

DYDEN CORPORATION

ELECTRIC WIRES
& CABLES PRODUCTS

DATE Sep, 16, 2015

SPEC. No.STD-061I

SPECIFICATION

FOR

CC-Link cable
(CM-110-5)

RoHS correspondence



signed by *K. Nishimura*
K. NISHIMURA

Manager
Engineering section
Engineering dept
Factory Automation & Robot Cable Division

1. SCOPE

This specification covers the cable corresponding to CC-Link Ver.1.10 (110Ω type for movement).

2. SYMBOL, SIZE

The symbol and size of the cable shall be " CM-110-5 AWG20/3C "

3. UL STANDARD

RECONGNIZED by UNDERWRITERS LABORATORIES Inc.

STYLE No.	2464 (UL 758 : AWM)
Rating TEMP.	80°C
VOLT.	300V
USE	Internal wiring or external interconnection of electronic equipment

4. FLAME TESTING

The cable shall pass the vertical wire flame test (VW-1) described in UL1581, Paragraph 1080.

5. CONSTRUCTION


The construction of the cable shall conform to Table 1.

6. CHARACTERISTICS

The characteristics of the cable shall be shown in Table 2.

7. MARKING

The following information shall be indicated with a suitable method to the cable.

" 耐屈曲・耐油 CC-Link Ver.1.10 DYDEN E91337  AWM 2464 80C 300V VW-1 伝送距離 50% "

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Table 1 Construction

I T E M		V A L U E
Symbol		CM-110-5
Size	AWG/Cores	20/3C
Conductor	Material	Annealed Copper
	Construction (No./mm)	3/40/0.08
	Dia. (approx. mm)	1.26
Insulation	Material	XLPE
	Thickness (approx. mm)	0.85
	Dia. (approx. mm)	2.96
Stranding	Center layer	3 C
Tape	Material	Polyester
Shield tape	Material	Copper polyester tape
Shield (Braid)	Material	Tinsel Wire
	Wire	0.25
Jacket	Material (color)	Heat resistant PVC (Brown, Yellow or Gray)
	Thickness (approx. mm)	0.9
Overall diameter (approx. mm)		9.6 (max 10.0)
Approx. mass (kg/km)		100

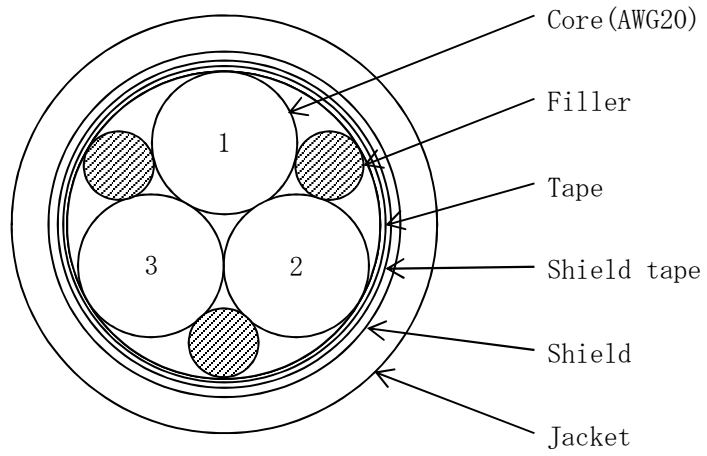
Table 2 Characteristics (at 20°C)

I T E M		S T A N D A R D V A L U E
Max. DC resistance of conductor (Ω /km)		37.8
Min. insulation resistance ($M\Omega$ -km)		10000
Dielectric strength (V/min)		AC 2000/5min, DC 500/min
Capacitance (nF/km)	* at 1KHz	60
Impedance (Ω)	* at 1MHz	110 \pm 15
	* at 5MHz	110 \pm 6
Max. Attenuation (dB/100m)	* at 1MHz	2.2
	* at 5MHz	6.4

※This cable is conform with the spec of CC-Link Ver.1.10, and designed movement type. Please take care of the wiring length depend on the attenuation.

F i g 1





C r o s s - S e c t i o n o f C a b l e



Core	Colors
1	Blue
2	White
3	Yellow

NOT TO SCALE

Revision process

Revised Date	Revised Items
1999, 8, 28	The first edition
2000, 8, 2	CC-Link → CC-Link Ver.1.10
Edition A	Change of Symbol : CMCV-SBX → CMCV110-SBX
	Addition the material of Binder tape
	Change of Cable Marking : (“耐屈曲・耐油 CC-Link DAIDEN K.K. E91337  AWM 2464 80C 300V VW-1 ” → “耐屈曲・耐油 CC-Link Ver.1.10 DAIDEN K.K. E91337  AWM 2464 80C 300V VW-1”)
	Addition of Filler
2000, 8, 7	Change of Symbol : CMCV110-SBX → CM-110
Edition B	
2003, 8, 26	Change of Symbol : CM110 → CM-110-5
Edition C	Change of Cable Marking : (“耐屈曲・耐油 CC-Link Ver.1.10 DAIDEN K.K. E91337  AWM 2464 80C 300V VW-1 ” → “耐屈曲・耐油 CC-Link Ver.1.10 DAIDEN K.K. E91337  AWM 2464 80C 300V VW-1 伝送距離 50%”)
2008, 3, 31	Change of Dielectric strength : AC 1500 → AC 2000
Edition D	Change of Cable Marking : (DAIDEN K.K. → DYDEN)
2010, 2, 4	The addition of RoHS correspondence
Edition E	
2010, 2, 22	Change of Dielectric strength : AC 2000/min → AC 2000/5min
Edition F	
2010, 5, 17	Addition of Jacket Color (Yellow)
Edition G	
2014, 10, 20	Change of Shield tape (Aluminum polyester tape → Copper polyester tape)
Edition H	
2015, 9, 16	Addition of Jacket Color (Gray)
Edition I	