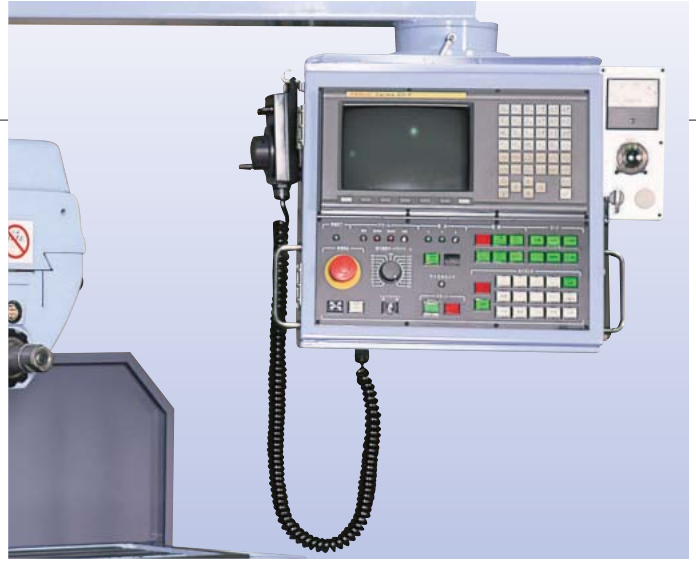


CVF-U

KURAMO Highly Extensible Spring Cable



Features

High extensibility Bending resistance Cold resistance
Abrasion resistance Oil resistance

Application

Control cable connection to industrial robot and other machine parts extending/contracting and swinging
Control cable connection to NC machine and other equipment parts extending/contracting and swinging

Electrical Characteristics

Item	Nominal Cross-Sectional Area (mm ²)	Number of Cores	Allowable Current (A)										
			2~16	2	3	4	5	6	7	8	9	10	12
Conductor Resistance (20°C) Ω/km or below	0.3	62.3	2	2	2	2	2	2	1	1	1	1	1
	0.5	37.8	3	3	3	2	2	2	2	2	2	2	2
	0.75	25.1	4	4	4	3	3	3	3	—	3	2	2
	1.25	15.1	7	7	7	5	4	4	4	—	3	3	3
	2.0	9.79	10	10	10	7	6	6	6				
Insulation Resistance (20°C) MΩ/km or above	0.3~2.0	5											
Test Voltage V · min	0.3, 0.5	AC 1000V											
	0.75~2.0	AC 3000V											

● Allowable Current (A) for the cable is based on calculation under aerial one-cable installation at ambient temperature of 30°C, not representing a guaranteed value. Allowable current for the cable at ambient temperature above 30°C is to be determined by multiplying the current value by the appropriate current reduction factor specified in the following table for the ambient temperature.

Current Reduction Factor Table

Ambient Temperature (°C)	30	35	40	45	50	55
Current Reduction Factor	1.00	0.91	0.82	0.71	0.58	0.41

Cable Construction

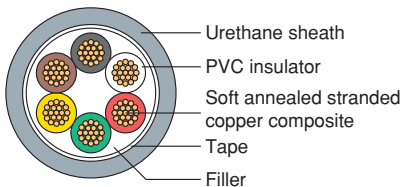
Item	Configuration
Conductor	Soft annealed stranded copper composite
Insulator	PVC
Conductor stranding	Circular
Core tape wrapping	Tape wrap around cores
Sheath	Lubricant containing urethane resin (black)

Core Identification

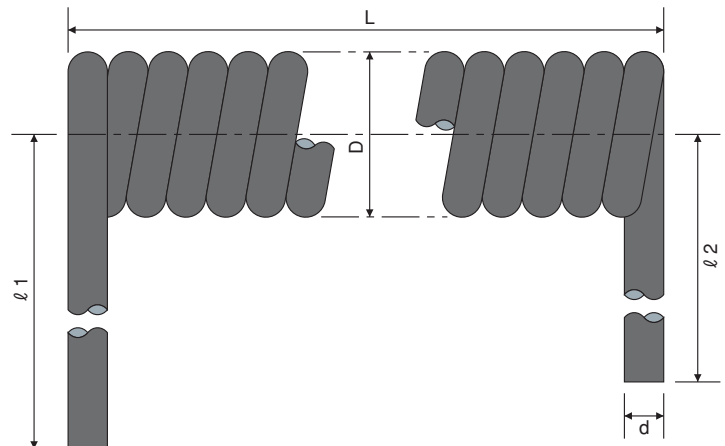
Number of Cores	Core Identification
12 or less	Identification by color (in order of black, white, red, green, yellow, brown, blue, gray, orange, purple, pink and light green)
13 or more	Identification by color + white straight line in order of black, white, red, green, yellow, brown, blue, gray, orange, purple, pink, black/white, red/white, green/white, yellow/white and brown/white

● “Black/white” indicates “white straight line marked on black insulator surface”.

Example : 6 core cable



- Cable outside diameter (d) As specified in [Cable Description Table]
- Spring outside diameter (D) As given in [Cable Description Table] (as standard specifications representing approx. 3.7 times the corresponding cable outside diameter). If you need any other optional specifications, contact us for consultation.
- Spring length (L) As given in [Cable Description Table] (as standard specifications — 30, 50, 100, 150 and 200cm). If you need any other optional specifications, specify your requirement in the range of 10 to 300cm.
- End length (ℓ1 · ℓ2) The standard specifications for end length ℓ1/ℓ2 are 30cm. If you need any other optional specifications, contact us for consultation.
- Spring extensibility The spring of the cable is designed so that it is extensible up to three (3) times the length of the spring when its outside diameter is specified as standard.



Cable Description Table

Nominal Cross-Sectional Area (mm ²) Conductor Count/Diameter	Number of Cores	Cable Outside Diameter d (mm)	Spring Specifications		Standing Inventory				
			Spring Outside Diameter D (mm)	Approx. Weight per 1m of Spring (g)	Spring Length (Lcm)				
					30	50	100	150	200
0.3 (3/20/0.08)	2	4.9	18	180	○	○	○		○
	3	5.1	19	240	○	○	○		○
	4	5.5	20	290	○	○	○		○
	6	6.6	25	410	○	○	○		○
	8	7.7	29	550	○	○	○		○
	10	9.1	34	720	○	○	○		○
	12	8.5	32	740	○	○	○		
	16	9.6	36	970	○	○	○		
0.5 (3/15/0.12)	2	5.9	22	290	○	○	○		○
	3	6.2	23	360	○	○	○		○
	4	6.9	26	460	○	○	○		○
	6	8.3	31	650	○	○	○		○
	8	9.7	36	880	○	○	○		○
	10	11.7	43	1180	○	○	○		○
	12	11.0	41	1220			○		○
	16	12.5	46	1590			○		
0.75 (3/22/0.12)	2	7.3	27	460	○	○	○		○
	3	7.9	29	590	○	○	○		○
	4	8.6	32	820	○	○	○		○
	6	10.5	39	1080	○	○	○		
	8	13.3	49	1660			○		
	10	14.5	54	1950		○	○		
	12	14.9	55	2200					
	16	16.5	61	2720			○		
1.25 (7/16/0.12)	2	8.1	30	600	○	○	○		○
	3	8.5	32	750	○	○	○		○
	4	9.5	35	970	○	○	○		○
	6	11.6	43	1460	○	○	○		
	8	14.6	54	2160		○			
	10	15.9	59	2520		○	○		
2.0 (7/25/0.12)	2	9.1	34	810	○	○	○		○
	3	9.6	36	1020	○	○	○		○
	4	10.7	40	1310	○	○	○		○

⚠ CVF-U cable, which is exempt from the application of the Electrical Appliance and Material Safety Law, can be used for cable connection to signal and communication circuits and other weak current electrical circuits in Japan.

- in the [Standing Inventory] column of the above table indicates that the relevant cable is kept in standing inventory.
- CVF-U cable designed to other specifications than as specified in the above table in terms of “number of cores” and “size” are available. If you need CVF-U spring cable designed to your application requirements, contact us for consultation.