

Specification
for
General purpose AC Servo
Long Bending Life Power supply cable

Type SC-PWC3CBL□M-○H

mitsubishi electric
system & service co.,ltd

Note

Revision				Drawn	Check	Design	Approved
A	27 Apr.,2016	D	7 Jun.,2018	<i>n. Ito</i>	<i>S. Fuziya</i>	<i>M. Awamura</i>	<i>D. Sudo</i>
B	31 Mar., 2017	E	15 Mar.,2022				
C	28 Sep.,2017						
Send to				Date		Dwg	
				2 September,2015		X903703D50052-F01E	
				Order			

1. SCOPE

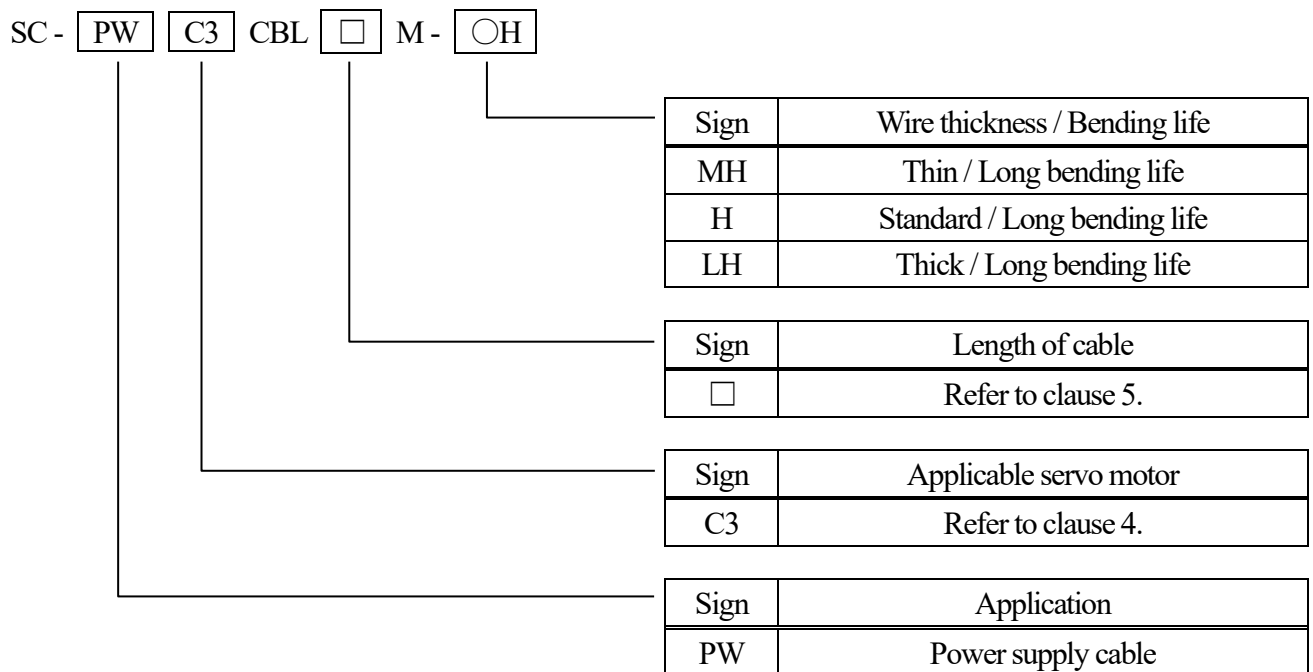
This specification covers the requirements for the General purpose AC Servo Long Bending Life Power supply cable.

- SC-PWC3CBL□M-MH
- SC-PWC3CBL□M-H
- SC-PWC3CBL□M-LH

※ 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



3. APPLICABLE STANDARDS

Wire part : UL standard (UL 758 : AWM)

UL Style No.	Rated	
2586	105°C	600V

4. APPLICABLE SERVO MOTOR

Refer to MR-J4 APPLICABLE SERVO MOTOR TABLE “R9037020-01002-105”.

5. LENGTH OF CABLE

1 to 30m Specified by 1m unit

6. EXAMPLE OF PRINTING CABLE TYPE NAME

SC-PWC3CBL□M-○H ××××××××

- ※ □ is a figure from 1 to 30.
- ※ ○ is wire thickness from M, none , L.
- ※ ×××××××× are the serial number for seven or eight digits.

7. STRUCTURE AND CHARACTERISTICS

Item		Unit	Specification		
			MH	H	LH
Structure		—	AWG10×4C	AWG9×4C	AWG6×4C
Conductor	Conductor size	—	AWG10	AWG9	AWG6
	Outer diameter	mm	Approx. 3.0	Approx. 4.8	Approx. 6.0
Insulation	Material	—	PVC		
	Outer diameter	mm	Approx. 4.7	Approx. 7.6	Approx. 9.3
Stranding	Number of insulation core wire	—	4C		
Sheath	Material	—	Flame Retardant PVC		
	Color	—	Black		
Overall diameter		mm	Approx. 14	Approx. 22.1	Approx. 25.9
Cable weight		kg/km	340	670	1120
Electrical characteristics	Insulation resistance	MΩ · km	Over 10		
	Withstand voltage	V for 1minute	AC2000*3		
Operating temperature range		°C	-10~+60 (without condensation)		
Minimum radius bend		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		—		
	Servo motor side	Type	MH: DDK Ltd. CE05-6A32-17SD-D(R1) (Plug)*4 Nippon Flex Co., Ltd.*5 ACS-16RL-MS32F (MS type straight connector) or SANKEI MANUFACTURING CO.LTD,*5 C2KD1632 (KEIGLAND Type C2)		
			H: DDK Ltd. CE05-6A32-17SD-D-BSS(R1) (Straight plug) CE3057-20A-1-D(R1) (Waterproof cable clamp)		
			LH: DDK Ltd. CE05-6A32-17SD-D-BSS(R1) (Straight plug) CE3057-20A-2-D(R1) (Waterproof cable clamp)		
	IP rating	IP67*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.

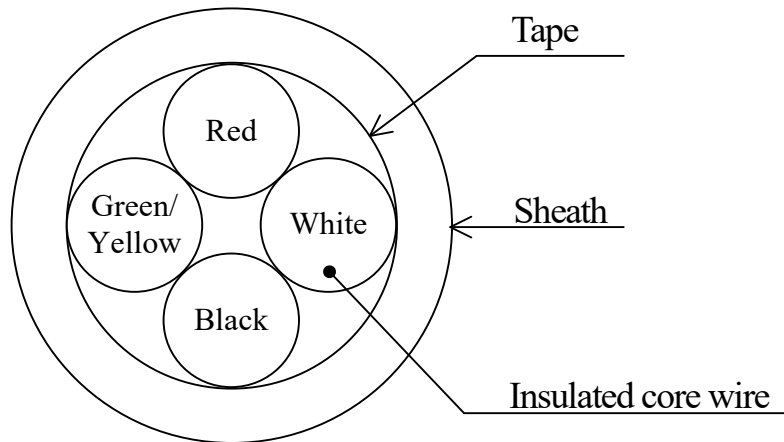
*3 In addition, the cable material alone is tested for a withstand voltage of 2000V / 5 minutes.

*4 The plug is used in common for Nippon Flex product and Sankei Seisakusho product clamps.

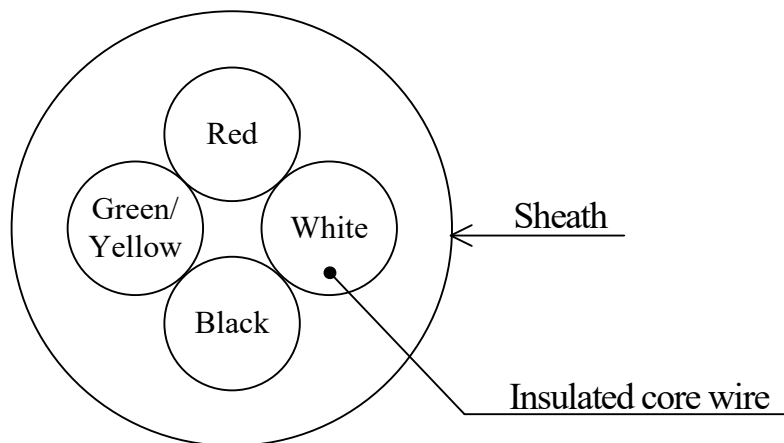
*5 Due to the discontinuation of production of Nippon Flex clamps, we will switch to Sankei Seisakusho products after the inventory of Nippon Flex products is exhausted.

8. STRUCTURAL DRAWING

(1) SC-PWC3CBL□M-MH, SC-PWC3CBL□M-H



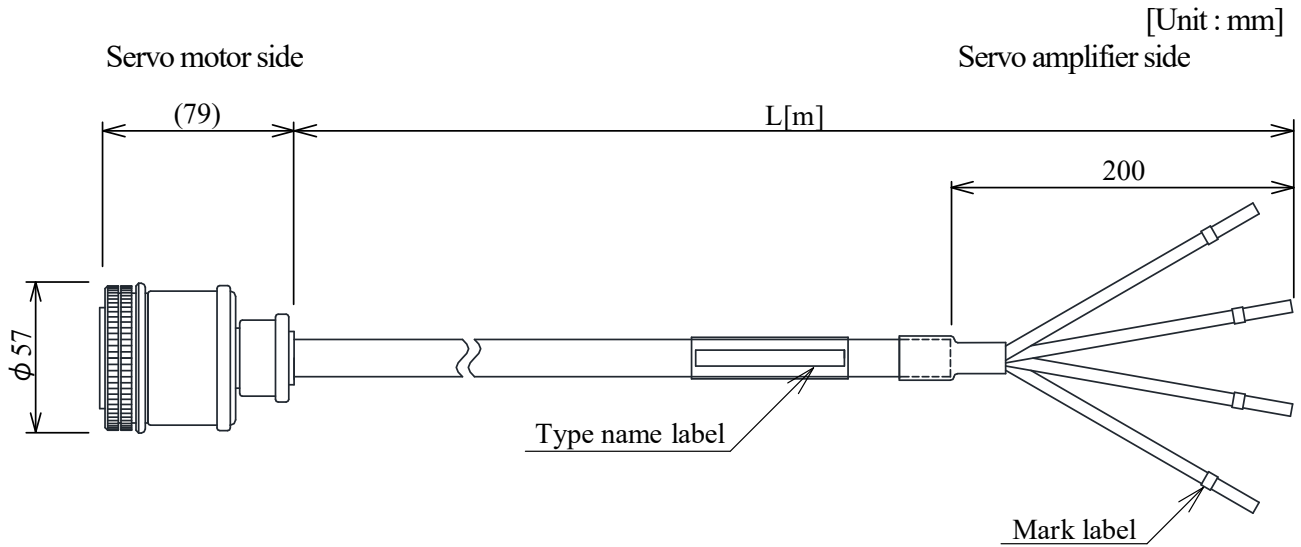
(2) SC-PWC3CBL□M-LH



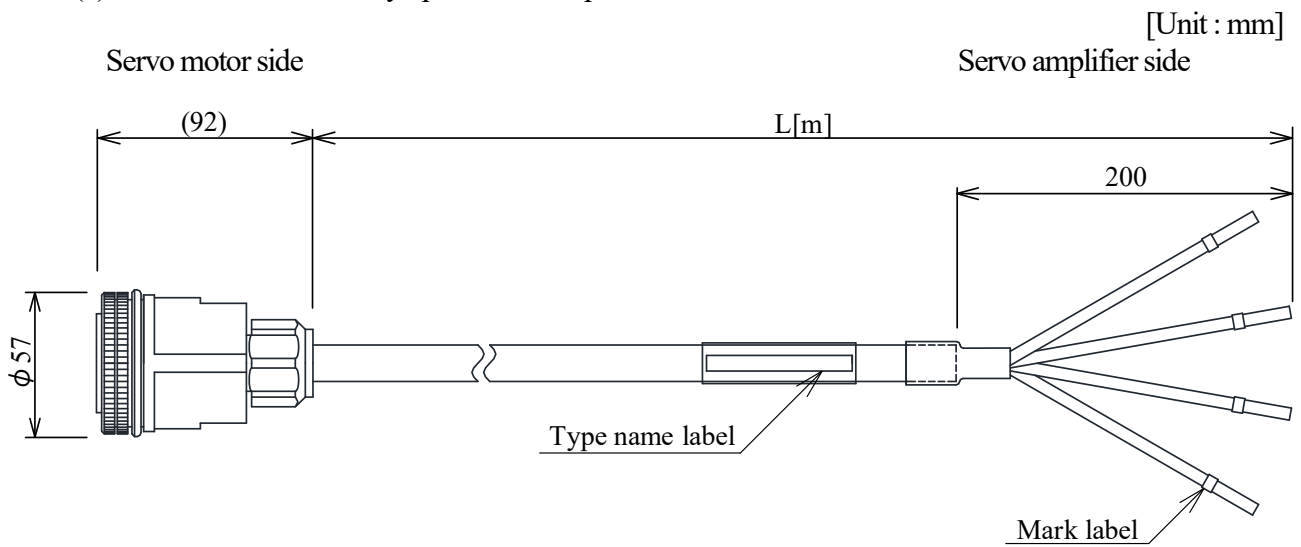
9. OUTLINE DRAWING

(1) SC-PWC3CBL□M-MH

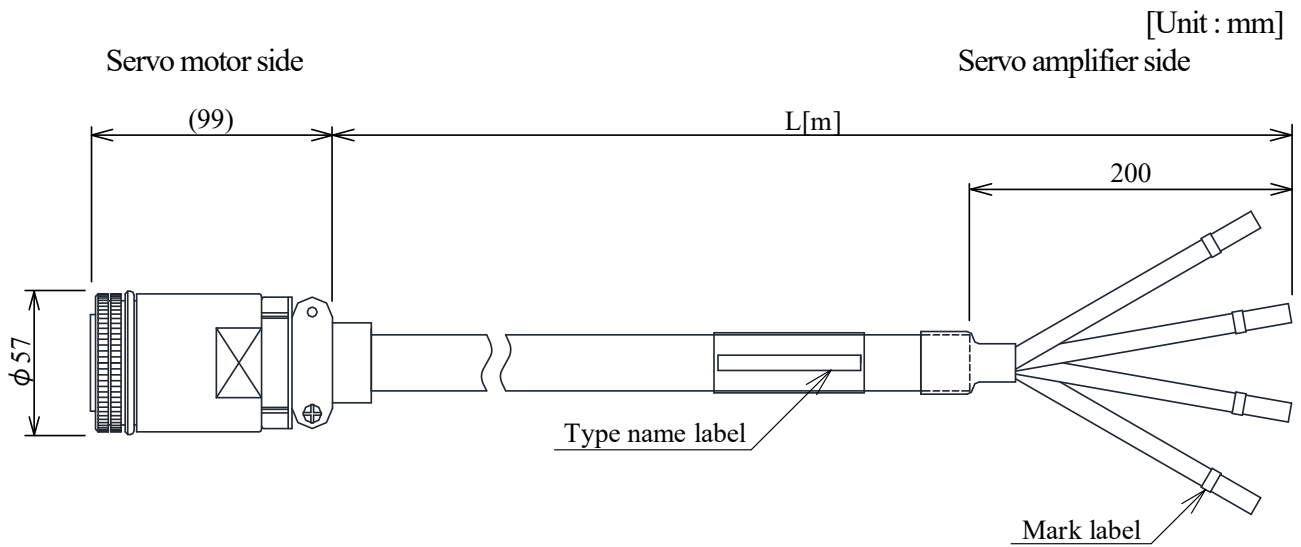
(1)-1 Uses Nippon Flex products clamp



(1)-2 Uses Sankei Seisakusyo products clamp



(2) SC-PWC3CBL□M-H
SC-PWC3CBL□M-LH



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

Mark label	Insulation color
U	Red
V	White
W	Black
E	Green / Yellow