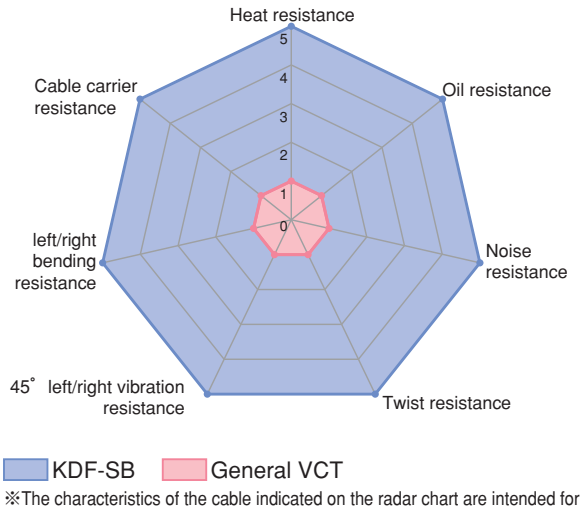
KDF-SB

KURAMO Durable Robot Cable

UL AWM 2103/2517

Characteristics Radar Chart



※The characteristics of the cable indicated on the radar chart are intended for use as a general guide for selecting the cable meeting your requirements.

Features

- Noise resistance
- Fluorocarbon resin insulation/Bending resistance
- Heat resistance
- Mat sheath
- Cable designed to UL, cUL standards

Application

- Cable carrier wiring
- Cable connection to robot arm swinging part
- Wiring of the portion requiring noise resistance

Certification

cULus

Electrical Characteristics

Item	Nominal Cross-Sectional Area (mm²) (AWG)	Number of Pairs	Allowable Current (A)														
		1～30P	1P	2P	3P	4P	5P	6P	7P	8P	9P	10P	12P	15P	20P	25P	30P
Conductor Resistance (20℃) Ω/km or below	0.2 (25)	105	6	5	4	4	4	4	4	3	3	3	3	3	2	2	2
	0.3 (23)	71.5	8	7	6	5	5	5	5	4	4	4	4	4	3	3	3
	0.5 (21)	43.4	11	9	8	7	7	7	7	6	6	6	6	5	5	4	4
Insulation Resistance (20℃) MΩ·km or above	0.2 (25) ～ 0.5 (21)	1500															
Test Voltage V・min		AC 2000V															

●Allowable Current (A) for the cable is based on calculation under aerial one-cable installation at ambient temperature of 30℃, not representing a guaranteed value. Allowable current for the cable at ambient temperature above 30℃ 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 (℃)	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100
Current Reduction Factor	1.00	0.97	0.93	0.89	0.86	0.82	0.77	0.73	0.68	0.63	0.58	0.52	0.45	0.36	0.26

Technical Data

	UL・cUL	
Size	2pairs or less×0.2-0.5㎟	3pairs or more×0.2-0.5㎟
Voltage Rating	300V	
Temperature Rating	105℃	
Test Voltage	AC2000V・1min	
Flame Resistance	FT2	VW-1, FT1
Applicable Standard	UL AWM Style 2103 CAN/CSA-C22.2 No210.2	UL AWM Style 2517 CAN/CSA-C22.2 No210.2

⚠The KDF-SB cable, when applied in compliance with the standards in Japan, can be used for cable connection to signal and communication circuits and other weak current electrical circuits.

Cable Outside Diameter/Weight

Nominal cross-sectional area(㎟)〈AWG〉 Conductor count/wire diameter	Number of Pairs														
	1P	2P	3P	4P	5P	6P	7P	8P	9P	10P	12P	15P	20P	25P	30P
0.2 (40/0.08) ＜25＞	4.0 25	6.2 49	6.7 60	6.9 65	7.7 80	8.2 90	8.5 100	9.3 115	※ 9.9 130	11.0 140	12.0 170	11.5 180	12.5 220	※14.5 285	※18.0 390
0.3 (3/20/0.08) ＜23＞	4.6 32	7.3 65	7.8 80	8.6 95	9.2 110	10.0 125	10.5 140	11.5 160	※12.0 175	13.0 205	15.0 265	14.5 270	16.0 345	※18.0 420	※22.5 570
0.5 (3/33/0.08) ＜21＞	5.4 42	8.4 87	9.4 110	10.5 140	11.5 170	12.5 190	13.0 210	14.0 245	※15.0 270	16.5 325	18.0 390	17.5 410	20.0 510	※21.5 610	※28.5 780

⚠KDF-SB 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.

●If any conventional products of this series are in stock, there may be a period required for transition to their UL/cUL compliant counterparts.

Upper: Standard cable outside diameter (Approx.㎜)
Lower: Approximate weight (kg/km)
※ indicates specifications for custom order production.

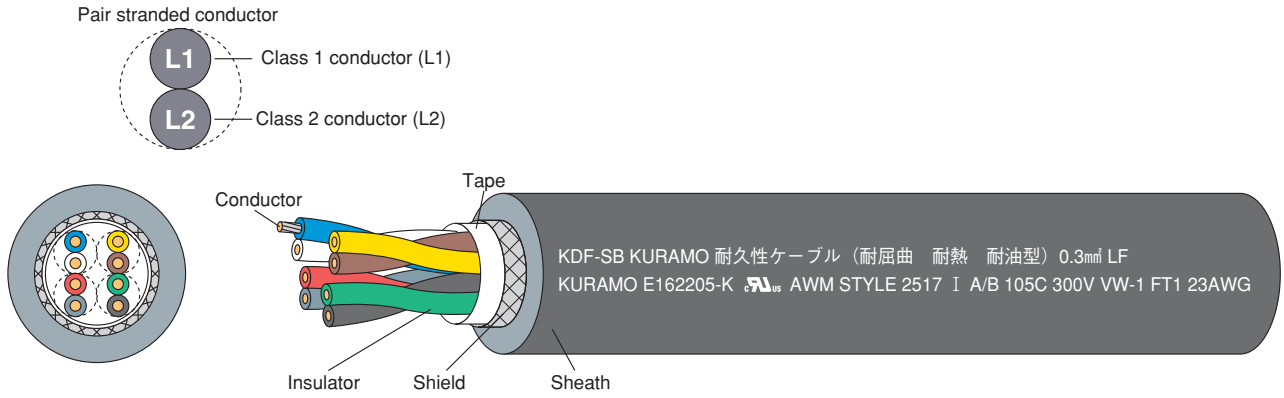
Cable Construction (applicable to 1-25P)

Item	0.2㎟	0.3㎟	0.5㎟
Conductor	Tin-plated soft annealed stranded copper	Tin-plated soft annealed stranded copper composite	
Insulator	Fluorocarbon resin (ETFE)		
Conductor stranding	Twisted pair		
Pair stranding	Circular		
Core wrapping tape	Tape wrap around cores		
Shield	Tin-plated soft annealed copper braid		
Sheath	Heat resistant PVC (black)		

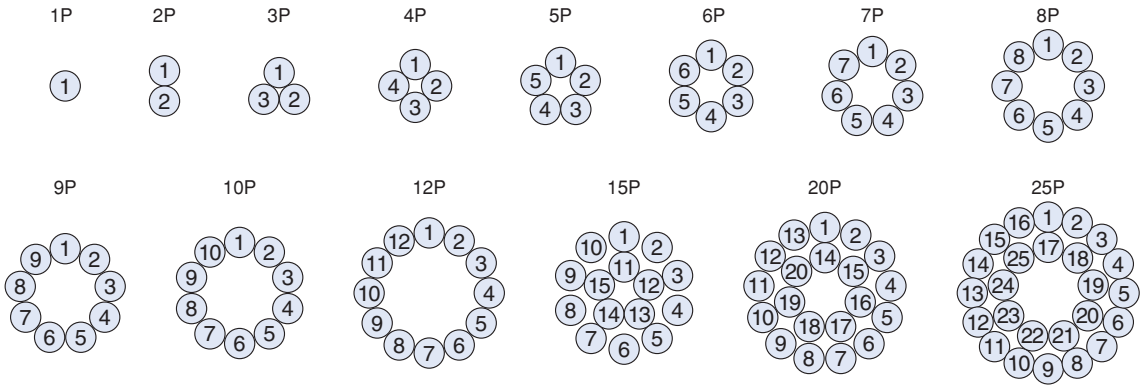
Core Identification (applicable to 1-25P)

Pair No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Class 1 Conductor (L1)	Blue	Yellow	Green	Red	Purple	Blue	Yellow	Green	Red	Purple	Blue	Yellow	Green
Class 2 Conductor (L2)	White	Brown	Black	Gray	Orange	Brown	Black	Gray	Orange	White	Black	Gray	Orange
対 番 号	14	15	16	17	18	19	20	21	22	23	24	25	
Class 1 Conductor (L1)	Red	Purple	Blue	Yellow	Green	Red	Purple	Blue	Yellow	Green	Red	Purple	
Class 2 Conductor (L2)	White	Brown	Gray	Orange	White	Brown	Black	Orange	White	Brown	Black	Gray	

■Example: 8 cores (4pair) 0.3㎟ cable



Conductor Layout (applicable to 1-25P)



Cable Construction (applicable to 30P)

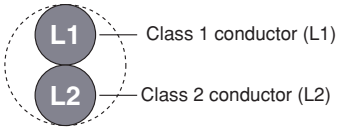
Item	0.2㎟	0.3㎟	0.5㎟
Conductor	Tin-plated soft annealed stranded copper	Tin-plated soft annealed stranded copper composite	
Insulator	Fluorocarbon resin (ETFE)		
Conductor stranding	Twisted pair		
Pair stranding	Circular (5P) into unit		
Unit stranding	Circular (6 units)		
Core wrapping tape	Tape wrap around cores		
Shield	Tin-plated soft annealed copper braid		
Sheath	Heat resistant PVC (black)		

Core Identification (applicable to 30P)

5P identification

Pair No.	1	2	3	4	5
Class 1 Conductor (L1)	Blue	Yellow	Green	Red	Purple
Class 2 Conductor (L2)	White	Brown	Black	Gray	Orange

Pair stranded conductor



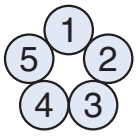
Unit identification

Unit No.	1	2	3	4	5	6
Tape Color	Blue	Yellow	Green	Red	Purple	White

Conductor Layout (applicable to 30P)

5P layout

Pair No.	1	2	3	4	5
Class 1 Conductor (L1)	Blue	Yellow	Green	Red	Purple
Class 2 Conductor (L2)	White	Brown	Black	Gray	Orange



ユニット配列

Unit No.	1	2	3	4	5	6
Tape Color	Blue	Yellow	Green	Red	Purple	White