

Specification  
for  
General purpose AC Servo  
Power supply cable

Type SC-PWC503C□M-○L

MITSUBISHI ELECTRIC  
SYSTEM & SERVICE CO.,LTD

Note

Revision								Drawn	Check	Design	Approved
A	24 Mar.,2020							N.Ito	S.Kariya	T.Kasahara	D.Fukushima
B	6 Sep.,2022										
Send to								Date		Dwg	
								24 Apr.,2019		X953503D70003-E22B	
								Order			

## 1. SCOPE

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

- SC-PWC503C□M-ML
- SC-PWC503C□M-L
- SC-PWC503C□M-LL

※ 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 - ○ L

SC -	PWC5	03	C	□	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 4
							Sign	Connector specifications
							03	One-touch locking plug
							Sign	Application
							PWC5	Power supply cable ※ Refer to cause 4 for applicable motor

## 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-○L    ×××××××

※ □ is a figure from 1 to 100.

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

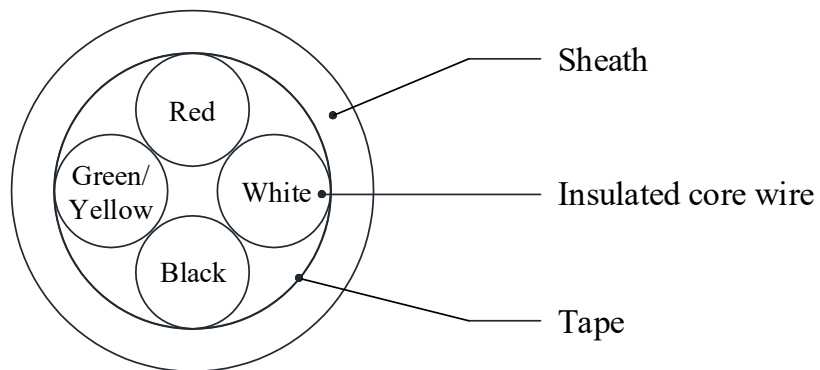
※ ××××××× are the serial number for seven digits.

## 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		
	Sheath	Material	—	Flame resisting PVC		
		color	—	Black		
	Overall diameter		mm	Approx. 11.6	Approx. 12.2	Approx. 13.7
	Cable weight		kg/km	200	250	330
	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 , L: Japan Aviation Electronics Industry, Ltd. JL10-6A22-22SE-EB (Straight plug) JL04-2022CK(12)-R (Waterproof cable clamp)			
			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	℃	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			

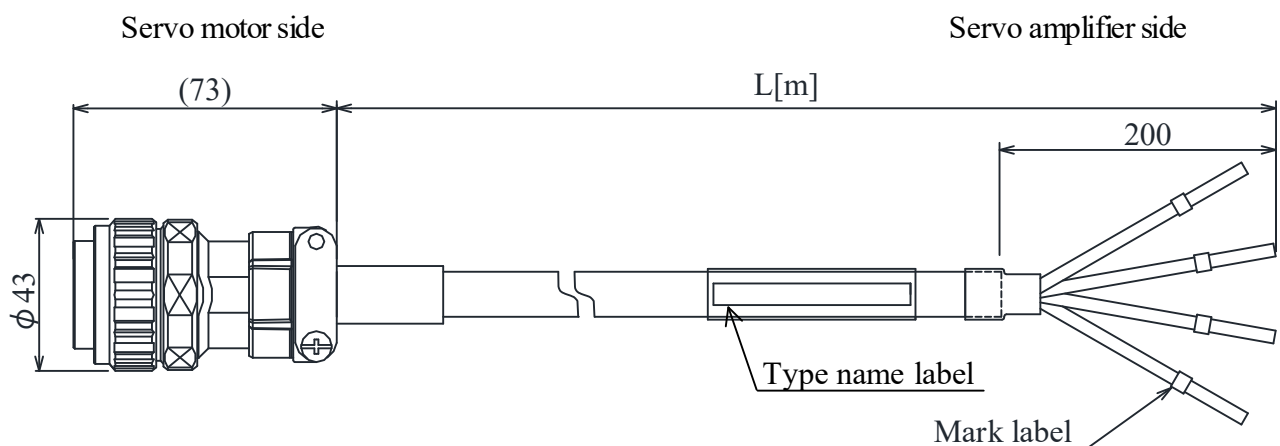
\*1 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

## 7. STRUCTURAL DRAWING



## 8. OUTLINE DRAWING

[Unit : mm]



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

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