

1. SCOPE

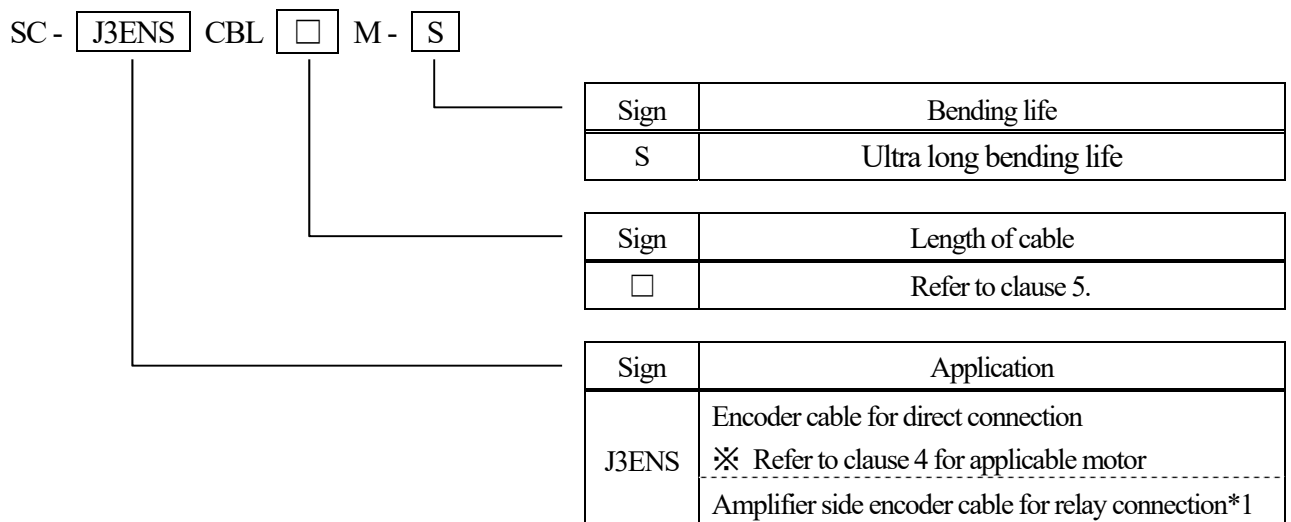
This specification covers the requirements for the General purpose AC Servo Ultra Long Bending Life Encoder cable.

• SC-J3ENSCBL□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



*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-J3ENSCBL□M-L	X903703D50052-E60
	SC-J3ENSCBL□M-■-L	X903703D50052-E61
Long bending life	SC-J3JSCBL□M-■-H	X903703D50052-E10
	SC-J3ENSCBL□M-H	X903703D50025-E62
	SC-J3ENSCBL□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

4. APPLICABLE SERVO MOTOR

HG-SR, HG-RR, HG-UR series motor

HG-JR53, 73, 103, 153, 203, 353, 503,

534, 734, 1034, 1534, 2034, 3534, 5034 motor

HF-SP, HC-LP, HC-RP, HC-UP, HA-LP series motor

HF-JP53, 73, 103, 153, 203, 353, 503,

534, 734, 1034, 1534, 2034, 3534, 5034, motor

5. LENGTH OF CABLE

1 to 20m Specified by 1m unit

6. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-J3ENSCBL□M-S ×××××××

※ □ is a figure from 1 to 20.

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

7. STRUCTURE AND CHARACTERISTICS

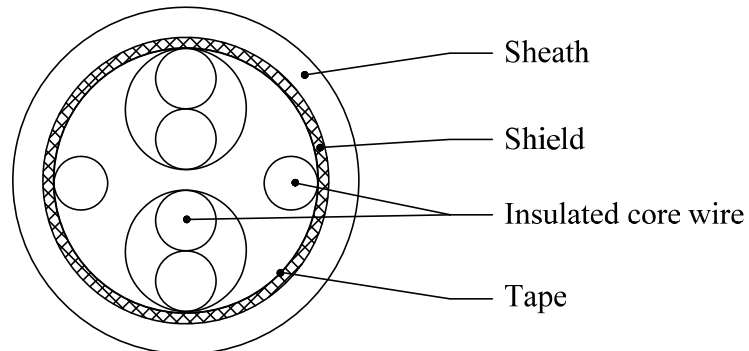
Item		Unit	Specification		
			1~10m		11~20m
Structure		—	AWG24×2C	AWG22×2P	AWG24×7P
Conductor	Conductor size	—	AWG24	AWG22	AWG24
	Outer diameter	mm	Approx. 0.66	Approx. 0.83	Approx.066
Insulation	Material	—	ETFE		
	Outer diameter	mm	Approx. 1.02	Approx. 1.23	Approx.1.02
Twisted pair	Number of pairs	—	—	2P	7P
	Number of insulated core wire	—	2C	2C	2C
Shield	Material	—	Copper alloy braid		
Sheath	Material	—	High elastic PVC		
	Color	—	Black		
Overall diameter		mm	Approx. 7.1		Approx.8.5
Electrical characteristics	Insulation resistance	MΩ · km	Over 500		
	Withstand voltage	V for 1minute	AC500		
Operating temperature range		°C	-10~+60 (without condensation)		
Minimum Bend Radius		mm	6 times the overall diameter		
Bending life		—	Over 10 million times ^{*1} (Bend radius : Minimum bend radius of each cable)		
Flame Retardant		—	UL1581 VW-1		
Connector	Servo amplifier side	Type	Molex 54599-1016 (Connector set)		
		IP rating	IP20 ^{*2}		
	Servo motor side	Type	DDK. Ltd. CMV1-SP10S-M2 (Straight plug)		
		IP rating	IP67 ^{*2}		

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

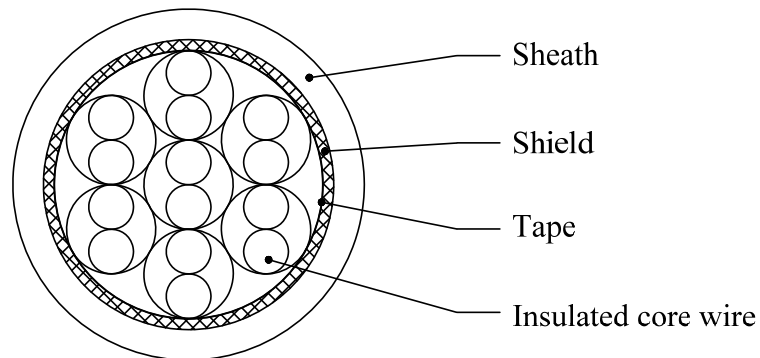
*2 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

9. STRUCTURAL DRAWING

(1) 1~10m



(2) 11~20m



10. OUTLINE DRAWING

[Unit : mm]

