

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	22 Mar.,2016	D	2 Aug.,2018	<i>N. Ito</i>	<i>S. Kariya</i>	<i>S. Kouchi</i>	<i>D. Subashini</i>
B	31 Mar.,2017	E	19 Aug.,2021				
C	26 Mar.,2018						
Send to				Date		Dwg	
				17 June.,2013		X903703D50052-E12E	
				Order			

1. SCOPE

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

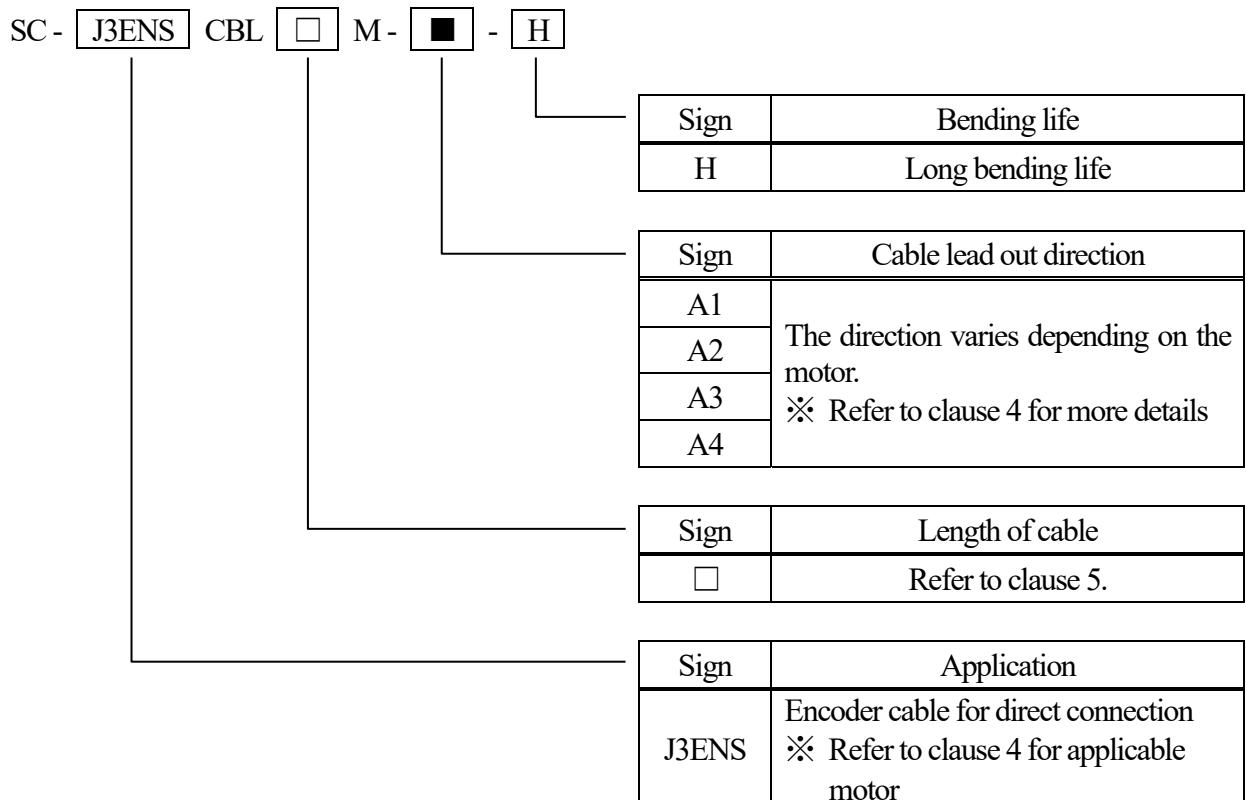
• SC-J3ENSCBL□M-■-H

※ 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



3. APPLICABLE STANDARDS

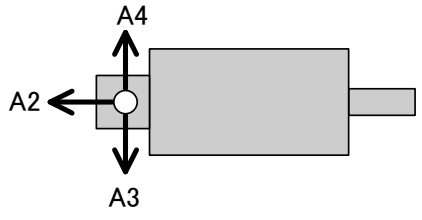
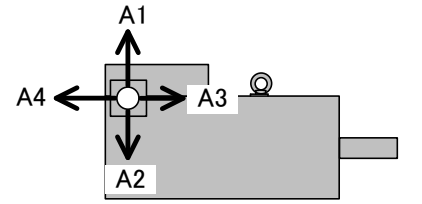
Wire part : UL standard (UL 758 : AWM)

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

Important matter	
Depending on the situation such as installation environment or combination of power supply cable and electromagnetic brake cable, there is a chance not to complete installation. Please make sure the cable lead out direction before your purchase.	
Applicable motor	Cable lead out direction (View from cable insertion direction)
HG-SR, HG-RR, HG-UR series motor HG-JR53, 73, 103, 153, 203, 353, 503, 703, 903, 534, 734, 1034, 1534, 2034, 3534, 5034, 7034, 9034 motor HF-SP, HC-LP, HC-RP, HC-UP series motor HA-LP502, 702 motor HF-JP53, 73, 103, 153, 203, 353, 503, 703, 903, 534, 734, 1034, 1534, 2034, 3534, 5034, 7034, 9034 motor	 <p>Please confirm above mentioned important matter when selecting cable lead out direction.</p>
HA-LP series motor ※Except for HA-LP502, HA-LP702	 <p>Please confirm above mentioned important matter when selecting cable lead out direction.</p>

5. LENGTH OF CABLE

1 to 50m Specified by 1m unit

6. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-J3ENSCBL□M-■-H ×××××××

- ※ □ is a figure from 1 to 50.
- ※ ■ is cable lead out direction from A1,A2,A3,A4.
- ※ ××××××× 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. 0.5
Insulation	Material	—	ETFE	
	Outer diameter	mm	Approx. 1.2	Approx. 1.0
Twisted pair	Number of insulated core wire	—	2C	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 one million times*1 (Bend radius is each cable's minimum radius bend.)	
Flame retardant		—	UL1581 VW-1	
Connector	Servo amplifier side	Type	Molex Japan LLC 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-AP10S-M (D6) (Angle plug) or CMV1-AP10S-M2 (Angle plug)	
		IP rating	IP67*2	

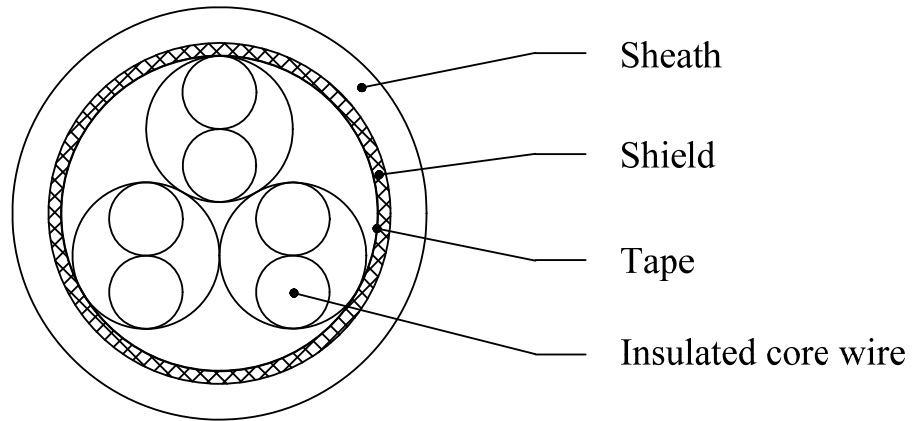
*1 It is a test outcome, and not a guaranteed value. (The performance is different according to customer's environment.)

*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.

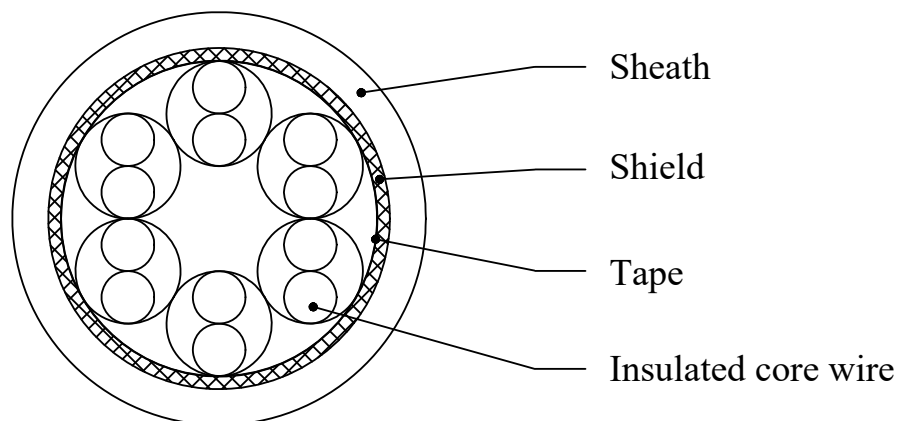
*3 Please note that the silk printing of the cable sheath varies depending on the manufacturer.

8. STRUCTURAL DRAWING

(1) 1~10m



(2) 11~50m



9. OUTLINE DRAWING

[Unit : mm]

