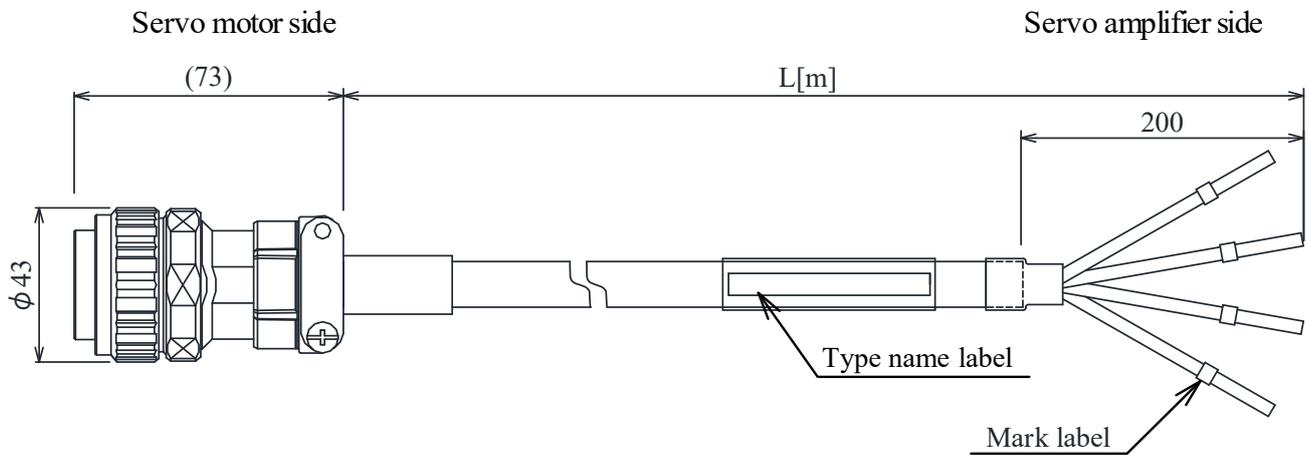


(2) SC-PWC503C□M-SBL
SC-PWC503C□M-SBLL



8. OUTLINE DRAWING

[Unit : mm]



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

(1) SC-PWC503C□M-SBML

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

(2) SC-PWC503C□M-SBL

SC-PWC503C□M-SBLL

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