

China compulsory certification mark (product conforming to safety standards)



三ツ星 Cable for China compulsory certification (CCC certification)



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What is CCC ...

Abbreviation for Chinese compulsory certification system (CCC)

This is a compulsory certification system for products established to protect consumers and ensure safety. Electric wires and cables are designated as compulsory certified items under this system, and have a CCC certification mark and

Products without CCC certification are prohibited from shipping, importing and selling in China.

China compulsory certification mark (product conforming to safety standards)



Our CCC-certified cables display the CE mark because they have been certified by the Chinese National Standard (GB), which is harmonized with the IEC standard, and have been certified as compliant with the EC Directive, in addition to the CCC certification mark.



CE mark



Products distributed in the European Union (EU) region that comply with the requirements of the EC Directive (EC Directive), including basic safety and health issues, must be labeled with this mark..

Mitsuboshi's China Compulsory Certification (CCC) compliant cables

U_0 = Voltage between conductor and ground

U = Voltage between each conductor (each phase)

Division		Rated voltage (U_0/U)	Name		Japanese equivalent
			CCC	IEC	
Rubber	flexible cable	450/750V	602451EC66(YCW)	602451EC66	2PNCT
vinyl chloride	Insulated wire	300/500V	602271EC06(RV)	602271EC06	VSF
		450/750V	602271EC02(RV)	602271EC02	KIV
	Flexible cable	300/500V	602271EC75(RVVY)	602271EC75	VCTF



60245IEC66(YCW)

Heavy chloroprene rubber sheath flexible cable

Features

1. This is a rubber-based CCC certified cable.
(Japan: 2PNCT equivalent)

2. It is ideal for use where flexibility and pliability are needed.

3. Ethylene propylene rubber, which has heat resistance, is used for the insulator, and chloroprene rubber, which has oil resistance, weather resistance, and flame resistance, is used for the sheath.

Compliant standard	GB5013. 4	IEC60245. 4
Name	60245IEC66(YCW)	60245IEC66
Rated Voltage	450/750V (U ₀ /U)	
Rated temperature	60°C	

Application

As a rubber flexible cable, it can be used mainly for industrial equipment used for power and control.

Note) This cable is not suitable for applications where it is repeatedly bent or twisted in a same place.

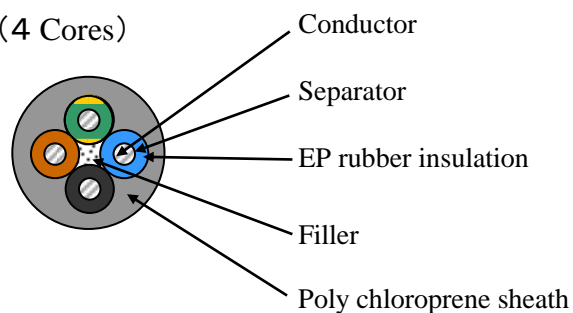
Dimension

Nominal cross section mm ²	Conductor mm		Core mm		Finishing outer diameter mm(approximately)				
	Construction Number of strands/ diameter	Outer Diameter (approximately)	Insulator thickness	Outer Diameter (approximately)	1 Core	2 Cores	3 Cores	4 Cores	5 Cores
1	TA 40/0.18	1.3	0.8	3.1	—	9.0	9.7	10.7	11.8
1.5	TA 60/0.18	1.6	0.8	3.4	6.4	10.0	10.7	11.8	13.0
2.5	TA 100/0.18	2.1	0.9	4.1	7.1	11.8	12.6	13.9	15.3
4	TA 76/0.26	2.6	1.0	4.8	8.0	13.4	14.3	15.8	17.6
6	TA 114/0.26	3.3	1.0	5.5	8.9	15.2	16.3	18.1	20.1
10	TA 124/0.32	4.2	1.2	6.8	10.6	20.1	21.6	23.5	25.9
16	TA 7/29/0.32	5.8	1.2	8.5	12.5	23.9	25.6	28.0	31.2
25	TA 7/44/0.32	7.1	1.4	10.2	14.4	27.9	30.0	33.2	36.7
35	TA 7/62/0.32	8.5	1.4	11.6	16.2	—	33.6	37.2	—
50	TA 19/33/0.32	10.3	1.6	13.9	18.9	—	39.4	43.6	—
70	TA 19/24/0.45	12.3	1.6	15.9	21.3	—	44.3	49.3	—
95	TA 19/32/0.45	14.3	1.8	18.3	24.1	—	50.5	56.6	—
120	TA 19/40/0.45	15.9	1.8	19.9	26.2	—	—	60.6	—
150	TA 19/50/0.45	17.8	2.0	22.3	29.0	—	—	67.4	—
185	TA 19/61/0.45	19.7	2.2	24.7	31.8	—	—	—	—
240	TA 37/41/0.45	22.6	2.4	28.0	35.3	—	—	—	—
300	TA 37/51/0.45	25.2	2.6	31.0	38.5	—	—	—	—

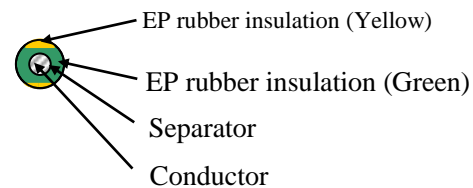
※ The above products need to order.

Construction

Cross section (4 Cores)



G (Green)/Y (Yellow) wire



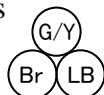
1 core



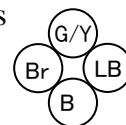
2 cores



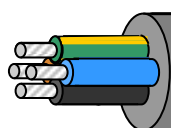
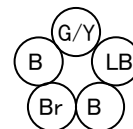
3 cores



4 cores



5 cores



CCC A043285 MITSUBOSHI CO., LTD. 60245IEC66(YCW) 4 × ○○sq
450/750V GB/T5013.4-2008 (E) JAPAN

Mass table

Nominal cross section mm ²	Approximate mass kg/km				
	1 Core	2 Cores	3 Cores	4 Cores	5 Cores
1	—	110	140	170	205
1.5	60	140	180	215	260
2.5	80	200	255	310	375
4	105	270	345	425	515
6	135	355	460	570	695
10	200	610	790	950	1150
16	300	900	1170	1430	1750
25	420	1270	1660	2060	2500
35	555	—	2160	2690	—
50	755	—	2960	3690	—
70	1020	—	3920	4940	—
95	1330	—	5140	6530	—
120	1620	—	—	7780	—
150	2010	—	—	9660	—
185	2430	—	—	—	—
240	3110	—	—	—	—
300	3790	—	—	—	—

※The above products need to order.



60245IEC 82 (YHF)

Synthetic rubber arc welding electrode cable

Features

1. A welding electrode cable that is flexible and has good workability.
2. Due to the chlorinated polyethylene rubber (synthetic rubber) coating,

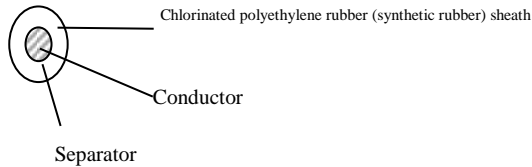
Compliant standard	GB5013. 6	IEC60245. 6
Name	60245IEC 82(Y HF)	60245IEC 82
Rated Voltage	450/750V (U _o /U)	
Rated temperature	105°C	

Application

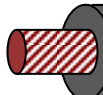
It can be used on the secondary side of an arc welder.

Construction

Cross section



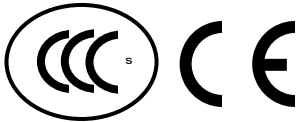
60245IEC82 (YHF)



CCC A043285 MITSUBOSHI CO., LTD. 60245IEC82(YHF) OOSQ
GB/T5013.6-2008 CE JAPAN

Dimension

Nominal cross section	Conductor	Conductor outer diameter	Separator thickness	Sheath thickness	Finishing outer diameter	Average finishing outer diameter		Maximum conductor resistance (20°C) No plating
						Minimum mm	Maximum mm	
mm ²		mm	mm	mm	mm			Ω/km
16	7/114/0.16mm	5.7	0.05	2.2	10.2	8.8	11.0	1.16
25	7/7/26/0.16mm	7.2	0.1	2.2	11.8	10.1	12.7	0.758
35	7/7/36/0.16mm	8.5	0.1	2.2	13.1	11.4	14.2	0.536
50	7/7/51/0.16mm	10.1	0.1	2.4	15.1	13.2	16.5	0.379
70	7/7/72/0.16mm	12.0	0.1	2.6	17.4	15.3	19.2	0.268
95	12/7/57/0.16mm	13.9	0.1	2.85	19.8	17.1	21.4	0.198



60227IEC06(RV)

Flexible conductor for internal wiring of equipment Cable without single-core sheath

Feature

1. It is a vinyl chloride type CCC certified cable.
(In Japan: VSF equivalent product)
2. It is flexible, has good workability, and is most suitable for wiring inside equipment.

Compliant standard 22	GB5023. 3	IEC60227. 3
Name	60227IEC06(RV)	60227IEC06
Rated Voltage	300/500V (U _o /U)	
Rated temperature	70°C	

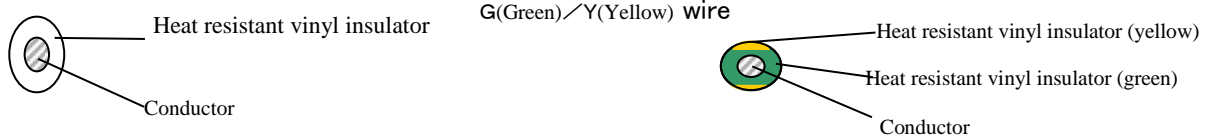
It uses lead-free vinyl chloride, which has heat resistance, weather resistance, and flame resistance as the insulator.

Application

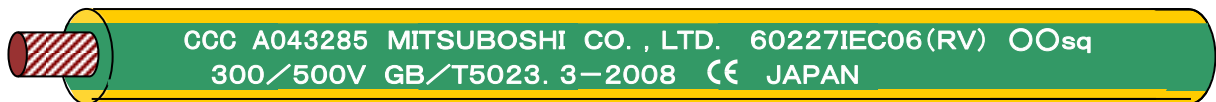
Used as a vinyl chloride insulated wire for wiring inside devices.

Construction

Cross section



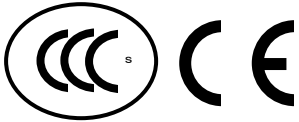
Standard color of insulator : Black, White, Red, Brown, Blue, Light blue, Gray, Orange, green/Yellow



Dimension table/Mass table

Nominal cross section mm ²	Conductor		Insulator thickness mm	Finishing outer diameter mm	Approximate mass Kg/km
	Construction Number of strands/ diameter mm	Outer diameter mm			
0.5	A 20/0.18	0.9	0.6	2.3	10
0.75	A 30/0.18	1.1	0.6	2.4	12
1	A 40/0.18	1.3	0.6	2.6	15

※The above products need to order.



60227IEC02(RV)

General-purpose flexible conductor cable without single-core sheath

Features

1. This is a vinyl chloride type CCC certified cable
(Japan: KIV equivalent)
2. It is flexible, has good workability, is most suitable for general wiring and uses lead-free vinyl chloride, which has heat resistance, weather, resistance and flame resistance as the insulator.

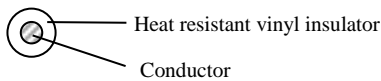
Compliant standard 22	GB5023. 3	IEC60227. 3
Name	60227IEC02 (RV)	60227IEC02
Rated Voltage	450/750V (U ₀ /U)	
Rated temperature	70°C	

Application

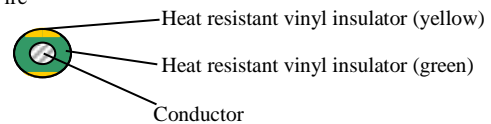
It can be used for general wiring as a vinyl chloride insulated wire.

Construction

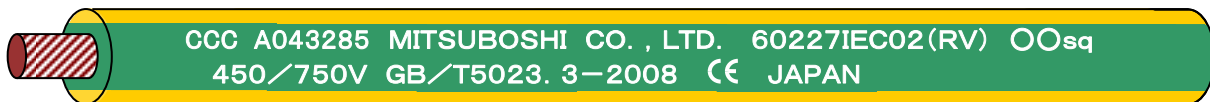
Cross section



G(Green)/Y(Yellow) Wire



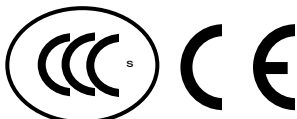
Standard color of insulator : Black, White, Red, Brown, Blue, Light blue, Gray, Orange, green/Yellow



Dimension table/Mass table

Nominal cross section mm ²	Conductor		Insulator thickness mm	Finishing outer diameter mm	Approximate mass Kg/km
	Construction Number of strands/ diameter mm	Outer diameter mm			
1.5	A 60/0.18	1.6	0.7	3.1	22
2.5	A 100/0.18	2.1	0.8	3.8	34
4	A 76/0.26	2.6	0.8	4.3	50
6	A 114/0.26	3.3	0.8	5.0	70
10	A 124/0.32	4.2	1.0	6.4	120
16	A 7/29/0.32	5.8	1.0	8.0	190
25	A 7/44/0.32	7.1	1.2	9.7	280
35	A 7/62/0.32	8.5	1.2	11.1	385
50	A 19/33/0.32	10.3	1.4	13.3	540
70	A 19/24/0.45	12.3	1.4	15.3	755
95	A 19/32/0.45	14.3	1.6	17.8	1010
120	A 19/40/0.45	15.9	1.6	19.4	1240
150	A 19/50/0.45	17.8	1.8	21.7	1550
185	A 19/61/0.45	19.7	2.0	24.1	1900
240	A 37/41/0.45	22.6	2.2	27.4	2500

※ The above products need to order.



60227IEC75 (RVVY)

Oil resistant vinyl sheath flexible cable for control

特長

1. It is a vinyl chloride type CCC certified cable.
(Japan: VCTF equivalent)

2. Ideal for places that need flexibility and flexibility.

3. The insulator is made of lead-free vinyl chloride, which has heat resistance, and the sheath is made of lead-free vinyl chloride, which has oil resistance, heat resistance, and flame resistance.

Compliant standard 22	GB5023. 7	IEC60227. 7
Name	60227IEC75 (RVVY)	60227IEC75
Rated Voltage	300/500V (U ₀ /U)	
Rated temperature	70°C	

Application

As a flexible vinyl chloride cable, it can be used mainly for power lines and signal lines for internal wiring between industrial equipment and electronic equipment.

Note) This cable is not suitable for applications where it is repeatedly bent or twisted in a same place.

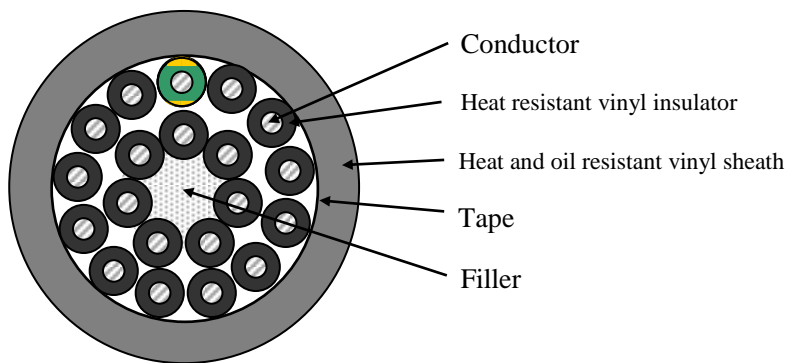
Dimension

Nominal cross section	Conductor	Core mm		Finishing outer diameter mm (approximately)													
	mm	Outer diameter	Insulator thickness	Outer diameter	2 Cores	3 Cores	4 Cores	5 Cores	6 Cores	8 Cores	10 Cores	12 Cores	16 Cores	18 Cores	20 Cores	24 Cores	30 Cores
0.5	A 20/0.18	0.9	0.6	2.2	6.2	6.5	7.3	7.9	8.8	10.3	11.9	11.7	13.1	13.8	14.7	16.2	17.3
0.75	A 30/0.18	1.1	0.6	2.4	6.8	7.2	7.8	8.7	9.4	11.1	13.0	12.6	14.1	15.0	15.7	17.7	18.9
1	A 40/0.18	1.3	0.6	2.6	7.2	7.6	8.3	9.2	10.2	12.0	13.8	13.6	15.2	16.0	17.0	18.9	20.4
1.5	A 60/0.18	1.6	0.7	3.1	8.2	8.9	9.7	10.8	11.9	14.0	16.3	15.9	18.1	19.0	20.1	22.3	24.0
2.5	A 100/0.18	2.1	0.8	3.8	9.8	10.6	11.8	12.9	14.2	16.9	19.8	19.3	21.8	23.1	24.5	27.1	29.2

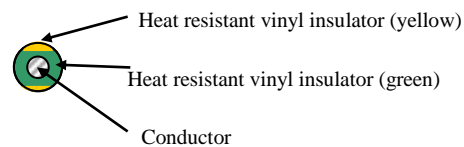
※The above products need to order.

Construction

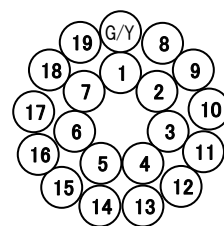
Cross section (20 cores)



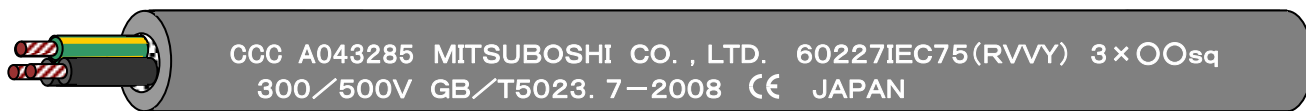
G (Green)/Y (Yellow) wire



Wire core identification (numbering method), numbered from the inner wire core.



Surface display example (3 cores)



Mass table

Nominal cross section mm ²	Approximate mass kg/km												
	2 cores	3 cores	4 cores	5 cores	6 cores	8 cores	10 cores	12 cores	16 cores	18 cores	20 cores	24 cores	30 cores
0.5	42	51	65	77	95	125	160	170	220	245	275	330	385
0.75	52	64	79	99	115	160	205	210	275	310	340	420	495
1	61	76	94	120	140	190	240	260	335	370	415	500	605
1.5	82	105	135	165	200	265	340	360	480	535	595	715	865
2.5	125	160	205	245	295	405	520	555	730	820	920	1105	1335

※The above products need to order.

Allowable current

(Note) The following permissible current (A) is for when one strip is used as normal wiring at an ambient temperature of 30°C or less.

It may be necessary to multiply the reduction coefficient and current reduction rate on the next page depending on the installation conditions.

This permissible current (A) is calculated based on JCS0168-1 of Japan Cable Manufacturers Association, and is a reference value only, not a guaranteed value.

60245IEC66 (YCW)

Nominal cross section mm ²	Allowable current (A)				
	1 core	2 cores	3 cores	4 cores	5 cores
1	—	14	12	11	10
1.5	22	18	15	14	13
2.5	29	25	21	19	18
4	39	33	28	26	24
6	51	42	36	33	31
10	71	59	51	46	43
16	97	79	68	62	57
25	125	100	89	80	75
35	155	—	105	98	—
50	200	—	135	120	—
70	245	—	165	150	—
95	295	—	200	180	—
120	340	—	—	210	—
150	390	—	—	245	—
185	440	—	—	—	—
240	520	—	—	—	—
300	590	—	—	—	—

Rated temperature 60°C

60227IEC06 (RV)

Nominal cross section mm ²	Allowable current (A)
0.5	10
0.75	12
1	15

Rated temperature 70°C

60227IEC02 (RV)

Nominal cross section mm ²	Allowable current (A)
1.5	20
2.5	28
4	38
6	50
10	73
16	100
25	135
35	170
50	220
70	280
95	335
120	390
150	450
185	510
240	605

Rated temperature 70°C

60227IEC75 (RVVY)

Nominal cross section mm ²	Allowable current (A)												
	2 cores	3 cores	4 cores	5 cores	6 cores	8 cores	10 cores	12 cores	16 cores	18 cores	20 cores	24 cores	30 cores
0.5	10	8	8	7	7	6	6	5	5	5	5	4	4
0.75	13	11	10	9	9	8	8	7	6	6	6	6	5
1	15	13	12	11	11	10	9	8	8	7	7	7	6
1.5	20	17	15	14	14	13	12	11	10	10	9	9	8
2.5	27	23	21	20	19	17	16	15	14	13	13	12	11

Rated temperature 70°C

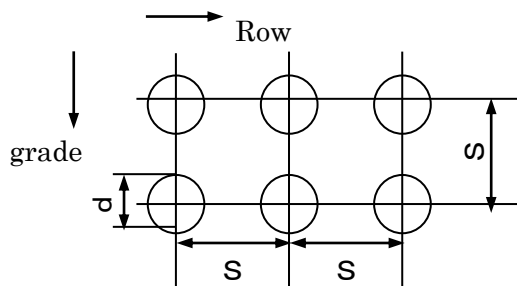
Nominal cross-sectional mm^2	Use rate(%)		
	100	80	50
16	143	159	202
25	189	211	267
35	236	263	333
50	296	330	418
70	370	413	523
95	449	501	634

Rate temperature 105°C

Allowable current reduction coefficient

Ambient temperature	60245IEC66 (YCW) Rated temperature (60°C)	60227IEC06 (RV) 60227IEC02 (RV) 60227IEC75 (RVVY) Rated temperature (70°C)	60245IEC82 (YHF) Rated temperature (105°C)
30°C	1	1	1
35°C	0.91	0.94	0.97
40°C	0.82	0.87	0.93
45°C	0.71	0.79	0.89
50°C	0.58	0.71	0.86
55°C	0.41	0.61	0.82
60°C	0	0.50	0.77
65°C	—	0.35	0.73
70°C	—	0	0.68
Calculation formula of temperature correction coefficient	$\sqrt{\frac{60-\theta}{30}}$	$\sqrt{\frac{70-\theta}{40}}$	$\sqrt{\frac{105-\theta}{75}}$

Current reduction rate depending on the wire layout (in the air, when laying multiple threads)



d : outer diameter of Cable

S : interval of Cable

center interval	Row	1					2						
	Grade	1	2	3	6	7~20	2	3	4	5	6	7	8~20
S= d	1.00	0.85	0.80	0.70	0.70	0.70	0.70	0.60	0.60	0.56	0.53	0.51	0.50
S=2 d		0.95	0.95	0.90	0.80	0.90	0.90	0.85	0.73	0.72	0.71	0.70	
S=3 d		1.00	1.00	0.95	—	0.95	0.95	0.90	—	—	—	—	—

Center interval	Row	3										
	Grade	3	4	5	6	7	8	9~10	11~12	13~15	16~19	20
S= d		0.48	0.41	0.37	0.34	0.32	0.31	0.30	0.30	0.30	0.30	0.30
S=2 d		0.80	0.80	0.68	0.66	0.65	0.65	0.64	0.63	0.62	0.61	0.60
S=3 d		0.85	0.85	—	—	—	—	—	—	—	—	—

China Compulsory Certification Mark
(Safety Standard Applied Products)



Locations

If you have any questions or requests,
please contact us。



MITSUBOSHI CO., LTD Electric wire

Osaka Branch	TEL 06-6261-8884	FAX 06-6261-5550
Tokyo Branch	TEL 03-6897-8660	FAX 03-6897-8665
Kyushu Sales Office	TEL 092-526-2615	FAX 092-526-2781
Nagoya Sales Office	TEL 052-760-4636	FAX 052-760-4637
Shiga Factory	TEL 0748-86-6104	FAX 0748-86-2103

URL : <http://www.kk-mitsuboshi.co.jp/>

Email: kaigai@kk-mitsuboshi.co.jp