Specification
for
General purpose AC Servo/
Sensor less servo
Power supply cable

Type SC-PWS1JCBL□M-■-L

MITSUBISHI ELECTRIC
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
A	23 Apr.,2020			N. Ito	S. Kariya	M. Amamura	D. Tsubushi
B	15 Mar.,2022						

Send to	Date	Dwg
	27 Apr.,2016	
	Order	X903703D50052-F20B

1. SCOPE

This specification covers the requirements for the General purpose AC Servo / Sensor less servo Power supply cable.

・SC-PWS1JCBL□M-■-L

※ 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 - [PWS1J] CBL [□] M - [■] - [L]

Sign	Bending life
L	Standard (For fixed part)

Sign	Cable lead out direction
A1	Motor shaft side
A2	Opposite of motor shaft

Sign	Length of cable
□	Refer to clause 5.

Sign	Application
PWS1J	Motor side power supply cable for relay connection*1 ※ Refer to clause 4 for applicable motor

*1 Please use it with amplifier side power supply cable.
Refer to clause 6 for confirming the combination and cable length.

3. APPLICABLE STANDARDS

Wire part : UL standard (UL13 PLCC CL3)

UL Style No.	Rated	
2517	105°C	300V

4. APPLICABLE SERVO MOTOR

(1) General purpose AC servo

HG-KR, HG-MR series motor
HF-KN, HF-KP, HF-MP series motor

(2) Sensor less servo

MM-GKR series motor

5. LENGTH OF CABLE

1 to 5m Specified by 1m unit

6. CABLE LENGTH FORE RELAY CONNECTION

(1) General purpose AC servo

Motor type name	Combination		Total cable length
	Amplifier side	Motor side	
HG-KR/MR 053,13,23,43 HF-KN/KP/MP 053,13,23,43	SC-PWC4CBL□M-ML	SC-PWS1JCBL□M-■-L (*1)	30m or less
	SC-PWC4CBL□M-MH		
HG-KR73 HF-KP73	SC-PWC4CBL□M-ML	SC-PWS1JCBL□M-■-L (*1)	30m or less
	SC-PWC4CBL□M-MH		25m or less
HG-MR73 HF-MP73	SC-PWC4CBL□M-ML	SC-PWS1JCBL□M-■-L (*1)	25m or less
	SC-PWC4CBL□M-MH		

*1 Please use 5m or less cable at motor side.

(2) Sensor less servo

Motor type name	Combination		Total cable length
	Amplifier side	Motor side	
MM-GKR13,23,43,73	SC-PWC4CBL□M-ML	SC-PWS1JCBL□M-■-L (*1)	30m or less
	SC-PWC4CBL□M-MH		

*1 Please use 5m or less cable at motor side.

7. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-PWS1JCBL□M-■-L ××××××××

※ □ is a figure from 1 to 5.
※ ■ is cable lead out direction from A1, A2.
※ ×××××××× are the serial number for seven or eight digits.

7. STRUCTURE AND CHARACTERISTICS

Item			Unit	Specification
Structure			—	AWG18×4C
Conductor	Conductor size		—	AWG18
	Outer diameter		mm	Approx. 1.3
Insulation	Material		—	ETFE
	Outer diameter		mm	Approx. 1.8
Twisted pair	Number of insulated core wire		—	4C
Sheath	Material		—	Flame resisting PVC
	color		—	Black
Overall diameter			mm	Approx. 6.2
Cable weight			kg/km	65
Electrical characteristics	Insulation resistance		MΩ・km	Over 100
	Withstand voltage		V/for 1min	AC1500[*2]
Operating temperature range			℃	-10～+60 (without condensation)
Minimum Bend Radius			mm	6 times the overall diameter
Flame Retardant			—	UL1581 VW-1
Connector	Servo amplifier side	Type	DDK Ltd. D/MS3101A18-10P (D263) (Cable receptacle)[*3] Nippon Flex Co., Ltd.[*4] ACS-08RL-MS18F (MS type Straight connector) or SANKEI MANUFACTURING CO.LTD, [*4] C2KD0818 (KEIGLAND Type C2)	
		IP rating	IP67[*1]	
	Servo motor side	Type	Japan Aviation Electronics Industry, Limited KN4FT04SJ1-R (Angle plug)	
		IP rating	IP65[*1]	

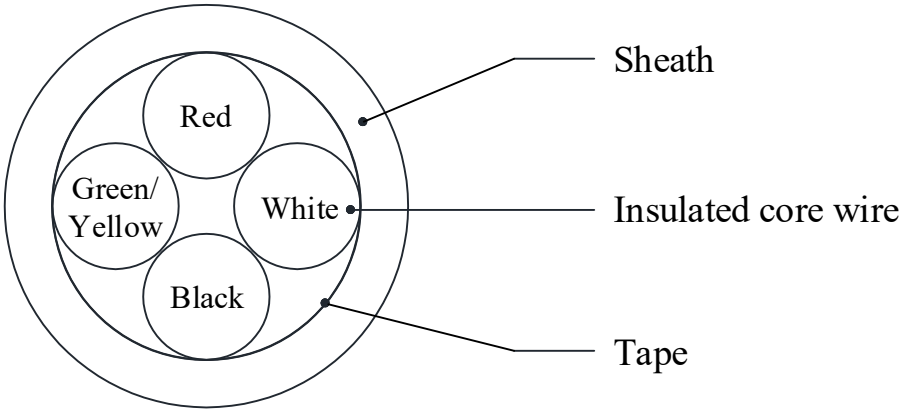
*1 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

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

*3 The receptacle is used in common for Nippon Flex product and Sankei Seisakusho product clamps.

*4 Due to the discontinuation of production of Nippon Flex clamps, we will switch to Sankei Seisakusho products after the inventory of Nippon Flex products is exhausted.

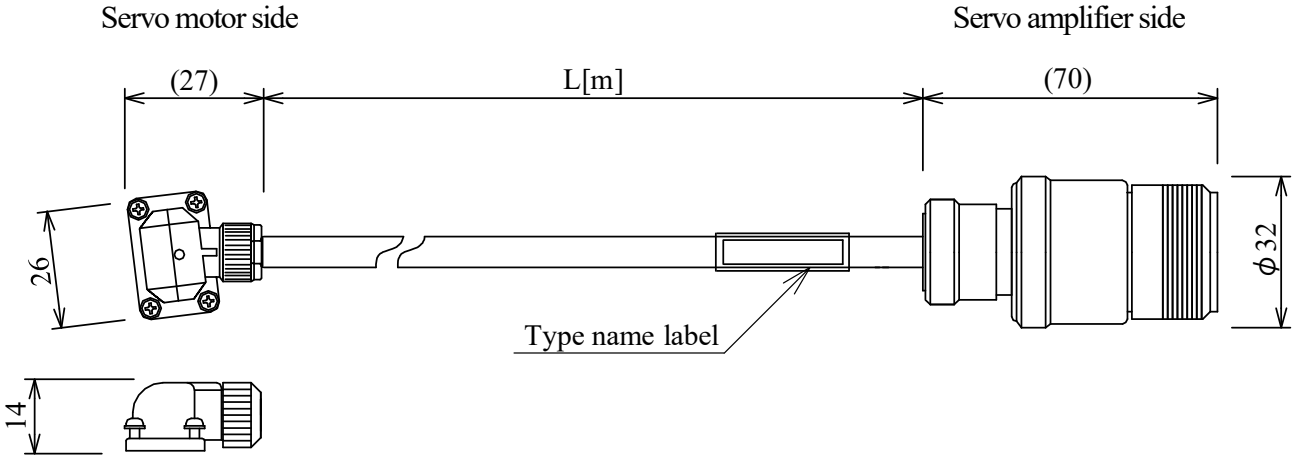
8. STRUCTURAL DRAWING



9. OUTLINE DRAWING

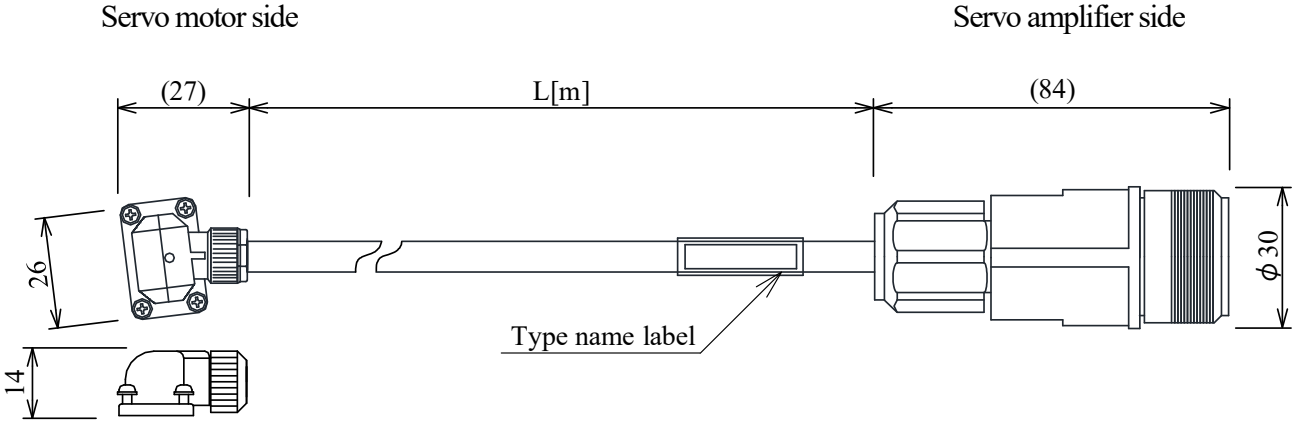
(1) Uses Nippon Flex products clamp

[Unit : mm]



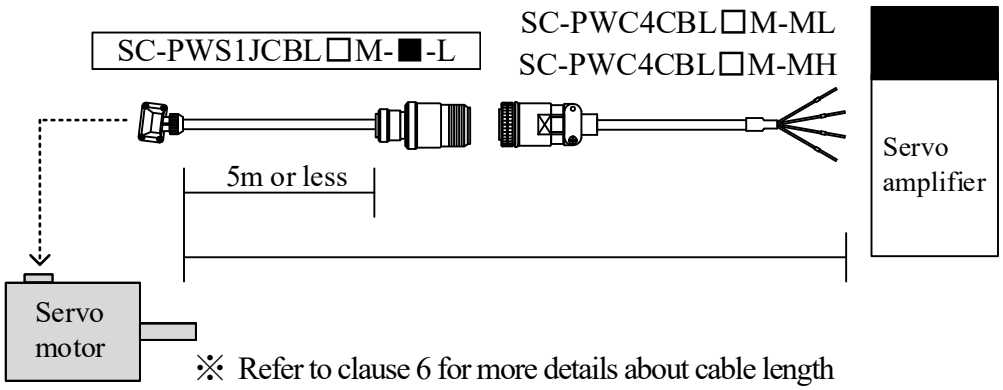
(2) Uses Sankei Seisakusyo products clamp

[Unit : mm]



10. SYSTEM CONFIGURATION DIAGRAM

(1) General purpose AC servo



※ Refer to clause 6 for more details about cable length

(2) Sensor less servo