

Specification  
for  
General purpose AC Servo  
Ultra Long Bending Life Encoder cable

Type SC-J3JS2CBL□M-■-S

MITSUBISHI ELECTRIC  
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
A	14 July ,2017			<i>N. Ishii</i>	<i>S. Kariya</i>	<i>S. Karahara</i>	<i>D. Kubochima</i>
B	13 Nov.,2017						
Send to				Date		Dwg	
				22 Mar.,2016		X903703D50052-E55B	
				Order			

## 1. SCOPE

This specification covers the requirements for the General purpose AC Servo Ultra Long Bending Life Encoder cable.

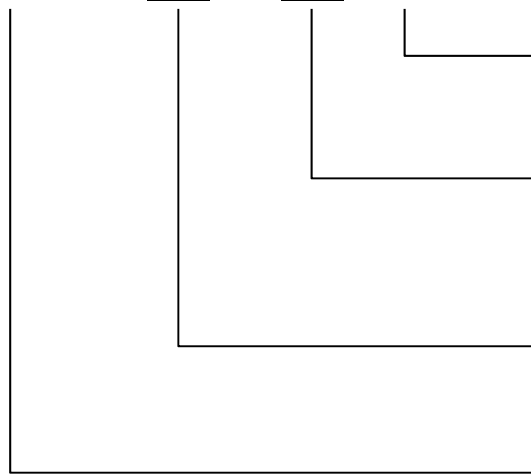
• SC-J3JS2CBL□M-■-S

※ This cable doesn'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 - J3JS2 CBL □ M - ■ - S



Sign	Bending life
S	Ultra long bending life

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

Sign	Length of cable
□	Refer to clause 5.

Sign	Application
J3JS2	Motor side 2 wire type encoder cable for relay connection *1 ※ Refer to clause 4 for applicable motor

**※ This cable does not work for 4 wire type connection**

\*1 Please use it with amplifier side encoder cable.

Refer to clause 6 for confirming the combination and cable length.

## 3. APPLICABLE STANDARDS

UL758 AWM STYLE 20276 (wire part)

## 4. APPLICABLE SERVO MOTOR

HG-KR, HG-MR series motor

HF-KN, HF-KP, HF-MP series motor

## 5. LENGTH OF CABLE

1 to 3m Specified by 1m unit

## 6. CABLE LENGTH FOR RELAY CONNECTION

Combination			Total cable length
Amplifier side	Motor side		
SC-J3ENSCBL□M-L SC-J3ENSCBL□M-H	SC-J3JS2CBL□M-■-S	3m or less	30m or less
SC-J3ENSCBL□M-S	SC-J3JS2CBL□M-■-S	3m or less	20m or less

## 7. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-J3JS2CBL□M-■-S ×××××××

- ※ □ is a figure from 1 to 3
- ※ ■ is cable lead out direction from A1,A2.
- ※ ××××××× are the serial number for seven digits.

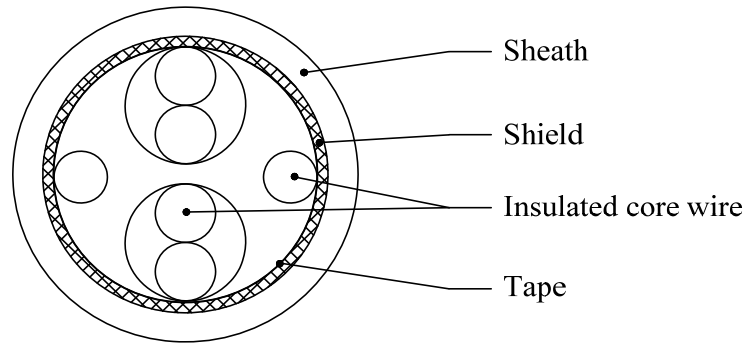
## 8. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification	
Structure		—	AWG24×2C	AWG22×2P
Conductor	Conductor size	—	AWG24	AWG22
	Outer diameter	mm	Approx. 0.66	Approx. 0.83
Insulation	Material	—	ETFE	
	Outer diameter	mm	Approx. 1.02	Approx. 1.23
Twisted pair	Number of pairs	—	—	2P
	Number of insulated core wire	—	2C	2C
Shield	Material	—	Copper alloy braid	
Sheath	Material	—	High elastic PVC	
	Color	—	Black	
Overall diameter		mm	Approx. 7.1	
Electrical characteristics	Insulation resistance	MΩ · km	Over 500	
	Withstand voltage	V for 1 minute	AC500	
Operating temperature range		°C	-10~+60 (without condensation)	
Minimum Bend Radius		mm	6 times the overall diameter	
Bending life		—	Over 10 million times <sup>*1</sup> (Bend radius : Minimum bend radius)	
Flame Retardant		—	UL1581 VW-1	
Connector	Servo amplifier side	Type	DDK Ltd. CM10-CR10P-M (D6) (Receptacle) or CMV1-CR10P-M (Receptacle)	
		IP rating	IP20 <sup>*2</sup>	
	Servo motor side	Type	Tyco electronics Japan 2174053-1 (Micro motor connector)	
		IP rating	IP65 <sup>*2</sup>	

\*1 This is the test result, not a guaranteed value. ( The performance would change depending on customer's environment)

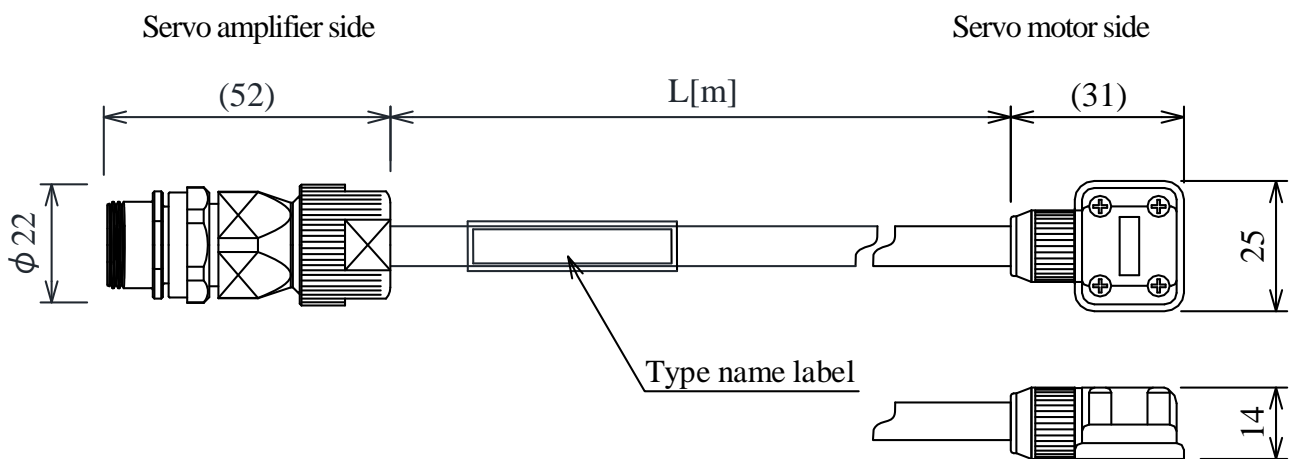
\*2 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

### 9. STRUCTURAL DRAWING



### 10. OUTLINE DRAWING

[Unit : mm]



### 11. SYSTEM CONFIGURATION DIAGRAM

