

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

Type SC-PWS1JCBL□M-■-H

MITSUBISHI ELECTRIC  
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
A	16 Mar.,2022			<i>N. Ito</i>	<i>S. Koiriya</i>	<i>M. Kuwamura</i>	<i>D. Subudhi</i>
Send to				Date		Dwg	
				27 Apr.,2016		X903703D50052-F40A	
				Order			

### 1. SCOPE

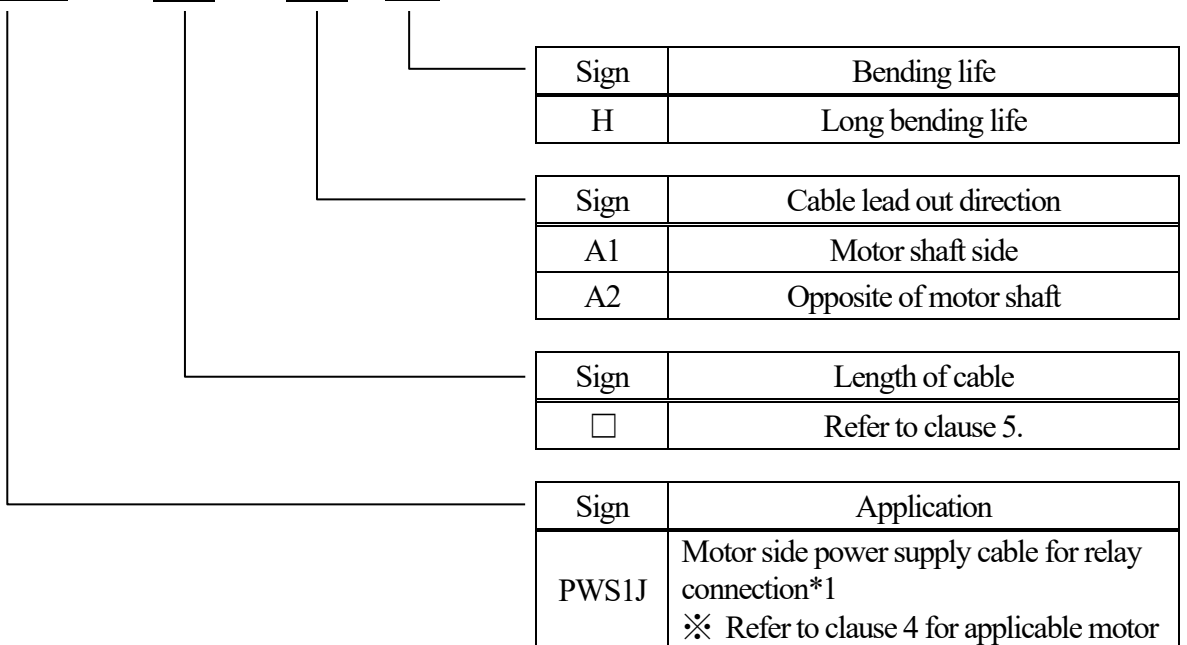
This specification covers the requirements for the General purpose AC Servo / Sensor less servo Long Bending Life Power supply cable type SC-PWS1JCBL□M-■-H.

※ 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 - ■ - H



\*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 CL3X)

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	SC-PWC4CBL□M-ML	SC-PWS1JCBL□M-■-H (*1)	30m or less
HF-KN/KP/MP 053,13,23,43	SC-PWC4CBL□M-MH		
HG-KR73 HF-KP73	SC-PWC4CBL□M-ML SC-PWC4CBL□M-MH	SC-PWS1JCBL□M-■-H (*1)	25m or less
HG-MR73 HF-MP73	SC-PWC4CBL□M-ML SC-PWC4CBL□M-MH	SC-PWS1JCBL□M-■-H (*1)	25m or less 20m or less

\*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-PWC4CBL□M-MH	SC-PWS1JCBL□M-■-H (*1)	30m or less

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

#### 7. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-PWS1JCBL□M-■-H ××××××××

※ □ 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		—	AWG19×4C
Conductor	Conductor size	—	AWG19
	Outer diameter	mm	Approx. 1.2
Insulation	Material	—	ETFE
	Outer diameter	mm	Approx. 1.7
Twisted pair	Number of insulated core wire	—	4C
Sheath	Material	—	Flame resisting PVC
	color	—	Black
Overall diameter		mm	Approx. 5.7
Cable weight		kg/km	60
Electrical characteristics	Insulation resistance	MΩ · km	Over 100
	Withstand voltage	V/for 1min	AC1500*3
Operating temperature range		°C	-10~+60 (without condensation)
Minimum Bend Radius		mm	6 times the overall diameter
Bending life		—	Over 1 million times*1 (Bend radius: Minimum bend radius)
Flame Retardant		—	UL1581 VW-1
Connector	Servo amplifier side	Type	DDK Ltd. D/MS3101A18-10P (D263) (Cable receptacle)*4 Nippon Flex Co., Ltd.*5 ACS-08RL-MS18F (MS type Straight connector) or SANKEI MANUFACTURING CO.LTD,*5 C2KD0818 (KEIGLAND Type C2)
		IP rating	IP67*2
	Servo motor side	Type	Japan Aviation Electronics Industry, Limited KN4FT04SJ1-R (Angle plug)
		IP rating	IP65*2

\*1 It is a test outcome, and not a guaranteed value. (The performance is different according to customer's environment. )

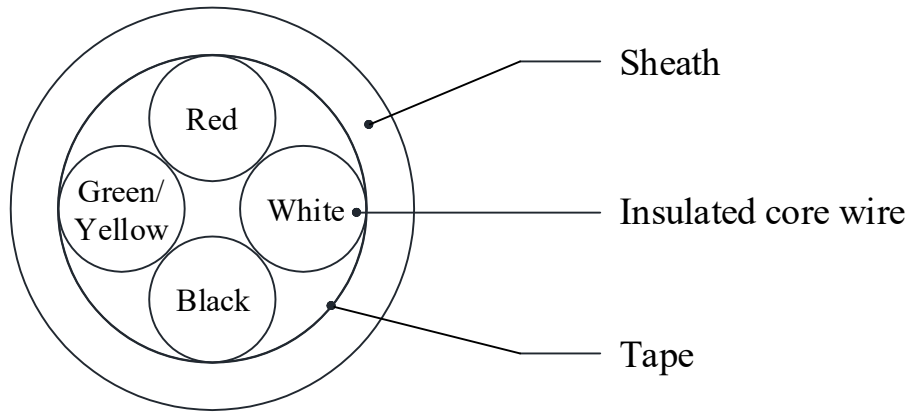
\*2 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

\*3 In addition, the cable material alone is tested for a withstand voltage of 2000V / 5 minutes.

\*4 The receptacle is used in common for Nippon Flex product and Sankei Seisakusho product clamps.

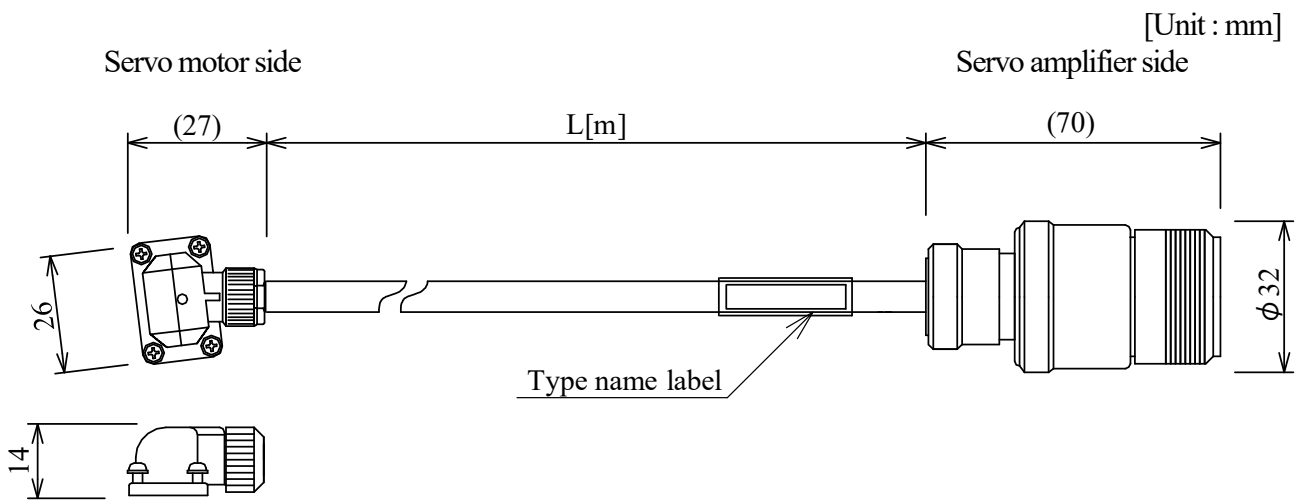
\*5 Due to the discontinuation of production of Nippon Flex clamps, we will switch to Sankei Seisakusho products after the inventory of Nippon Flex products is exhausted.

### 8. STRUCTURAL DRAWING

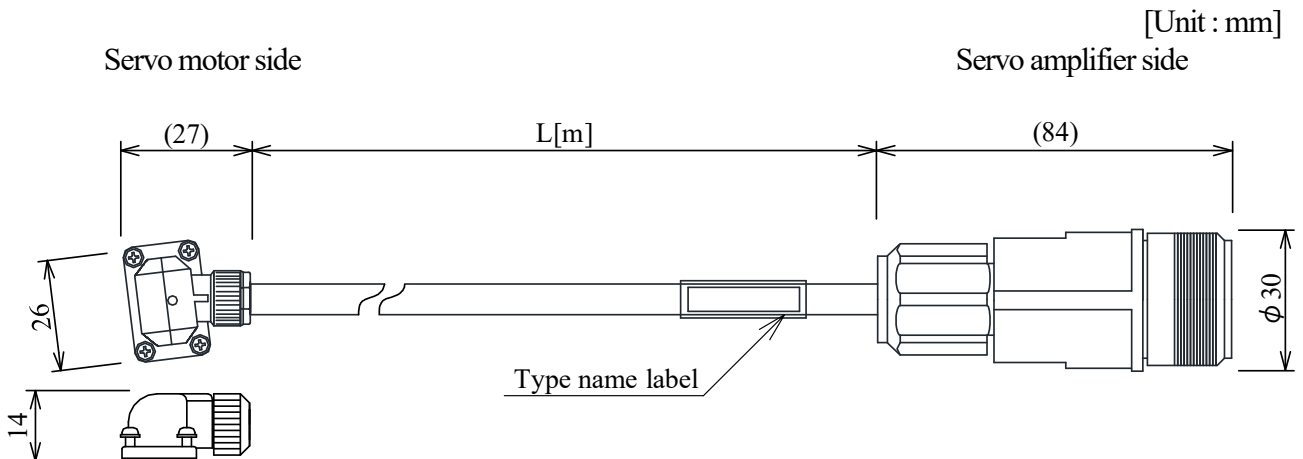


### 9. OUTLINE DRAWING

(1) Uses Nippon Flex products clamp

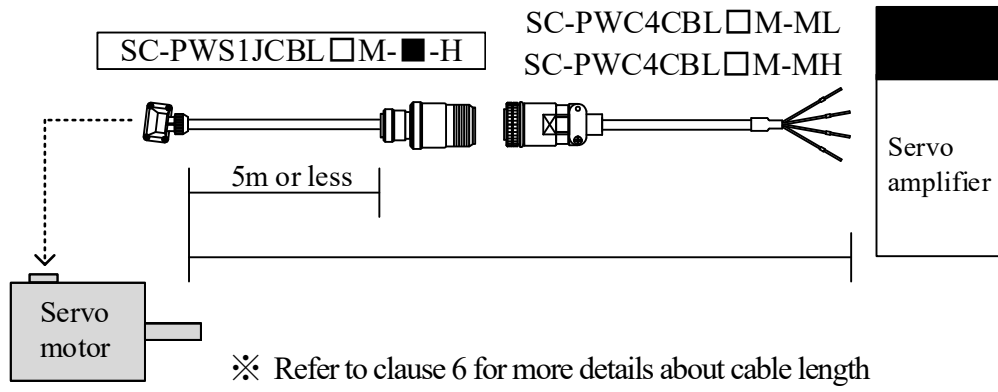


(2) Uses Sankei Seisakusyo products clamp



## 10. SYSTEM CONFIGURATION DIAGRAM

### (1) General purpose AC servo



### (2) Sensor less servo

