



## 1. SCOPE

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

- SC-EKCBL□M-L.

※ Please note that the product specifications described in this specification are subject to change without notice for improvement.

※ If you need copy exactly, please contact our Sales Department.

Copy exactly ... Products made in the same process, same parts

## 2. CABLE TYPE

SC -  EK CBL  M -  L

SC - <input type="checkbox"/> EK	Sign	Bending life
	L	Standard (For fixed part)
CBL <input type="checkbox"/>	Sign	Length of cable
	<input type="checkbox"/>	Refer to clause 5.
M - <input type="checkbox"/> L	Sign	Application
	EK	Amplifier side encoder cable for relay connection *1 *2 ※ Refer to clause 4 for applicable motor

\*1 Please use it with motor side encoder cable.

Refer to clause 6 for confirming the combination and cable length.

\*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

Wire part : UL standard (UL 758 : AWM)

UL Style No.	Rated	
20276	80°C	30V

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

- This cable doesn't include the toxic substances in RoHS.

## 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. CABLE LENGTH FOR RELAY CONNECTION

Cable type name		Total cable length
Amplifier side	Motor side	
SC-EKCBL□M-L	SC-J3JCBL□M-■-L SC-J3JCBL□M-■-H	1m or less 50m or less
	SC-J3JCBL□M-■-L SC-J3JCBL□M-■-H	2~5m 40m or less
	SC-J3J2CBL□M-■-S *1 SC-J3J2CBL□M-■-N *1	3m or less 30m or less

\*1 This cable is only for 2 wire type connection.

## 7. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-EKCBL□M-L ×××××××

※ □ is a figure from 1 to 50.

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

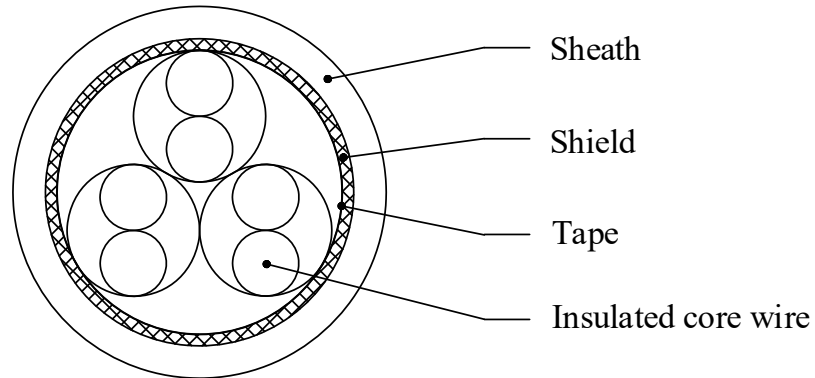
## 8. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification	
			1~10m	11~50m
Structure		—	AWG22×3P	AWG23×6P
Conductor	Conductor size	—	AWG22	AWG23
	Outer diameter	mm	Approx. 0.8	Approx. 0.7
Insulation	Material	—	PVC	
	Outer diameter	mm	Approx. 1.2	Approx. 1.3
Twisted pair	Number of insulated core wire	—	2C	2C
	Outer diameter	mm	Approx. 2.3	Approx. 2.4
Twisted	Number of pairs	—	3P	6P
Shield	Material	—	Tin coated copper braid	
Sheath	Material	—	Flame resisting PVC	
	Color	—	Black	
Overall diameter		mm	Approx. 7.1	Approx. 8.2
Cable weight		kg/km	75	95
Electrical characteristics	Insulation resistance	MΩ · km	Over 10	
	Withstand voltage	V for 1minute	AC500	
Operating temperature range		°C	-10~+60 (without condensation)	
Minimum Bend Radius		mm	6 times the overall diameter	
Flame Retardant		—	UL1581 VW-1	
Connector	Servo amplifier side	Type	Molex Japan LLC 54599-1016 (Connector set) or 3M Japan Limited 36210-0100PL (Receptacle) 36310-3200-008 (Shell kit)	
		IP rating	IP20*1	
	Servo motor side	Type	Tyco electronics Japan G.K. 1-172161-9 (Housing) AINIX Co., Ltd. MTI-0002 (Cable crump)	
		IP rating	IP20*1	

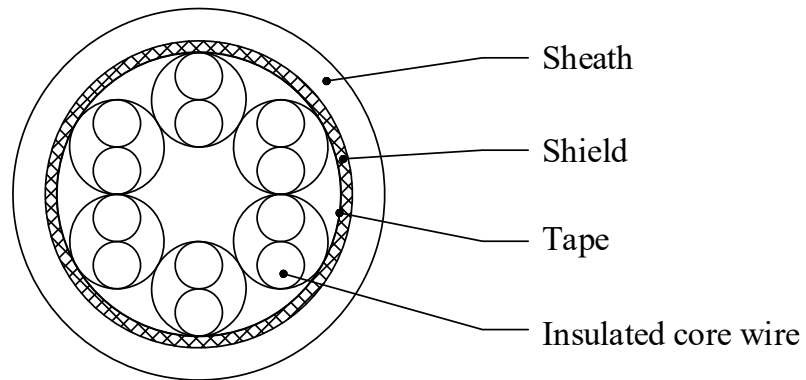
\*1 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

### 9. STRUCTURAL DRAWING

(1) 1~10m

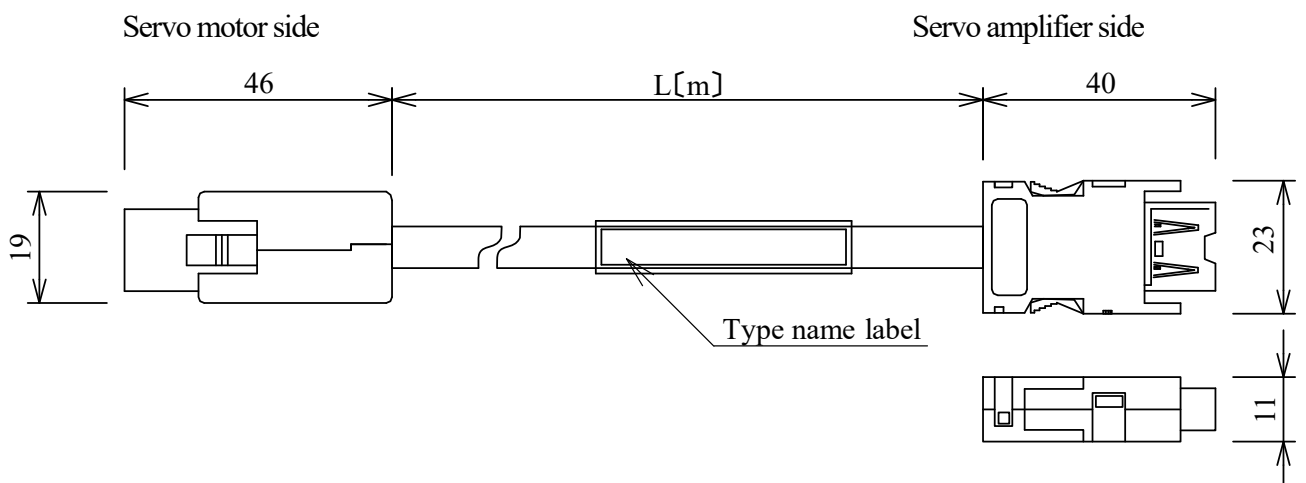


(2) 11~50m



### 10. OUTLINE DRAWING

[Unit : mm]



### 11. SYSTEM CONFIGURATION DIAGRAM

