

Specification  
for  
General purpose AC Servo  
Long Bending Life Encoder cable

Type SC-ENECBL□M-H

MITSUBISHI ELECTRIC  
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
A	22 Aug.,2019			<i>N. Ito</i>	<i>S. Kijima</i>	<i>I. Minonaga</i>	<i>D. Kubokawa</i>
Send to				Date		Dwg	
				22 Mar.,2016		X903703D50052-E13A	
				Order			

## 1. SCOPE

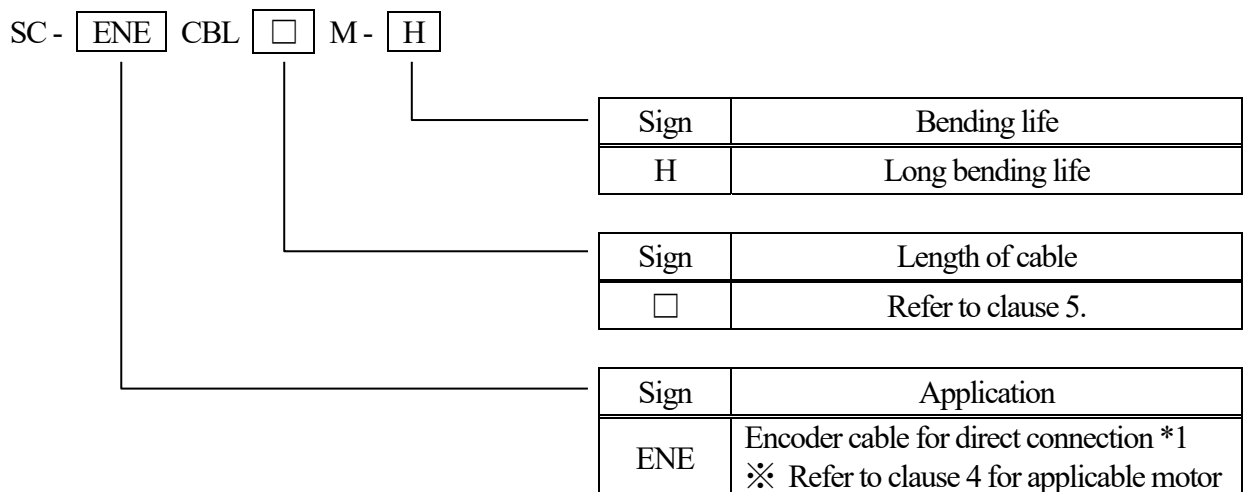
This specification covers the requirements for the General purpose AC Servo Long Bending Life Encoder cable.

- SC-ENECBL□M-H

※ 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 The cable(Over 30m) is available in 4-wire type. Parameter setting is required to use the 4-wire type encoder cable. Refer to "SERVO AMPLIFIER INSTRUCTION MANUAL issued by Mitsubishi Electric Corporation" for more details.

## 3. APPLICABLE STANDARDS

Wire part : UL standard (UL 758 : AWM)

Length of cable	UL Style No.	Rated	
		1~10m	2517
11~30m	20276	80°C	30V
31~50m	2464		300V

## 4. APPLICABLE SERVO MOTOR

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

## 5. LENGTH OF CABLE

1 to 50m Specified by 1m unit

## 6. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-ENECBL□M-H ×××××××

※ □ is a figure from 1 to 50.

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

## 7. STRUCTURE AND CHARACTERISTICS

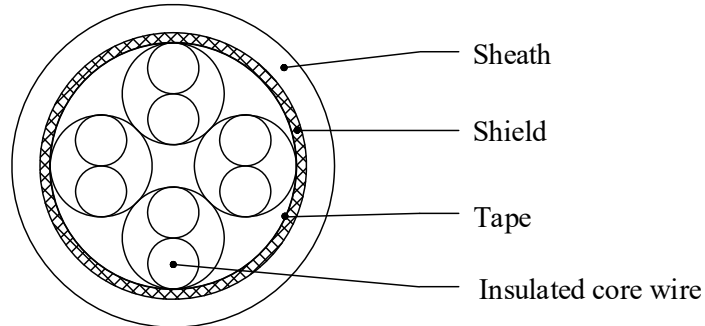
Item		Unit	Specification		
			1~10m	11~30m	31~50m
Structure		—	AWG22×4P	AWG25×6P	AWG25×7P
Conductor	Conductor size	—	AWG25	AWG25	AWG25
	Outer diameter	mm	Approx. 0.58	Approx. 0.58	Approx.058
Insulation	Material	—	ETFE		
	Outer diameter	mm	Approx. 0.98	Approx. 0.98	Approx.0.98
Twisted pair	Number of insulated core wire	—	2C	2C	2C
	Outer diameter	mm	2.0	2.0	2.0
Twisted	Number of pairs	—	4P	6P	7P
Shield	Material	—	Tin coated copper braid		
Sheath	Material	—	Flame resisting PVC		
	Color	—	Black		
Overall diameter		mm	Approx. 7.0	Approx. 8.0	Approx.8.3
Electrical characteristics	Insulation resistance	MΩ · km	Over 100		
	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 1 million times *1 (Bend radius: Minimum bend radius of each cable)		
Flame Retardant		—	UL1581 VW-1		
Connector	Servo amplifier side	Type	Molex Japan Co., Ltd. 54599-1016 (Connector set)		
		IP rating	IP20*2		
	Servo motor side	Type	DDK Ltd. D/MS3106A20-29S (D190) (Plug) CE3057-12A-3-D (Cable crump)		
		IP rating	IP67*2		

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

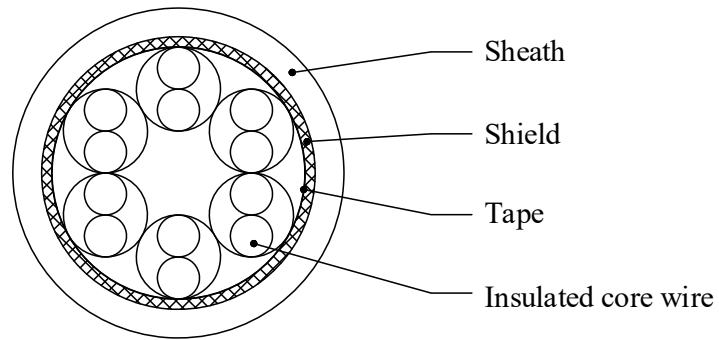
\*2 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

### 8. STRUCTURAL DRAWING

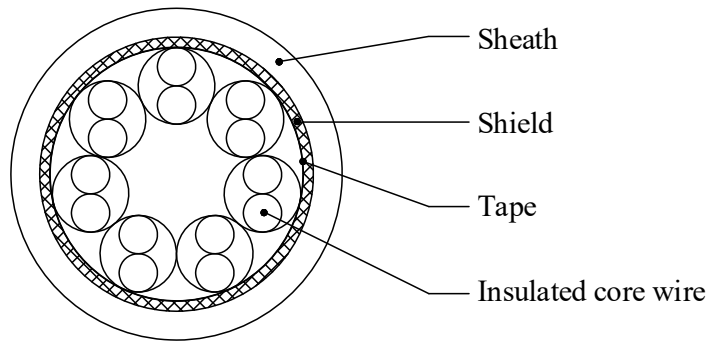
(1) 1~10m



(2) 11~30m



(3) 31~50m



## 9. OUTLINE DRAWING

