

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

Type SC-EKCBL□M-S

MITSUBISHI ELECTRIC
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
A	13 Nov.,2017			<i>N. Ishii</i>	<i>S. Kanaya</i>	<i>T. Kawahara</i>	<i>D. Subushiro</i>
Send to				Date		Dwg	
				22 Mar.,2016		X903703D50052-E52A	
				Order			

1. SCOPE

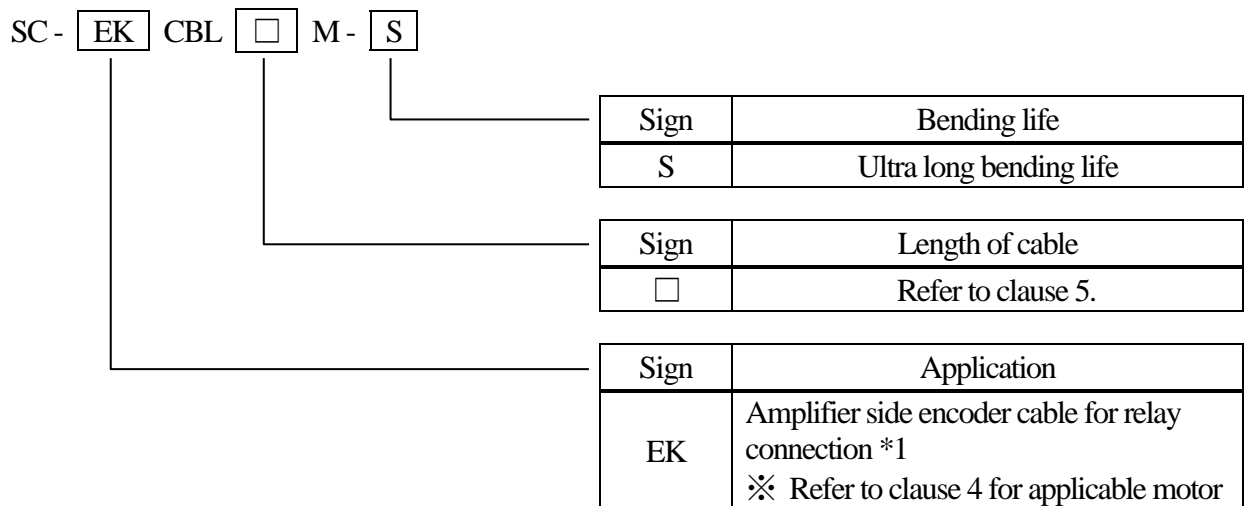
This specification covers the requirements for the General purpose AC Servo Ultra Long Bending Life Encoder cable.

- SC-EKCBL□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 Please use it with motor 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 20m Specified by 1m unit

6. CABLE LENGTH FOR RELAY CONNECTION

Combination		Total cable length	
Amplifier side	Motor side		
SC-EKCBL□M-S	SC-J3JCBL□M-■-L	4m or less	20m or less
	SC-J3JCBL□M-■-H		
SC-EKCBL□M-S	SC-J3J2CBL□M-■-S	3m or less	20m or less
	SC-J3J2CBL□M-■-N		

7. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-EKCBL□M-S ×××××××

※ □ is a figure from 1 to 20

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

8. STRUCTURE AND CHARACTERISTICS

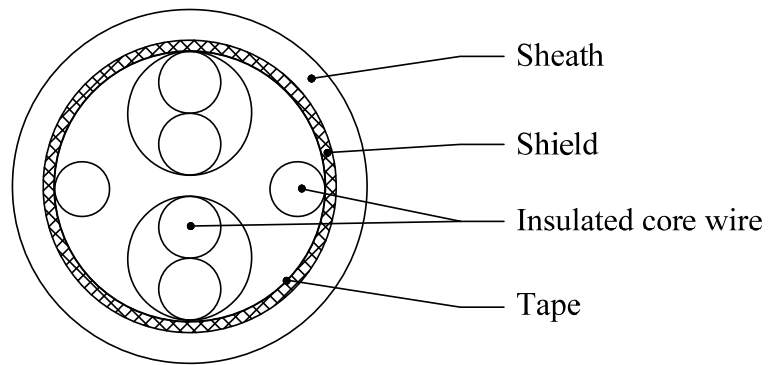
Item		Unit	Specification		
			1~10m		11~20m
Structure		—	AWG24×2C	AWG22×2P	AWG24×7P
Conductor	Conductor size	—	AWG24	AWG22	AWG24
	Outer diameter	mm	Approx. 0.66	Approx. 0.83	Approx.066
Insulation	Material	—	ETFE		
	Outer diameter	mm	Approx. 1.02	Approx. 1.23	Approx.1.02
Twisted pair	Number of pairs	—	—	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 for1minute	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	Tyco electronics Japan 1-172161-9 (Housing) AINIX MTI-0002 (Cable crump)		
		IP rating	IP20 ^{*2}		

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

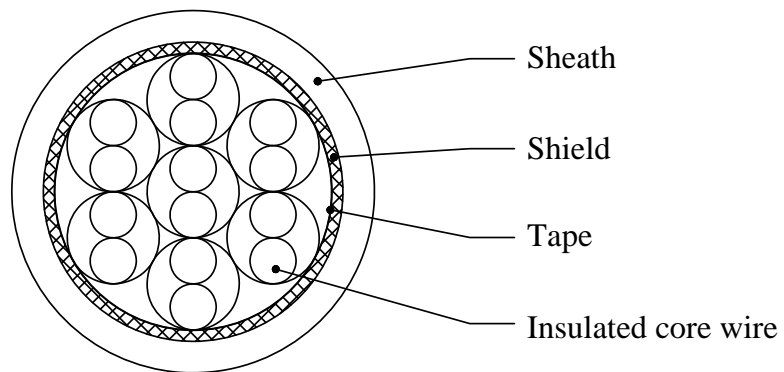
*2 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

9. STRUCTURAL DRAWING

(1) 1~10m

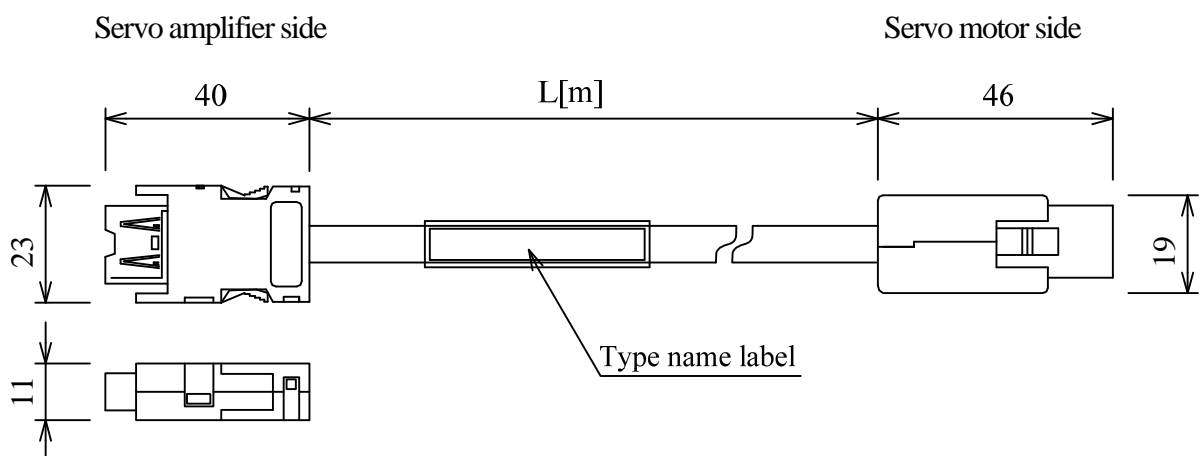


(2) 11~20m



10. OUTLINE DRAWING

[Unit : mm]



11. SYSTEM CONFIGURATION DIAGRAM

