

EXT-01G/2517 300V LF

Electronic equipment robot cable

- Heat resistance ★★★★★
- Oil resistance ★★★★★
- Noise resistance ★
- Flame resistance ★★★★★
- Torsion resistance ★★★★★
- Flexibility resistance ★★★★★
- Cable carrier ★★★★★

※The characteristic is an aim.

Meeting standard

| Certification | UL AWM | cUL AWM |
|---------------------|---------------|------------------|
| Applicable standard | UL 758 | CSA C22.2 No.210 |
| Official symbol | UL STYLE 2517 | CSA AWM II A/B |
| Voltage rating | 300V | 300V |
| Temperature rating | 105°C | 105°C |
| Conductor | UL 758 | CSA C22.2 No.210 |
| Flame rating | VW-1 | FT1 |



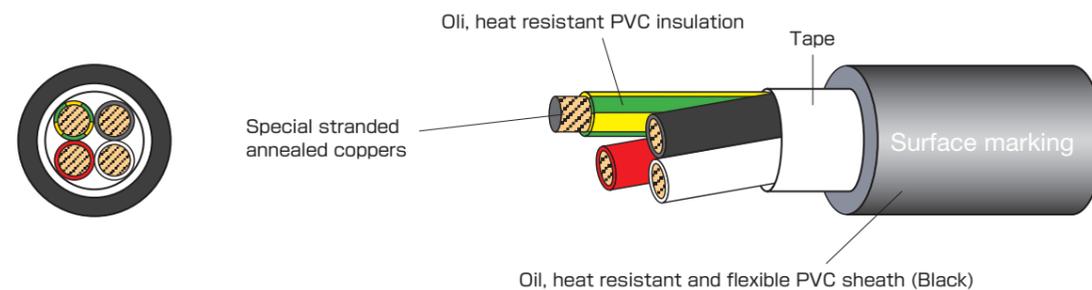
> Application

- Appropriate for drag chain wiring for high-speed moving.
- Drag chain test 20 million times or more.
- Robot cable with UL and cUL at 300V 105°C. (Category : AVL2, AVL8)

> Feature

- Extremely fine conductor use.
- Oil and heat resistant PVC used for insulation.
- Oil and heat resistant PVC used for sheath.
- Flame resisting : UL VW-1, cUL FT1.

> Construction figure

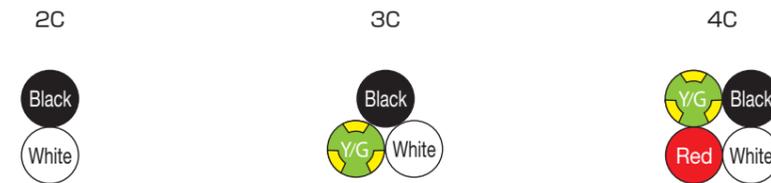


> Surface marking

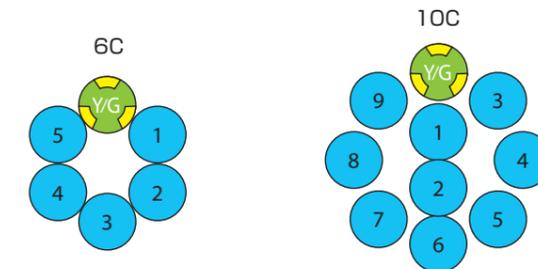


※R15 indicates "Compliant with RoHS Directive 2011/65/EU and Directive (EU) 2015/863 (10 substances)".

> Identification

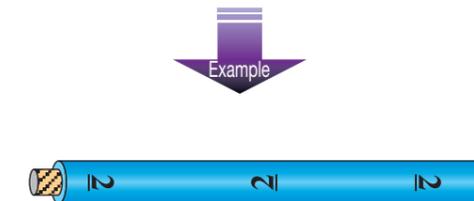


·6 cores or more is identified by numbering



Figures in ○ indicate black numbering on light blue insulator.

※Y/G indicates green core with yellow stripe (30~50%).



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> Construction table

| No. of cores | Conductor | | | Oil, heat resistant PVC insulation | | Oil, heat resistant flexible PVC sheath | | Approx. weight (lbs/1000ft) (kg/km) | Electrical Characteristics | | | Allowable ampacity (A) |
|--------------|------------|------------------------|-----------------------|------------------------------------|-----------------------|---|-------------------------------|-------------------------------------|---------------------------------|----------------------------------|-------------------------------|------------------------|
| | Size (AWG) | Construction (Line/mm) | Outside diameter (mm) | Outside diameter (inch) | Outside diameter (mm) | Overall diameter approx. (inch) | Overall diameter approx. (mm) | | Conductor resistance (Ω/km20°C) | Insulation resistance (MΩkm20°C) | Electrical strength (V/1min.) | |
| 2C | | | | | | 0.228 | 5.8 | 29(43) | | | | 10 |
| 3C | | | | | | 0.240 | 6.1 | 34(50) | | | | 10 |
| 4C | | | | | | 0.264 | 6.7 | 40(60) | | | | 8.8 |
| 6C | | | | | | 0.307 | 7.8 | 57(85) | | | | 7.3 |
| 8C | 20 | 112/0.08 | 1.07 | 0.078 | 1.97 | 0.354 | 9.0 | 74(110) | less than 34.6 | more than 10 | 2000 | 6.6 |
| 10C | (0.518mil) | (112/3.2mil) | (42mil) | | | 0.386 | 9.8 | 87(130) | | | | 6.1 |
| 12C | | | | | | 0.398 | 10.1 | 97(145) | | | | 5.6 |
| 16C | | | | | | 0.441 | 11.2 | 124(185) | | | | 5.0 |
| 20C | | | | | | 0.488 | 12.4 | 154(230) | | | | 4.6 |
| 30C | | | | | | 0.646 | 16.4 | 255(380) | | | | 4.1 |
| 2C | | | | | | 0.248 | 6.3 | 34(50) | | | | 13 |
| 3C | | | | | | 0.264 | 6.7 | 44(65) | | | | 13 |
| 4C | | | | | | 0.283 | 7.2 | 54(80) | | | | 11 |
| 6C | | | | | | 0.335 | 8.5 | 74(110) | | | | 9.6 |
| 8C | 18 | 168/0.08 | 1.31 | 0.087 | 2.21 | 0.390 | 9.9 | 97(145) | less than 21.8 | more than 10 | 2000 | 8.7 |
| 10C | (0.823mil) | (168/3.2mil) | (52mil) | | | 0.421 | 10.7 | 114(170) | | | | 7.9 |
| 12C | | | | | | 0.437 | 11.1 | 131(195) | | | | 7.3 |
| 16C | | | | | | 0.484 | 12.3 | 168(250) | | | | 6.6 |
| 20C | | | | | | 0.535 | 13.6 | 205(305) | | | | 6.1 |
| 30C | | | | | | 0.713 | 18.1 | 336(500) | | | | 5.4 |
| 2C | | | | | | 0.276 | 7.0 | 47(70) | | | | 16 |
| 3C | | | | | | 0.291 | 7.4 | 57(85) | | | | 16 |
| 4C | 16 | 266/0.08 | 1.64 | 0.100 | 2.54 | 0.315 | 8.0 | 74(110) | less than 15.5 | more than 10 | 2000 | 14 |
| 6C | (1.30mil) | (266/3.2mil) | (65mil) | | | 0.374 | 9.5 | 104(155) | | | | 12 |
| 8C | | | | | | 0.437 | 11.1 | 131(195) | | | | 10 |
| 10C | | | | | | 0.476 | 12.1 | 158(235) | | | | 9.9 |
| 2C | 14 | 420/0.08 | 2.07 | 0.117 | 2.97 | 0.307 | 7.8 | 64(95) | | | | 23 |
| 3C | (2.08mil) | (420/3.2mil) | (81mil) | | | 0.327 | 8.3 | 81(120) | | | | 23 |
| 4C | | | | | | 0.358 | 9.1 | 101(150) | 20 | | | |

※3C or more has the [Y/G] earth cable of an equal size.

※The test of 2000V/5 minute besides the withstand voltage test on above mentioned UL standard and the CSA standard is applied.

※Please contact us which sizes are available.

> Allowable ampacity

The allowable ampacity of this catalog is a value at one in the air construction and the ambient temperature 30°C.

Allowable ampacity is calculated based on JCS0168.

Allowable ampacity is calculated excluding grounding conductor.

Please multiply the following adjustment factors by the ambient temperature.

●Adjustment factors(at ambient temperature)

| Ambient temperature (°C) | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
|--------------------------|------|------|------|------|------|------|------|------|
| Adjustment factors | 1.00 | 0.93 | 0.86 | 0.77 | 0.68 | 0.58 | 0.45 | 0.26 |

> Movement characteristic

| *1 Rotary bending | Bending | U-shaped turn-back | 90° bending | Twist | | *2 Move bending | Examination's time: S= More than 20 million times A= More than 10 million times B= More than 5 million times C= More than 3 million times D= More than 1 million times E= More than 0.5 million times |
|----------------------|---------|-----------------------|----------------|----------|---------|--------------------|---|
| A | A | S | A | Straight | Bending | C | |
| | | | | A | A | | |

*1 It is C when overall diameter of the cable is 20mm or more, and D when overall diameter of the cable is 30mm or more.

*2 When overall diameter of the cable is 20mm or less.

※The longevity of the cable inside a drag chain is dependent on the travel distance. Please consult our Sales Department when wiring a travel distance of 5m or greater.

> Oil resistance

| Insulating oil | Lubricating oil | Cutting oil I | Cutting oil II | Hydraulic oil | Grease |
|----------------|-----------------|---------------|----------------|---------------|--------|
| A | A | B | B | B | B |

※A~C in the table indicate the characteristics below.

A:There is no problem on practical use at all.

B:Deterioration slightly no problem almost on practical use.

C:It is sometimes deteriorated to some degree, and not possible to use it.