

Specification  
for  
General purpose AC Servo  
Electromagnetic brake cable

Type SC-BKC1CBL□M-L

MITSUBISHI ELECTRIC  
SYSTEM & SERVICE CO.,LTD

Note

Revision				Drawn	Check	Design	Approved
A	31 Mar.,2017			<i>N. Ishii</i>	<i>S. Kariya</i>	<i>M. Awamura</i>	<i>D. Fukushiro</i>
B	14 July ,2017						
C	8 Jun.,2018						
Send to				Date		Dwg	
				26 Apr.,2016		X903703D50052-G03C	
				Order			

## 1. SCOPE

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

- SC-BKC1CBL□M-L

※ The Products covered in this specification don'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

SC -	<input type="checkbox"/> BK	<input type="checkbox"/> C1	CBL	<input type="checkbox"/>	M -	<input type="checkbox"/> L						
							<table border="1"> <tr> <td>Sign</td> <td>Bending life</td> </tr> <tr> <td>L</td> <td>Standard(For fixed part)</td> </tr> </table>	Sign	Bending life	L	Standard(For fixed part)	
Sign	Bending life											
L	Standard(For fixed part)											
							<table border="1"> <tr> <td>Sign</td> <td>Length of cable</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Refer to clause 5.</td> </tr> </table>	Sign	Length of cable	<input type="checkbox"/>	Refer to clause 5.	
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							<table border="1"> <tr> <td>Sign</td> <td>Applicable servo motor</td> </tr> <tr> <td>C1</td> <td>Refer to clause 4.</td> </tr> </table>	Sign	Applicable servo motor	C1	Refer to clause 4.	
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							<table border="1"> <tr> <td>Sign</td> <td>Application</td> </tr> <tr> <td rowspan="2">BK</td> <td>Electromagnetic brake cable for direct connection ※ Refer to clause 4 for applicable motor</td> </tr> <tr> <td>Power supply side electromagnetic brake cable for relay connection *1</td> </tr> </table>	Sign	Application	BK	Electromagnetic brake cable for direct connection ※ Refer to clause 4 for applicable motor	Power supply side electromagnetic brake cable for relay connection *1
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	Power supply side electromagnetic brake cable for relay connection *1											

**\*1 When used for relay connection at the Power supply side**

When using this cable for relaying at the Power supply side, for the items (1) to (3) below refer to the specification sheet on the motor side relay cable (below table).

- (1) Combination
- (2) Applicable motor
- (3) Cable length

Bending life	Cable type name	The number of specification sheet
Standard (For fixed part)	SC-BKS1JCBL□M-■-L	X903703D50052-G06
	SC-BKC1JCBL□M-L	X903703D50052-G09
	SC-BKC1JCBL□M-■-L	X903703D50052-G10
Long bending life	SC-BKS1JCBL□M-■-H	X903703D50052-G16
	SC-BKC1JCBL□M-H	X903703D50052-G19
	SC-BKC1JCBL□M-■-H	X903703D50052-G20
Ultra long bending life	SC-BKS1JCBL□M-■-S	X903703D50052-G22

### 3. APPLICABLE STANDARDS

UL758 AWM STYLE 2517 (wire part)

### 4. APPLICABLE SERVO MOTOR

HG-SR series motor

HG-JR53B, 73B, 103B, 153B, 203B, 353B, 503B, 703B, 903B,  
534B, 734B, 1034B, 1534B, 2034B, 3534B, 5034B, 7034B, 9034B motor

HF-SP series motor

HF-JP53B, 73B, 103B, 153B, 203B, 353B, 503B, 703B, 903B,  
534B, 734B, 1034B, 1534B, 2034B, 3534B, 5034B, 7034B, 9034B motor

### 5. LENGTH OF CABLE

1 to 30m Specified by 1m unit

### 6. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-BKC1CBL□M-L ×××××××

※ □ is a figure from 1 to 30.

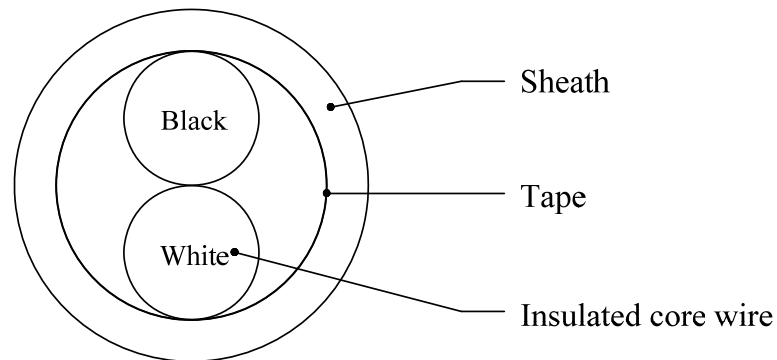
※ ××××××× are the serial number for seven digits.

## 7. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification
Structure		—	AWG16×2C
Conductor	Conductor size	—	AWG16
	Outer diameter	mm	Approx. 1.53
Insulation	Material	—	PVC
	Outer diameter	mm	Approx. 2.43
Stranding	Number of insulation core wire	—	2C
Sheath	Material	—	Flame resisting PVC
	Color	—	Black
Overall diameter		mm	Approx. 7.0
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	6 times the overall diameter
Flame retardant		—	UL1581 VW-1
Connector	Power supply side		—
	Servo motor side	Type	DDK Ltd. CM10-SP2S-M (D6) (Straight plug) or CMV1-SP2S-M2 (Straight plug)
		IP rating	IP67*1

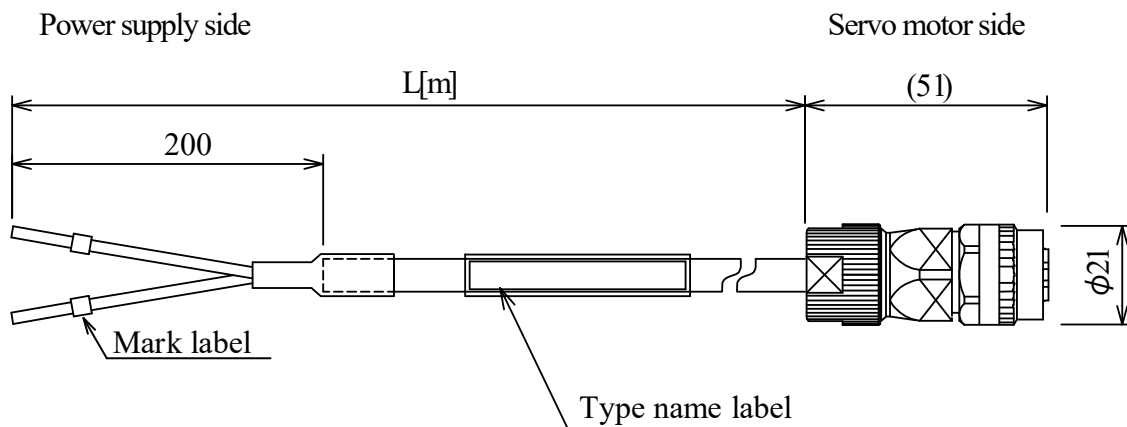
\*1 The IP rating indicated is for the connector's protection against ingress of dust and water when coupled to a servo amplifier/servo motor. If the IP rating of the servo amplifier/servo motor differs from that of these connectors, overall IP rating depends on the lowest of all.

## 8. STRUCTURAL DRAWING



## 9. OUTLINE DRAWING

[Unit : mm]



Refer to the following table for mark label and insulation color.

Mark label	Insulation color
B1	White
B2	Black