



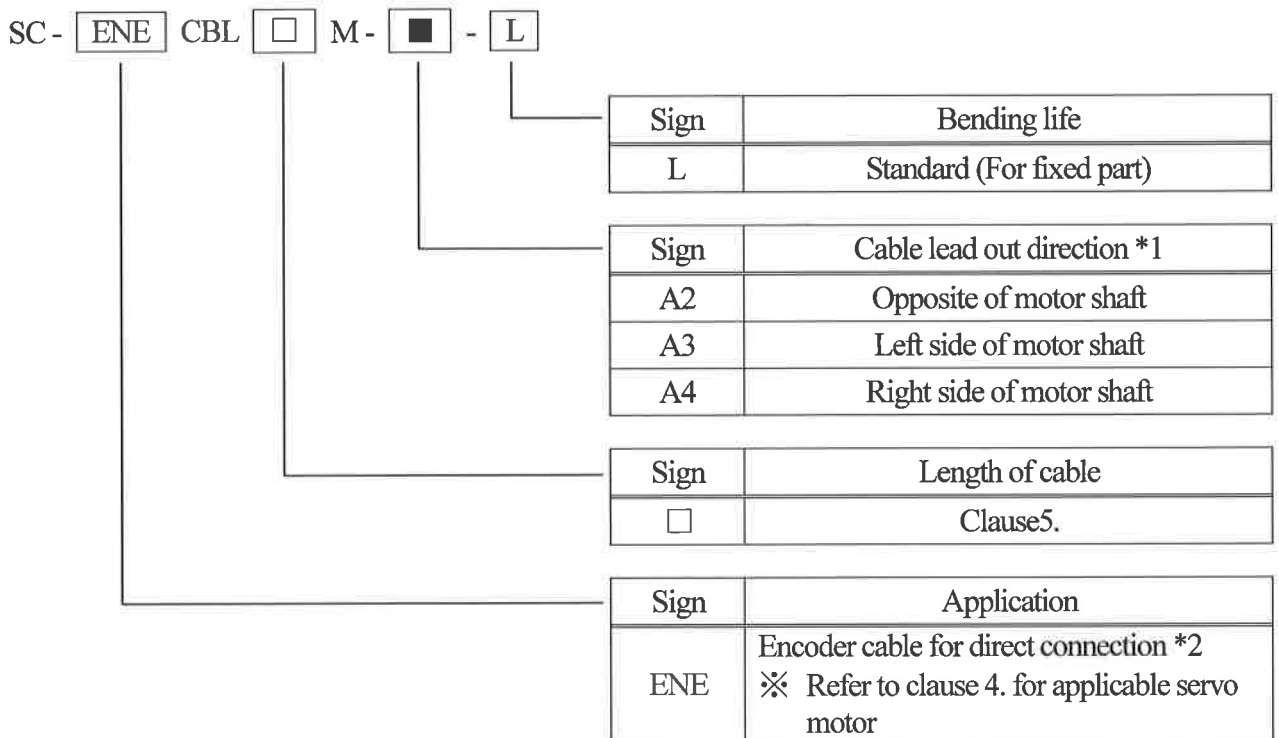
## 1. SCOPE

This specification covers the requirements for the General purpose AC Servo Encoder cable type SC-ENE CBL □ M-■ -L.

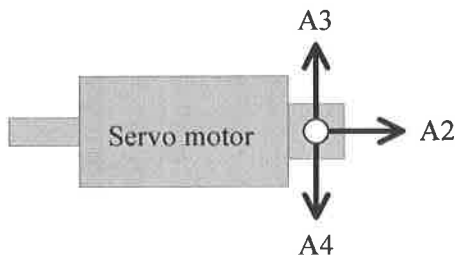
※ This cable doesn't include the toxic substances in RoHS (Lead, Mercury, Cadmium, Hexavalent Chromium, PBDE, PBB).

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

## 2. CABLE TYPE



\*1 Cable lead out direction(View from cable insertion direction)



A2: Opposite of motor shaft  
A3: Left side of motor shaft  
A4: Right side of motor shaft

\*2 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

- 1~10m :UL758 AWM STYLE 2464 (wire part)  
11~50m :UL758 AWM STYLE 20276 (wire part)

### 4. APPLICABLE SERVO MOTOR

HF-JP11K1M, 15K1M, 11K1M4, 15K1M4 motor

### 5. LENGTH OF CABLE

1 to 50m Specified by 1m unit

### 6. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-ENECBL□M-■-L ×××××××

- ※ □ is a figure from 1 to 50.
- ※ ■ is cable lead out direction from A2, A3, A4.
- ※ ××××××× are the serial number for seven digits.

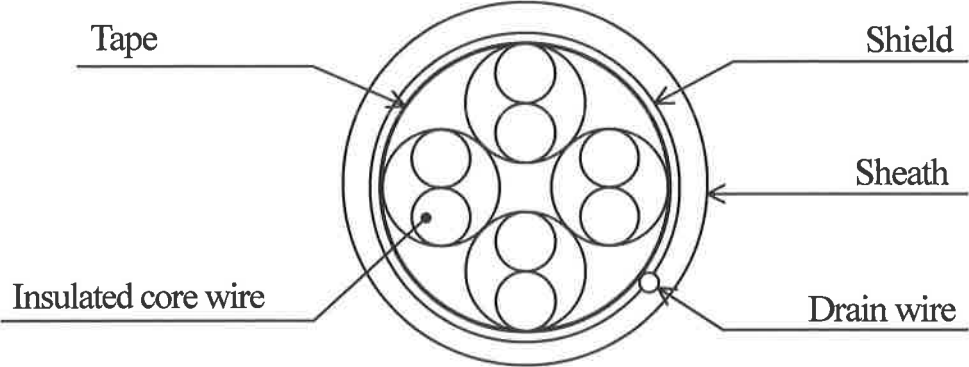
## 7. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification	
			1~10m	11~50m
Structure		—	AWG24×4P	AWG23×6P
Conductor	Conductor size	—	AWG24	AWG23
	Outer diameter	mm	Approx. 0.60	Approx. 0.72
Insulation	Material	—	PVC	
	Outer diameter	mm	Approx. 1.10	Approx. 1.22
Twisted pair	Number of insulated core wire	—	2C	2C
	Outer diameter	mm	2.2	2.4
Twisted	Number of pairs	—	4P	6P
Drain wire		—	Tin coated copper	—
Shield	Material	—	Tin coated copper braid	
Sheath	Material	—	Flame resisting PVC	
	Color	—	Black	
Overall diameter		mm	Approx. 7.5	Approx. 8.2
Electrical characteristics	Insulation resistance	MΩ · km	Over 10	
	Withstand voltage	V for 1 minute	AC500	
Operating temperature range		°C	-10~+60 (without condensation)	
Minimum Bend Radius		mm	Over 45	Over 50
Flame Retardant		—	UL1581 VW-1	
Connector	Servo amplifier side	Type	Molex 54599-1016 (Connector set)	
		IP rating	IP20*1	
	Servo motor side	Type	DDK D/MS3106A20-29S (D190) (Plug) CE-20BA-S-D (Angle back shell) CE3057-12A-3-D (Cable crump)	
		IP rating	IP67*1	

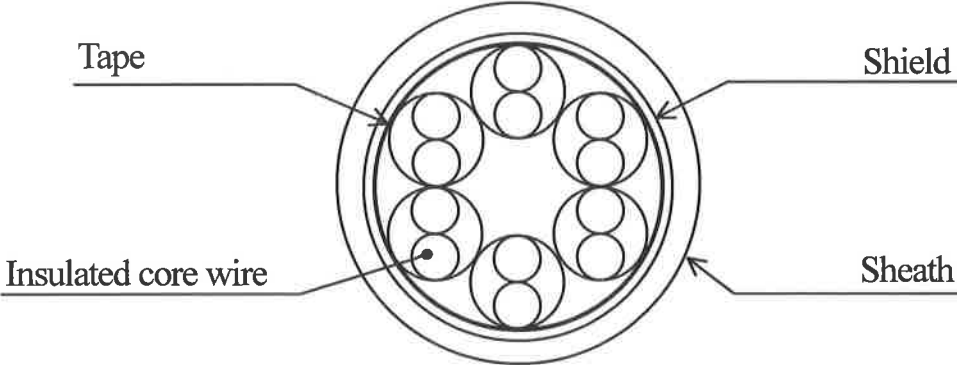
\*1 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

9. STRUCTURAL DRAWING

(1) 1~10m



(2) 11~50m



10. OUTLINE DRAWING

[Unit : mm]

