

Specification
for
General purpose AC Servo
Long Bending Life Encoder cable

Type SC-J3ENSCBL□M-H

MITSUBISHI ELECTRIC
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
A	31 Mar.,2017	D	22 Aug.,2019	<i>n. Ito</i>	<i>S. Kariya</i>	<i>J. Kawahara</i>	<i>D. Tsubokawa</i>
B	14 July ,2017	E	2 Jun.,2021				
C	26 Mar.,2018						
Send to				Date		Dwg	
				22 Mar.,2016		X903703D50052-E11E	
				Order			

1. SCOPE

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

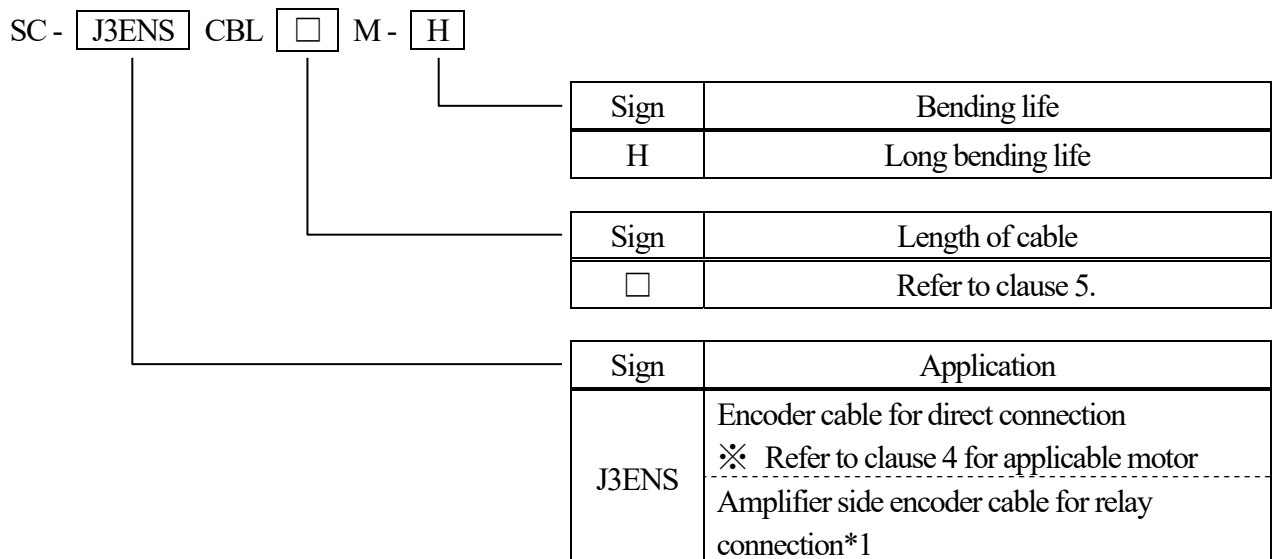
• SC-J3ENSCBL□M-H

※ Please note that the product specifications described in this specification are subject to change without notice for improvement.

※ If you need copy exactly, please contact our Sales Department.

Copy exactly ... Products made in the same process, same parts

2. CABLE TYPE



***1 When used for relay connection at the amplifier side**

When using this cable for relaying at the amplifier side, for the items (1) to (3) below refer to the specification sheet on the motor side relay cable (below table).

(1) Combination

(2) Applicable motor

(3) Cable length

Bending life	Cable type name	The number of specification sheet
Standard (For fixed part)	SC-J3JSCBL□M-■-L	X903703D50052-E03
	SC-J3ENSJCBL□M-L	X903703D50052-E60
	SC-J3ENSJCBL□M-■-L	X903703D50052-E61
Long bending life	SC-J3JSCBL□M-■-H	X903703D50052-E10
	SC-J3ENSJCBL□M-H	X903703D50025-E62
	SC-J3ENSJCBL□M-■-H	X903703D50052-E63
Ultra long bending life	SC-J3JS2CBL□M-■-S	X903703D50052-E55
High twisting long life	SC-J3JS2CBL□M-■-N	X903703D50052-E81

3. APPLICABLE STANDARDS

Wire part : UL standard (UL 758 : AWM)

UL Style No.	Rated	
20276	80°C	30V

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

- This cable doesn't include the toxic substances in RoHS.

4. APPLICABLE SERVO MOTOR

Refer to MR-J4 APPLICABLE SERVO MOTOR TABLE "R9037020-010022-105".

5. LENGTH OF CABLE

1~50m Specified by 1m unit

6. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-J3ENSCBL□M-H ×××××××

※ □ is a figure from 1 to 50.

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

7. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification	
			1~10m	11~50m
Structure		—	AWG22×3P	AWG25×6P
Conductor	Conductor size	—	AWG22	AWG25
	Outer diameter	mm	Approx. 0.8	Approx. 0.6
Insulation	Material	—	ETFE	
	Outer diameter	mm	Approx. 1.2	Approx. 1.0
Twisted pair	Number of insulated core wire	—	2C	
	Outer diameter	mm	Approx. 2.4	Approx. 2.0
Twisted	Number of pairs	—	3P	6P
Shield	Material	—	Tin coated copper braid	
Sheath*3	Material	—	Flame resisting PVC	
	Color	—	Black	
Overall diameter		mm	Approx. 7.2	Approx. 8.0
Cable weight		kg/km	75	85
Electrical characteristics	Insulation resistance	MΩ · km	Over 100	
	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 1 million times*1 (Bend radius : Minimum radius bend for each cable)	
Flame Retardant		—	UL1581 VW-1	
Connector	Servo amplifier side	Type	Molex Japan Co., Ltd. 54599-1016 (Connector set) or 3M Japan Limited. 36210-0100PL (Receptacle) 36310-3200-008 (Shell kit)	
		IP rating	IP20*2	
	Servo motor side	Type	DDK Ltd. CM10-SP10S-M (D6) (Straight plug) or CMV1-SP10S-M2 (Straight plug)	
		IP rating	IP67*2	

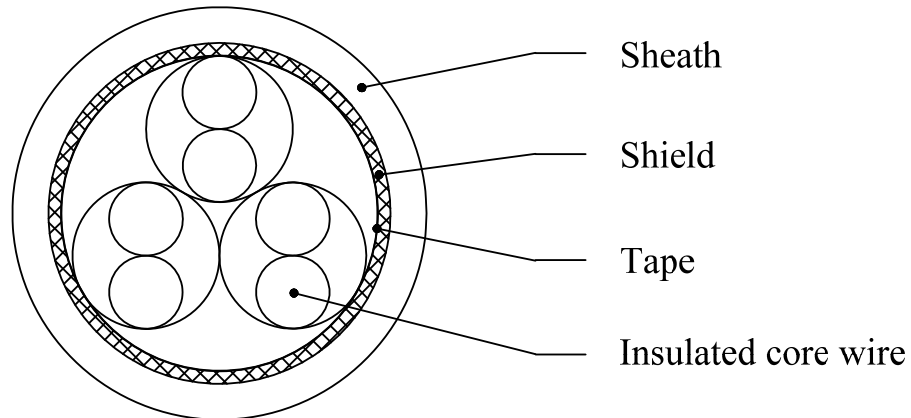
*1 This is the only test result, not guaranteed value. (The performance would be different depends on environment they are used.)

*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.

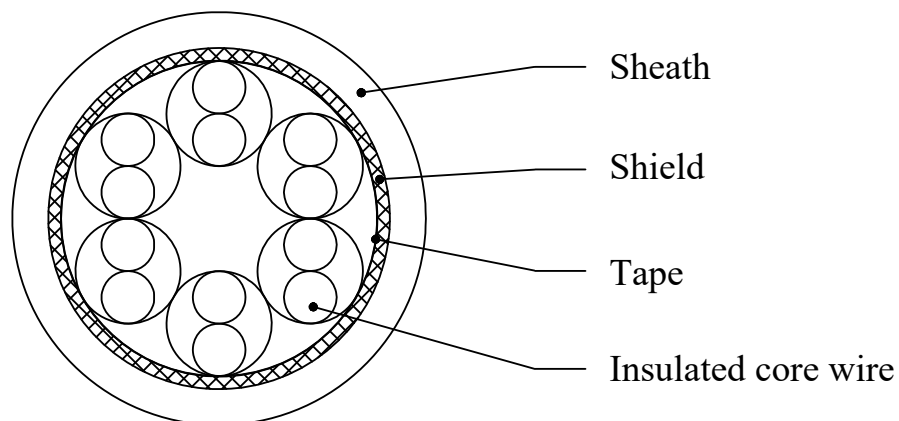
*3 Please note that the silk printing of the cable sheath varies depending on the manufacturer.

8. STRUCTURAL DRAWING

(1)1~10m



(2)11~50m



9. OUTLINE DRAWING

[Unit : mm]

