

Specification
for
General purpose AC Servo
Encoder cable

Type SC-AEKCBL□M-H

MITSUBISHI ELECTRIC
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
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Send to				Date		Dwg	
				24 Apr., 2019		X953503D70003-E31	
				Order			

1. SCOPE

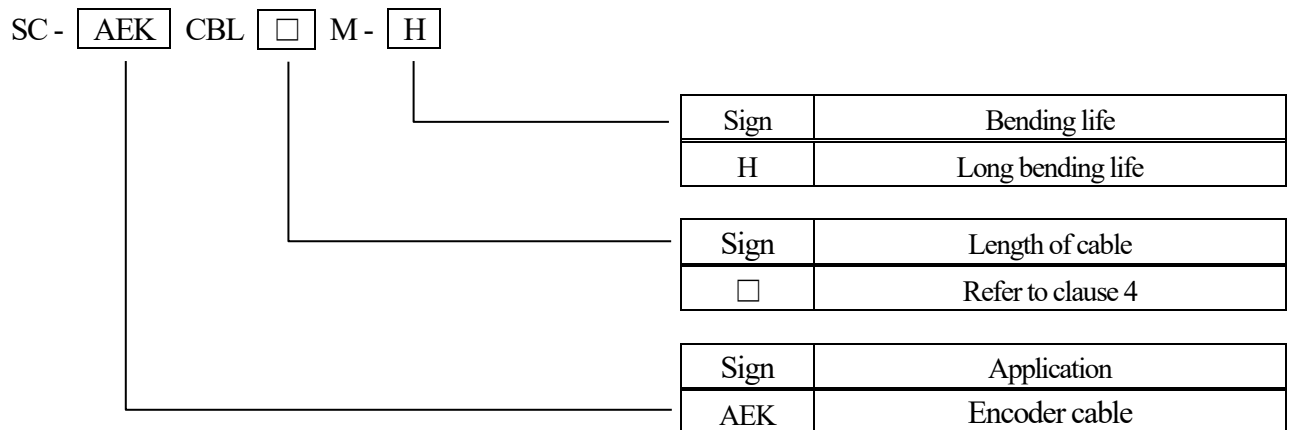
This specification covers the requirements for the General purpose AC Servo Encoder cable.

- SC-AEKCBL□M-H

※ The Products covered in this specification don't include the toxic substances in RoHS2 (Lead, Mercury, Cadmium, Hexavalent Chromium, PBDE, PBB, HBCDD, DEHP, BPP, DBP).

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

2. CABLE TYPE



3. APPLICABLE STANDARDS

Wire part : UL standard (UL 758 : AWM)

UL Style No.	Rated	
20276	80°C	30V

4. LENGTH OF CABLE

1 to 49 m

※ For 2m, 5m, 10m, 20m, 30m, 40m and 50m products, please purchase from Mitsubishi Electric Corporation.

5. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-AEKCBL□M-H ×××××××

※ □ is a figure from 1 to 49.(Except for 2m, 5m,10m, 20m,30m and 40m)

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

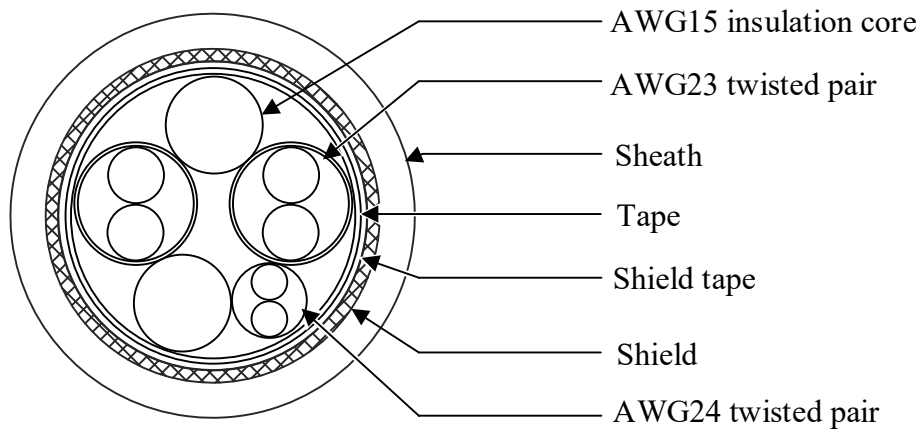
6. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification		
Structure		—	AWG15×2C+AWG23×2P+AWG24×1P		
Conductor	Conductor size	—	AWG15	AWG23	AWG24
	Outer diameter	mm	Approx.2.0	Approx.0.8	Approx.0.7
Insulation	Material	—	Special elastomer	Cross-linked PE	Special elastomer
	Outer diameter	mm	Approx.2.4	Approx.1.6	Approx.1.0
Twisted pair	Number of insulated core wire	—	—	2C	2C
	Outer diameter	mm	—	Approx.3.0	Approx.1.8
Twisted	Number of pairs	—	—	2P	1P
	Number of insulated core wire	—	2C	—	—
Shield	Material	—	Tin coated copper braid		
Sheath	Material	—	Flame resisting PVC		
	color	—	Black		
Overall diameter		mm	Approx. 8.7		
Electrical characteristics	Insulation resistance	MΩ・km	Over 100		
	Withstand voltage	V / for 1 min	AC500		
Operating temperature range		℃	-10～+60 (without condensation)		
Minimum bend radius		mm	6 times the overall diameter		
Bending life		—	Over 1 million times*1 (by Minimum bend radius)		
Flame retardant		—	UL1581 VW-1		
Connector					
Amplifier side		Type	Molex Japan Co., Ltd. 54599-1016 (Connector set)		
		IP rating	IP20 ^{*2}		
Motor side		Type	Tyco Electronics Japan Ltd. 1-172161-9 (Housing plug) Toa Electric Industry Co., Ltd. MTI-0002 (Cable clamp)		
		IP rating	IP20 ^{*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.

7. STRUCTURAL DRAWING



8. OUTLINE DRAWING

[Unit : mm]

