KWANGIL Electric Wire & Cable

FA

KWANGIL®

주식회사 광일전선

FACTORY AUTOMATION CABLE

KIFLEX RVV

KIFLEX RIREV

KIFLEX RIREU

KIFLEX RFHV

KIFLEX RFHU

KICC - 110SB

KITRONIC DNET

KITRONIC PB

주식회사 광일전선

Best Solution For Industrial Automation Cable

This Catalog of KWANIL Products
is a uniquely distinctive publication. It presents
the fulfillment of KWANGIL's commitment to
Provide the most through lineup of wire and cable
solutions for industrial automation.

This Extraordinary publication, however, is much more than a
listing of products. It is also the industry's premier source of
information regarding wire and cable products.
To designers and specifiers, it is an essential tool in
solving a wide range of problems.

KWANGIL has the wide range of product offerings in the market, devoted to :

- Industrial instrumentation and control
- Computer networking and computer networking
- Eletrical equipment; including motors, lighting, test apparatus, heating and cooling

Every one of these products, including a broad assortment of new items, is the result of foresight andleadership, and a proactive response to both emerging technologies and the changilng needs of our customers.

Thesuccess of KWANGLI's efforts is evidenced by our receiving ISO 9001 and 14001 registration. ISO accreditation is a confirmation of KWANGIL's pledge to total quality and to continual improvement through our company's quality processes.

This edition of the KWANGIL's Catalog is an unparalleled source of wire and cable solutions. It is the standard by which an entire industry is judged.

We believe you'll also find it's the answer to all of your wire and cable information needs.

WE CREATE THE VALUE

Since the humble beginning in 1984, KWANGIL has been providing the wire and cable products to such industries as: transportation, telecommunications, and medical industries as well as the distributors, the government, and the military to become one of the most successful manufacturers of wire and cable products in Korea.

With more than 30 years of industry experience, KWANGIL has aggressively invested in R&D, manufacturing facilities and testing equipment to bring to our customers the highest quality, the most competitive pricing, and utmost service.

As a partner of SIEMENS, ABB, FANUC, Samsung, Hyundai etc., KWANGIL offers our customers the highest quality products. Additionally, by focusing on R&D, KWANGIL has successfully obtained ISO 9001:2000, ISO 14000: 2000 as well as international quality certifications including UL, CSA, CE, TUV, CC-link, etc.

It is our promise that KWANIGL's management and sales team make it the highest priority to meet and exceed our customers' utmost satisfaction and contribute all resources to improving quality, pricing and service.

QUALITY IS OUR HIGHEST PRIORITY

Unlike some programs that are, at best, short term, KWANGIL regards its commitment to reliability as a perpetual process. This has encompassed a total restructuring of the company toward achieving a quality, problem-free product.

KWANGIL's accent on reliability extends to the manufacturing process. Similar products are produced in one area of the manufacturing plant in a configuration. One operator can monitor and operate several machines, as well as assemble and test products. This improves operating efficiency and product quality while reducing the amount of work-in-process and finished product inventories.

The Most Reliable Wire & Cable

ISO Certified

KWANGIL has high quality and environment standards, which is why the company introduced an integrated management system for creating quality products within environmentally-friendly guidelines based on the principles of the DIN EN ISO 9001:2008 and DIN EN ISO 14001:2009 standards.

Qualified Employees

Trained employees that cooperatively work in teams and combine a high level of self-responsibility and independence with a marked awareness for quality and the environment ensure the success of the management system at KWANGIL.

Continuous Improvement

We continuously develop and implement enhancements for products, processes, environmental protection procedures, and occupational safety requirements currently in place.

Why Choose KWANGIL?

Commitment to Quality

Partnering with world's top cable manufacturers, KWANGIL has continuously developed the latest technology to be a true market leader.

Competitive Prices

With a strong financial backing, KWANGIL buys raw materials in large quantity for discounted prices, enabling us to pass on the savings to our customers. Also, having a factory in Korea enables us to provide more competitive prices than others.

Short Production Lead Time

KWANGIL's factory runs 24/7 regardless of holidays. Our regular orders are usually ready within two weeks. For urgent orders, we can draw the schedule to be ready in a week.

Excellent R&D

Over the last 30 years KWANGIL has specialized in Custom cables with small volume and complex constructions. Such special experience made KWANGIL able to fulfill the diverse needs of our customers

Fast Decision Making

As a family owned business, KWANGIL makes aggressive and fast decision with simple communication channels.

Project Reference

CONSTRUCTION

VIETNAM Hanoi Center
Korea Expressway Corporation
KOREA Subway Corporation
HYUNDAI Construction
DAELIN Construction
LOTTE Construction
SK Construction
GS Construction
LH Construction
INCHEON Airport

PLANT

SINGAPORE Power Plant
KOREA Nuclear Power Plant
HYUNDAI Heavy Industry
SAMSUNG Heavy Industry
DOOSAN Heavy Industry
SK HYNIX
POSCO
KEPCO

AUTOMATION

ABB
FANUC
Weidmuller
SEMES
AUTONICS
HYUNDAI WIA
DOOSAN Infracore

GAS & SECURITY

ADT Security
S1(SAMSUNG)
KT Telecop
SAMSUNG Techwin
RUSSIA Gas Project
KOREA Gas Corporation

ELECTRONICS

EMERSON
SIEMENS
YOKOGAWA
SAMSUNG SDI
LG Electronics
HYUNDAI
SAMSUNG Electronics

SHIPBUILDING

STX O&S
DSME
HYUNDAI Heavy Industry
SAMSUNG Heavy Industry

MILITARY

KOREA General Outpost
SAMSUNG Techwin
HYUNDAI Heavy Industry

Milestones Since 1981

1981
Company founded in Seoul, Korea

1994
Obtained UL and CSA certification

1998
Began to supply KIA

2001
Moved HQ to Gyeonggi province, Korea
Expanded Manufacturing capacity

2003
Obtained ISO 9001: 2000

2008
Began to supply Hyundai and Samsung

2011
Obtained ISO 14000:2000

2012
Began to supply ADT
Obtained TUV(CE)
Obtained CC-LINK
Began to supply Siemens

2013
2nd plant established in Seoul, Korea
Began to supply Doosan Infracore

2014
Began to supply Hyundai Wia

2015
Obtained PSE

2016
Began to supply ABB
Began to supply Weidmuller

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ROBOTIC
CABLES

RoHS

Flexible Non Shieldid Core Type

KIFLEX RVV

E 150633 AWM 2464 80°C 300V VW-1 AWM I/II A/B 80°C 300V
FT1 KIFLEX RVV 2C X 24AWG KWANGIL RoHS = M =

Super Fine Conductor / Special PVC Insulation / Special PVC Sheath

KIFLEX RVV is signal interconnecting or power supply cable between the main body and the control system used for the industrial robots and used for the low speed cable chains for manufactuning automatic machine.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Special Poly Vinyl Chloride
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Sheath	Special Poly Vinyl Chloride
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	80°C, 300V
Insulation Resistance	Min. 10MΩ/km
Spark Test Voltage	
less than 15mils	AC 2500V
19mils and smaller	AC 4000V
18mils and larger	AC 5000V
Dielectric Test Voltage	
Core/Core	AC 2000V / 1 min
Core/Screen	AC 1200V / 1 min
Min. bending radius	
fixed laying	Overall diameter x 10
flexble application	Overall diameter x 15
Temperature range	
fixed laying	-20°C ~ +80°C
flexble application	-10°C ~ +80°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	1.05	3.9	4.0
3 x 0.2	40/0.08	0.58	1.05	4.2	3.5
4 x 0.2	40/0.08	0.58	1.05	4.5	2.8
6 x 0.2	40/0.08	0.58	1.05	5.2	2.5
8 x 0.2	40/0.08	0.58	1.05	5.9	2.3
10 x 0.2	40/0.08	0.58	1.05	6.6	2.2
12 x 0.2	40/0.08	0.58	1.05	6.5	2.1
15 x 0.2	40/0.08	0.58	1.05	7.0	2.1
20 x 0.2	40/0.08	0.58	1.05	7.8	1.9
2 x 0.3	60/0.08	0.72	1.25	4.4	4.8
3 x 0.3	60/0.08	0.72	1.25	4.6	4.2
4 x 0.3	60/0.08	0.72	1.25	5.1	3.4
6 x 0.3	60/0.08	0.72	1.25	5.8	2.9
8 x 0.3	60/0.08	0.72	1.25	6.7	2.7
10 x 0.3	60/0.08	0.72	1.25	7.5	2.6
12 x 0.3	60/0.08	0.72	1.25	7.4	2.5
15 x 0.3	60/0.08	0.72	1.25	7.9	2.5
20 x 0.3	60/0.08	0.72	1.25	9.0	2.3
2 x 0.5	7/14/0.08	1.04	1.65	5.3	6.4
3 x 0.5	7/14/0.08	1.04	1.65	5.6	5.6
4 x 0.5	7/14/0.08	1.04	1.65	6.1	4.5
6 x 0.5	7/14/0.08	1.04	1.65	7.2	3.9
8 x 0.5	7/14/0.08	1.04	1.65	8.3	3.6
10 x 0.5	7/14/0.08	1.04	1.65	9.4	3.4
12 x 0.5	7/14/0.08	1.04	1.65	9.3	3.4
15 x 0.5	7/14/0.08	1.04	1.65	10.0	3.3
20 x 0.5	7/14/0.08	1.04	1.65	11.5	3.0
2 x 0.75	7/20/0.08	1.24	2.00	6.1	8.8
3 x 0.75	7/20/0.08	1.24	2.00	6.5	7.7
4 x 0.75	7/20/0.08	1.24	2.00	7.1	6.2
6 x 0.75	7/20/0.08	1.24	2.00	8.3	5.4
8 x 0.75	7/20/0.08	1.24	2.00	9.7	5.0
10 x 0.75	7/20/0.08	1.24	2.00	11.2	4.7
2 x 1.25	7/36/0.08	1.66	2.55	7.3	12.8
3 x 1.25	7/36/0.08	1.66	2.55	7.7	11.2
4 x 1.25	7/36/0.08	1.66	2.55	8.5	9.0
6 x 1.25	7/36/0.08	1.66	2.55	10.2	7.8

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously flexible
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

Flexible Shieldid Core Type

KIFLEX RVV - SB

E 150633 AWM 2464 80°C 300V VW-1 c AWM I/II A/B 80°C 300V
FT1 KIFLEX RVV - SB 2C X 24AWG KWANGIL CE RoHS = M =

KIFLEX RVV-SB is signal interconnecting or control cable between the main body and control system used for the industrial robots and used for the low speed cable chains for manufacturing automatic machine.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Special Poly Vinyl Chloride
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Shield	Tinned copper braid shield
Sheath	Special Poly Vinyl Chloride
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	80°C, 300V
Insulation Resistance	Min. 10MΩ/km
Spark Test Voltage	
less than 15mils	AC 2500V
19mils and smaller	AC 4000V
18mils and larger	AC 5000V
Dielectric Test Voltage	
Core/Core	AC 2000V / 1 min
Core/Screen	AC 1200V / 1 min
Min. bending radius	
fixed laying	Overall diameter x 12.5
flexble application	Overall diameter x 17
Temperature range	
fixed laying	-20°C ~ +80°C
flexble application	-10°C ~ +80°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

Super Fine Conductor / Colour Coded / Braid Shielded

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	1.05	4.5	4.0
3 x 0.2	40/0.08	0.58	1.05	4.6	3.5
4 x 0.2	40/0.08	0.58	1.05	5.0	2.8
6 x 0.2	40/0.08	0.58	1.05	5.6	2.5
8 x 0.2	40/0.08	0.58	1.05	6.4	2.3
10 x 0.2	40/0.08	0.58	1.05	7.1	2.2
12 x 0.2	40/0.08	0.58	1.05	7.0	2.1
15 x 0.2	40/0.08	0.58	1.05	7.5	2.1
20 x 0.2	40/0.08	0.58	1.05	8.4	1.9
2 x 0.3	60/0.08	0.72	1.25	5.0	4.8
3 x 0.3	60/0.08	0.72	1.25	5.2	4.2
4 x 0.3	60/0.08	0.72	1.25	5.5	3.4
6 x 0.3	60/0.08	0.72	1.25	6.3	2.9
8 x 0.3	60/0.08	0.72	1.25	7.2	2.7
10 x 0.3	60/0.08	0.72	1.25	8.0	2.6
12 x 0.3	60/0.08	0.72	1.25	7.9	2.5
15 x 0.3	60/0.08	0.72	1.25	8.5	2.5
20 x 0.3	60/0.08	0.72	1.25	9.5	2.3
2 x 0.5	7/14/0.08	1.04	1.65	5.8	6.4
3 x 0.5	7/14/0.08	1.04	1.65	6.1	5.6
4 x 0.5	7/14/0.08	1.04	1.65	6.6	4.5
6 x 0.5	7/14/0.08	1.04	1.65	7.6	3.9
8 x 0.5	7/14/0.08	1.04	1.65	8.7	3.6
10 x 0.5	7/14/0.08	1.04	1.65	10.0	3.4
12 x 0.5	7/14/0.08	1.04	1.65	9.8	3.4
15 x 0.5	7/14/0.08	1.04	1.65	10.6	3.3
20 x 0.5	7/14/0.08	1.04	1.65	12.0	3.0
2 x 0.75	7/20/0.08	1.24	2.00	6.6	8.8
3 x 0.75	7/20/0.08	1.24	2.00	6.9	7.7
4 x 0.75	7/20/0.08	1.24	2.00	7.5	6.2
6 x 0.75	7/20/0.08	1.24	2.00	8.8	5.4
8 x 0.75	7/20/0.08	1.24	2.00	10.2	5.0
10 x 0.75	7/20/0.08	1.24	2.00	11.8	4.7
2 x 1.25	7/36/0.08	1.66	2.55	7.8	12.8
3 x 1.25	7/36/0.08	1.66	2.55	8.3	11.2
4 x 1.25	7/36/0.08	1.66	2.55	8.9	9.0
6 x 1.25	7/36/0.08	1.66	2.55	10.7	7.8

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously flexible
- Good EMC characteristics
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

High Flexible Non Shieldid Core Type

KIFLEX RIREV

E 150633 AWM 2464 80°C 300V VW-1 c AWM I/II A/B 80°C 300V
FT1 KIFLEX RIREV 2C X 24AWG KWANGIL CE RoHS = M =

Super Fine Conductor / Colour Coded

KIFLEX RIREV is signal interconnecting or power supply cable used for the cable chains or internal wiring of the industrial robots.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Special Polyethylene
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Sheath	Special Poly Vinyl Chloride
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	80°C, 300V
Insulation Resistance	Min. 1000MΩ/km
Spark Test Voltage	AC 500V
Dielectric Test Voltage	
Core/Core	AC 500V / 1 min
Core/Screen	AC 300V / 1 min
Min. bending radius	Overall diameter x 8
90° Bending Test	5,000,000 more
U - Bending Test	10,000,000 more
Torsion Test	10,000,000 more
Temperature range	
fixed laying	-20°C ~ +80°C
flexble application	-10°C ~ +80°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	1.00	3.8	4.8
3 x 0.2	40/0.08	0.58	1.00	4.0	4.2
4 x 0.2	40/0.08	0.58	1.00	4.4	3.4
6 x 0.2	40/0.08	0.58	1.00	5.0	2.9
8 x 0.2	40/0.08	0.58	1.00	5.7	2.7
10 x 0.2	40/0.08	0.58	1.00	6.4	2.6
12 x 0.2	40/0.08	0.58	1.00	6.3	2.5
15 x 0.2	40/0.08	0.58	1.00	6.7	2.5
20 x 0.2	40/0.08	0.58	1.00	7.5	2.3
2 x 0.3	60/0.08	0.72	1.25	4.4	6.4
3 x 0.3	60/0.08	0.72	1.25	4.6	5.6
4 x 0.3	60/0.08	0.72	1.25	5.1	4.5
6 x 0.3	60/0.08	0.72	1.25	5.8	3.9
8 x 0.3	60/0.08	0.72	1.25	6.7	3.6
10 x 0.3	60/0.08	0.72	1.25	7.5	3.4
12 x 0.3	60/0.08	0.72	1.25	7.4	3.4
15 x 0.3	60/0.08	0.72	1.25	7.9	3.3
20 x 0.3	60/0.08	0.72	1.25	9.0	3.0
2 x 0.5	7/14/0.08	1.04	1.65	5.3	8.0
3 x 0.5	7/14/0.08	1.04	1.65	5.6	7.0
4 x 0.5	7/14/0.08	1.04	1.65	6.1	5.6
6 x 0.5	7/14/0.08	1.04	1.65	7.2	4.9
8 x 0.5	7/14/0.08	1.04	1.65	8.3	4.5
10 x 0.5	7/14/0.08	1.04	1.65	9.4	4.3
12 x 0.5	7/14/0.08	1.04	1.65	9.3	4.2
15 x 0.5	7/14/0.08	1.04	1.65	10.0	4.1
20 x 0.5	7/14/0.08	1.04	1.65	11.5	3.8
2 x 0.75	7/20/0.08	1.24	1.90	5.9	11.2
3 x 0.75	7/20/0.08	1.24	1.90	6.2	9.8
4 x 0.75	7/20/0.08	1.24	1.90	6.7	7.8
6 x 0.75	7/20/0.08	1.24	1.90	7.9	6.9
8 x 0.75	7/20/0.08	1.24	1.90	9.3	6.3
10 x 0.75	7/20/0.08	1.24	1.90	10.7	6.0
2 x 1.25	7/36/0.08	1.66	2.50	7.2	15.2
3 x 1.25	7/36/0.08	1.66	2.50	7.6	13.3
4 x 1.25	7/36/0.08	1.66	2.50	8.4	10.6
6 x 1.25	7/36/0.08	1.66	2.50	10.0	9.3

Other dimensions and colors are possible on request.

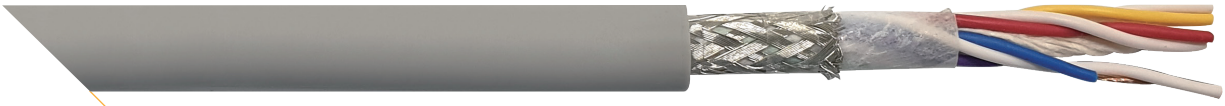
Outstanding Features

- Small outer diameter and small bending radius
- Continuously high flexible
- Specially formulated durable PE insulation
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

High Flexible Shieldid Core Type

KIFLEX RIREV - SB



E 150633 AWM 2464 80°C 300V VW-1 AWM I/II A/B 80°C 300V
FT1 KIFLEX RIREV - SB 2C X 24AWG KWANGIL RoHS = M =

Super Fine Conductor / Colour Coded / Braid Shielded

KIFLEX RIREV - SB is signal interconnecting or control cable used for the cable chains or internal wiring of the industrial robots.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Special Polyethylene
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Shield	Tinned copper braid shield
Sheath	Special Poly Vinyl Chloride
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	80°C, 300V
Insulation Resistance	Min. 1000MΩ/km
Spark Test Voltage	AC 500V
Dielectric Test Voltage	
Core/Core	AC 500V / 1 min
Core/Screen	AC 300V / 1 min
Min. bending radius	
fixed laying	Overall diameter x 10
flexble application	Overall diameter x 12
90° L&R Bending Test	5,000,000 more
U - Bending Test	10,000,000 more
Torsion Test	10,000,000 more
Temperature range	
fixed laying	-20°C ~ +80°C
flexble application	-10°C ~ +80°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / mm²)	Conductor strands (EA / mm)	Conductor diameter (mm)	Insulation diameter (mm)	Overall diameter (mm)	Max. current (A)
2 x 0.2	40/0.08	0.58	1.00	4.4	4.8
3 x 0.2	40/0.08	0.58	1.00	4.5	4.2
4 x 0.2	40/0.08	0.58	1.00	4.9	3.4
6 x 0.2	40/0.08	0.58	1.00	5.5	2.9
8 x 0.2	40/0.08	0.58	1.00	6.2	2.7
10 x 0.2	40/0.08	0.58	1.00	6.8	2.6
12 x 0.2	40/0.08	0.58	1.00	6.7	2.5
15 x 0.2	40/0.08	0.58	1.00	7.2	2.5
20 x 0.2	40/0.08	0.58	1.00	8.0	2.3
2 x 0.3	60/0.08	0.72	1.25	5.0	6.4
3 x 0.3	60/0.08	0.72	1.25	5.2	5.6
4 x 0.3	60/0.08	0.72	1.25	5.5	4.5
6 x 0.3	60/0.08	0.72	1.25	6.3	3.9
8 x 0.3	60/0.08	0.72	1.25	7.2	3.6
10 x 0.3	60/0.08	0.72	1.25	8.0	3.4
12 x 0.3	60/0.08	0.72	1.25	7.9	3.4
15 x 0.3	60/0.08	0.72	1.25	8.5	3.3
20 x 0.3	60/0.08	0.72	1.25	9.5	3.0
2 x 0.5	7/14/0.08	1.04	1.65	5.8	8.0
3 x 0.5	7/14/0.08	1.04	1.65	6.1	7.0
4 x 0.5	7/14/0.08	1.04	1.65	6.6	5.6
6 x 0.5	7/14/0.08	1.04	1.65	7.6	4.9
8 x 0.5	7/14/0.08	1.04	1.65	8.7	4.5
10 x 0.5	7/14/0.08	1.04	1.65	10.0	4.3
12 x 0.5	7/14/0.08	1.04	1.65	9.8	4.2
15 x 0.5	7/14/0.08	1.04	1.65	10.6	4.1
20 x 0.5	7/14/0.08	1.04	1.65	12.0	3.8
2 x 0.75	7/20/0.08	1.24	1.90	6.4	11.2
3 x 0.75	7/20/0.08	1.24	1.90	6.7	9.8
4 x 0.75	7/20/0.08	1.24	1.90	7.3	7.8
6 x 0.75	7/20/0.08	1.24	1.90	8.5	6.9
8 x 0.75	7/20/0.08	1.24	1.90	9.3	6.3
10 x 0.75	7/20/0.08	1.24	1.90	10.7	6.0
2 x 1.25	7/36/0.08	1.66	2.50	7.7	15.2
3 x 1.25	7/36/0.08	1.66	2.50	8.2	13.3
4 x 1.25	7/36/0.08	1.66	2.50	8.8	10.6
6 x 1.25	7/36/0.08	1.66	2.50	10.6	9.3

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously high flexible
- Good EMC characteristics
- Specially formulated durable PE insulation
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

High Flexible Non Shieldid Core Type

KIFLEX RIREU

E 150633 AWM 20936 80°C 300V VW-1 c AWM I/II A/B 80°C 300V
FT1 KIFLEX RIREU 2C X 24AWG KWANGIL CE RoHS = M =

Super Fine Conductor / Colour Coded / Special TPU sheathed

KIFLEX RIREU is signal interconnecting or control cable used for the cable chains of manufacturing automatic machine or internal wiring of the industrial robots.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Special Polyethylene
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Sheath	Special Polyurethane
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	80°C, 300V
Insulation Resistance	Min. 1000MΩ/km
Spark Test Voltage	AC 500V
Dielectric Test Voltage	
Core/Core	AC 500V / 1 min
Core/Screen	AC 300V / 1 min
Min. bending radius	
Fixed laying	Overall diameter x 8
Flexible application	Overall diameter x 8
Temperature range	
fixed laying	-20°C ~ +80°C
flexble application	-10°C ~ +80°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	1.00	4.0	4.8
3 x 0.2	40/0.08	0.58	1.00	4.2	4.2
4 x 0.2	40/0.08	0.58	1.00	4.6	3.4
6 x 0.2	40/0.08	0.58	1.00	5.2	2.9
8 x 0.2	40/0.08	0.58	1.00	5.9	2.7
10 x 0.2	40/0.08	0.58	1.00	6.6	2.6
12 x 0.2	40/0.08	0.58	1.00	6.5	2.5
15 x 0.2	40/0.08	0.58	1.00	6.9	2.5
20 x 0.2	40/0.08	0.58	1.00	7.7	2.3
2 x 0.3	60/0.08	0.72	1.25	4.6	6.4
3 x 0.3	60/0.08	0.72	1.25	4.8	5.6
4 x 0.3	60/0.08	0.72	1.25	5.3	4.5
6 x 0.3	60/0.08	0.72	1.25	6.0	3.9
8 x 0.3	60/0.08	0.72	1.25	6.9	3.6
10 x 0.3	60/0.08	0.72	1.25	7.7	3.4
12 x 0.3	60/0.08	0.72	1.25	7.6	3.4
15 x 0.3	60/0.08	0.72	1.25	8.1	3.3
20 x 0.3	60/0.08	0.72	1.25	9.2	3.0
2 x 0.5	7/14/0.08	1.04	1.65	5.5	8.0
3 x 0.5	7/14/0.08	1.04	1.65	5.8	7.0
4 x 0.5	7/14/0.08	1.04	1.65	6.3	5.6
6 x 0.5	7/14/0.08	1.04	1.65	7.4	4.9
8 x 0.5	7/14/0.08	1.04	1.65	8.5	4.5
10 x 0.5	7/14/0.08	1.04	1.65	9.6	4.3
12 x 0.5	7/14/0.08	1.04	1.65	9.5	4.2
15 x 0.5	7/14/0.08	1.04	1.65	10.2	4.1
20 x 0.5	7/14/0.08	1.04	1.65	11.7	3.8
2 x 0.75	7/20/0.08	1.24	1.90	6.1	11.2
3 x 0.75	7/20/0.08	1.24	1.90	6.4	9.8
4 x 0.75	7/20/0.08	1.24	1.90	6.9	7.8
6 x 0.75	7/20/0.08	1.24	1.90	8.1	6.9
8 x 0.75	7/20/0.08	1.24	1.90	9.5	6.3
10 x 0.75	7/20/0.08	1.24	1.90	10.9	6.0
2 x 1.25	7/36/0.08	1.66	2.50	7.4	15.2
3 x 1.25	7/36/0.08	1.66	2.50	7.8	13.3
4 x 1.25	7/36/0.08	1.66	2.50	8.6	10.6
6 x 1.25	7/36/0.08	1.66	2.50	10.2	9.3

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously high flexible
- Specially formulated durable PE insulation
- Superior resistance to oil, abrasion, chemical
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

High Flexible Shieldid Core Type

KIFLEX RIREU - SB

E 150633 AWM 20936 80℃ 300V VW-1 c AWM I/II A/B 80℃ 300V
FT1 KIFLEX RIREU - SB 2C X 24AWG KWANGIL CE RoHS = M =

Super Fine Conductor / Colour Coded / Braid Shielded / Special TPU Sheathed

KIFLEX RIREU - SB is signal interconnecting or control cable used for the cable chains or manufacturing automatic machine or internal wiring of the industrial robots.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Special Polyethylene
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Shield	Tinned copper braid shield
Sheath	Special Polyurethane
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	80℃, 300V
Insulation Resistance	Min. 1000MΩ/km
Spark Test Voltage	AC 500V
Dielectric Test Voltage	
Core/Core	AC 500V / 1 min
Core/Screen	AC 300V / 1 min
Min. bending radius	
fixed laying	Overall diameter x 10
flexble application	Overall diameter x 12
Temperature range	
fixed laying	-20℃ ~ +80℃
flexble application	-10℃ ~ +80℃
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	1.00	4.6	4.8
3 x 0.2	40/0.08	0.58	1.00	4.7	4.2
4 x 0.2	40/0.08	0.58	1.00	5.1	3.4
6 x 0.2	40/0.08	0.58	1.00	5.7	2.9
8 x 0.2	40/0.08	0.58	1.00	6.4	2.7
10 x 0.2	40/0.08	0.58	1.00	7.0	2.6
12 x 0.2	40/0.08	0.58	1.00	6.9	2.5
15 x 0.2	40/0.08	0.58	1.00	7.4	2.5
20 x 0.2	40/0.08	0.58	1.00	8.2	2.3
2 x 0.3	60/0.08	0.72	1.25	5.2	6.4
3 x 0.3	60/0.08	0.72	1.25	5.4	5.6
4 x 0.3	60/0.08	0.72	1.25	5.7	4.5
6 x 0.3	60/0.08	0.72	1.25	6.5	3.9
8 x 0.3	60/0.08	0.72	1.25	7.4	3.6
10 x 0.3	60/0.08	0.72	1.25	8.2	3.4
12 x 0.3	60/0.08	0.72	1.25	8.1	3.4
15 x 0.3	60/0.08	0.72	1.25	8.7	3.3
20 x 0.3	60/0.08	0.72	1.25	9.7	3.0
2 x 0.5	7/14/0.08	1.04	1.65	6.0	8.0
3 x 0.5	7/14/0.08	1.04	1.65	6.3	7.0
4 x 0.5	7/14/0.08	1.04	1.65	6.8	5.6
6 x 0.5	7/14/0.08	1.04	1.65	7.8	4.9
8 x 0.5	7/14/0.08	1.04	1.65	8.9	4.5
10 x 0.5	7/14/0.08	1.04	1.65	10.2	4.3
12 x 0.5	7/14/0.08	1.04	1.65	10.0	4.2
15 x 0.5	7/14/0.08	1.04	1.65	10.8	4.1
20 x 0.5	7/14/0.08	1.04	1.65	12.2	3.8
2 x 0.75	7/20/0.08	1.24	1.90	6.6	11.2
3 x 0.75	7/20/0.08	1.24	1.90	6.9	9.8
4 x 0.75	7/20/0.08	1.24	1.90	7.5	7.8
6 x 0.75	7/20/0.08	1.24	1.90	8.7	6.9
8 x 0.75	7/20/0.08	1.24	1.90	10.0	6.3
10 x 0.75	7/20/0.08	1.24	1.90	11.4	6.0
2 x 1.25	7/36/0.08	1.66	2.50	7.9	15.2
3 x 1.25	7/36/0.08	1.66	2.50	8.4	13.3
4 x 1.25	7/36/0.08	1.66	2.50	9.0	10.6
6 x 1.25	7/36/0.08	1.66	2.50	10.8	9.3

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously high flexible
- Good EMC characteristics
- Specially formulated durable PE insulation
- Superior resistance to oil, abrasion, chemical
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

Super Flexible Non Shieldid Core Type

KIFLEX RFHV

E 150633 AWM 2517 105°C 300V VW-1 c AWM I/II A/B 105°C 300V FT1 KIFLEX RFHV 10C X 24AWG KWANGIL CE RoHS = M =

Super Fine Conductor / Fluorine Insulation / Colour coded

KIFLEX RFHV is signal interconnecting or control cable used for the high speed cable chains of manufacturing automatic machine or internal or external wiring of the industrial robots system.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Fluorine compound
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Sheath	Special Poly Vinyl Chloride
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	105°C, 300V
Insulation Resistance	Min. 1000MΩ/km
Spark Test Voltage	AC 2500V
Dielectric Test Voltage	
Core/Core	AC 200V / 1 min
Core/Screen	AC 1200V / 1 min
Min. bending radius	
Fixed laying	Overall diameter x 6
Flexible application	Overall diameter x 7.5
Temperature range	
fixed laying	-20°C ~ +105°C
flexble application	-10°C ~ +105°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	0.95	3.5	6.4
3 x 0.2	40/0.08	0.58	0.95	3.7	5.6
4 x 0.2	40/0.08	0.58	0.95	4.0	4.5
6 x 0.2	40/0.08	0.58	0.95	4.7	3.9
8 x 0.2	40/0.08	0.58	0.95	5.3	3.6
10 x 0.2	40/0.08	0.58	0.95	6.0	3.4
12 x 0.2	40/0.08	0.58	0.95	5.9	3.4
15 x 0.2	40/0.08	0.58	0.95	6.3	3.3
20 x 0.2	40/0.08	0.58	0.95	7.1	3.0
2 x 0.3	60/0.08	0.72	1.15	4.2	8.0
3 x 0.3	60/0.08	0.72	1.15	4.4	7.0
4 x 0.3	60/0.08	0.72	1.15	4.9	5.6
6 x 0.3	60/0.08	0.72	1.15	5.6	4.9
8 x 0.3	60/0.08	0.72	1.15	6.5	4.5
10 x 0.3	60/0.08	0.72	1.15	7.3	4.3
12 x 0.3	60/0.08	0.72	1.15	4.2	4.2
15 x 0.3	60/0.08	0.72	1.15	7.7	4.1
20 x 0.3	60/0.08	0.72	1.15	8.8	3.8
2 x 0.5	7/14/0.08	1.04	1.40	4.8	11.2
3 x 0.5	7/14/0.08	1.04	1.40	5.1	9.8
4 x 0.5	7/14/0.08	1.04	1.40	5.4	7.8
6 x 0.5	7/14/0.08	1.04	1.40	6.4	6.9
8 x 0.5	7/14/0.08	1.04	1.40	7.4	6.3
10 x 0.5	7/14/0.08	1.04	1.40	8.4	6.0
12 x 0.5	7/14/0.08	1.04	1.40	8.3	5.9
15 x 0.5	7/14/0.08	1.04	1.40	8.85	5.7
20 x 0.5	7/14/0.08	1.04	1.40	10.1	5.3
2 x 0.75	7/20/0.08	1.24	1.70	5.4	16.0
3 x 0.75	7/20/0.08	1.24	1.70	5.7	14.0
4 x 0.75	7/20/0.08	1.24	1.70	6.2	11.2
6 x 0.75	7/20/0.08	1.24	1.70	7.3	9.8
8 x 0.75	7/20/0.08	1.24	1.70	8.5	9.0
10 x 0.75	7/20/0.08	1.24	1.70	9.6	8.6
2 x 1.25	7/36/0.08	1.66	2.10	6.3	21.6
3 x 1.25	7/36/0.08	1.66	2.10	6.7	18.9
4 x 1.25	7/36/0.08	1.66	2.10	7.3	15.1
6 x 1.25	7/36/0.08	1.66	2.10	8.6	13.2

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously Super flexible
- Low friction of fluorine insulation
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

Super Flexible Shieldid Core Type

KIFLEX RFHV - SB

E 150633 AWM 2517 105°C 300V VW-1 AWM I/II A/B 105°C 300V
FT1 KIFLEX RFHV - SB 10C X 24AWG KWANGIL CE RoHS = M =

Super fine conductor / Fluorine Insulation / Colour coded / Braid shielded

KIFLEX RFHV-SB is signal interconnecting or power supply cable used for the high speed cable chains of manufacturing automatic machine or internal or external wiring of the industrial robots system.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Fluorine
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Shield	Tinned copper braid shield
Sheath	Special Poly Vinyl Chloride
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	105°C, 300V
Insulation Resistance	Min. 1000MΩ/km
Spark Test Voltage	AC 2,500V
Dielectric Test Voltage	
Core/Core	AC 200V / 1 min
Core/Screen	AC 1200V / 1 min
Min. bending radius	
fixed laying	Overall diameter x 8
flexble application	Overall diameter x 12
Temperature range	
fixed laying	-20°C ~ +105°C
flexble application	-10°C ~ +105°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	0.95	4.0	6.4
3 x 0.2	40/0.08	0.58	0.95	4.2	5.6
4 x 0.2	40/0.08	0.58	0.95	4.4	4.5
6 x 0.2	40/0.08	0.58	0.95	5.0	3.9
8 x 0.2	40/0.08	0.58	0.95	5.6	3.6
10 x 0.2	40/0.08	0.58	0.95	6.0	3.4
12 x 0.2	40/0.08	0.58	0.95	6.2	3.4
15 x 0.2	40/0.08	0.58	0.95	6.6	3.3
20 x 0.2	40/0.08	0.58	0.95	7.2	3.0
2 x 0.3	60/0.08	0.72	1.15	4.4	8.0
3 x 0.3	60/0.08	0.72	1.15	4.6	7.0
4 x 0.3	60/0.08	0.72	1.15	4.9	5.6
6 x 0.3	60/0.08	0.72	1.15	5.6	4.9
8 x 0.3	60/0.08	0.72	1.15	6.3	4.5
10 x 0.3	60/0.08	0.72	1.15	6.8	4.3
12 x 0.3	60/0.08	0.72	1.15	7.1	4.2
15 x 0.3	60/0.08	0.72	1.15	7.5	4.1
20 x 0.3	60/0.08	0.72	1.15	8.3	3.8
2 x 0.5	7/14/0.08	1.04	1.40	4.9	11.2
3 x 0.5	7/14/0.08	1.04	1.40	5.1	9.8
4 x 0.5	7/14/0.08	1.04	1.40	5.5	7.8
6 x 0.5	7/14/0.08	1.04	1.40	6.4	6.9
8 x 0.5	7/14/0.08	1.04	1.40	7.3	6.3
10 x 0.5	7/14/0.08	1.04	1.40	7.9	6.0
12 x 0.5	7/14/0.08	1.04	1.40	8.2	5.9
15 x 0.5	7/14/0.08	1.04	1.40	8.8	5.7
20 x 0.5	7/14/0.08	1.04	1.40	9.8	5.3
2 x 0.75	7/20/0.08	1.24	1.70	5.5	16.0
3 x 0.75	7/20/0.08	1.24	1.70	5.8	14.0
4 x 0.75	7/20/0.08	1.24	1.70	6.3	11.2
6 x 0.75	7/20/0.08	1.24	1.70	7.3	9.8
8 x 0.75	7/20/0.08	1.24	1.70	8.4	9.0
10 x 0.75	7/20/0.08	1.24	1.70	9.1	8.6
2 x 1.25	7/36/0.08	1.66	2.10	6.4	21.6
3 x 1.25	7/36/0.08	1.66	2.10	6.7	18.9
4 x 1.25	7/36/0.08	1.66	2.10	7.3	15.1
6 x 1.25	7/36/0.08	1.66	2.10	8.6	13.2

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously high flexible
- Good EMC characteristics
- Low friction of fluorine insulation
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

Super Flexible Non Shieldid Core Type

KIFLEX RFHU

E 150633 AWM 20233 80°C 300V VW-1 AWM I/II A/B 80°C 300V
FT1 KIFLEX RFHU 2C X 24AWG KWANGIL CE RoHS = M =

Super Fine Conductor / Fluorine Insulation / Colour coded / Special TPU sheath

KIFLEX RFHU is signal interconnecting or power supply cable used for the high speed cable chanins of manufacturing automatic machine or arm of the industrial robots.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Fluorine compound
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Sheath	Special Polyurethane
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	80°C, 300V
Insulation Resistance	Min. 1000MΩ/km
Spark Test Voltage	AC 2500V
Dielectric Test Voltage	
Core/Core	AC 200V / 1 min
Core/Screen	AC 1200V / 1 min
Min. bending radius	
Fixed laying	Overall diameter x 6
Flexible application	Overall diameter x 7.5
Temperature range	
fixed laying	-20°C ~ +80°C
flexble application	-10°C ~ +80°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	0.95	3.9	6.4
3 x 0.2	40/0.08	0.58	0.95	4.1	5.6
4 x 0.2	40/0.08	0.58	0.95	4.4	4.5
6 x 0.2	40/0.08	0.58	0.95	5.1	3.9
8 x 0.2	40/0.08	0.58	0.95	5.7	3.6
10 x 0.2	40/0.08	0.58	0.95	6.4	3.4
12 x 0.2	40/0.08	0.58	0.95	6.3	3.4
15 x 0.2	40/0.08	0.58	0.95	6.7	3.3
20 x 0.2	40/0.08	0.58	0.95	7.5	3.0
2 x 0.3	60/0.08	0.72	1.15	4.3	8.0
3 x 0.3	60/0.08	0.72	1.15	4.5	7.0
4 x 0.3	60/0.08	0.72	1.15	4.9	5.6
6 x 0.3	60/0.08	0.72	1.15	5.7	4.9
8 x 0.3	60/0.08	0.72	1.15	6.4	4.5
10 x 0.3	60/0.08	0.72	1.15	7.0	4.3
12 x 0.3	60/0.08	0.72	1.15	7.2	4.2
15 x 0.3	60/0.08	0.72	1.15	7.7	4.1
20 x 0.3	60/0.08	0.72	1.15	8.5	3.8
2 x 0.5	7/14/0.08	1.04	1.40	4.9	11.2
3 x 0.5	7/14/0.08	1.04	1.40	5.1	9.8
4 x 0.5	7/14/0.08	1.04	1.40	5.5	7.8
6 x 0.5	7/14/0.08	1.04	1.40	6.5	6.9
8 x 0.5	7/14/0.08	1.04	1.40	7.4	6.3
10 x 0.5	7/14/0.08	1.04	1.40	8.1	6.0
12 x 0.5	7/14/0.08	1.04	1.40	8.4	5.9
15 x 0.5	7/14/0.08	1.04	1.40	9.0	5.7
20 x 0.5	7/14/0.08	1.04	1.40	10.0	5.3
2 x 0.75	7/20/0.08	1.24	1.70	5.6	16.0
3 x 0.75	7/20/0.08	1.24	1.70	5.9	14.0
4 x 0.75	7/20/0.08	1.24	1.70	6.4	11.2
6 x 0.75	7/20/0.08	1.24	1.70	7.5	9.8
8 x 0.75	7/20/0.08	1.24	1.70	8.7	9.0
10 x 0.75	7/20/0.08	1.24	1.70	9.8	8.6
2 x 1.25	7/36/0.08	1.66	2.10	6.5	21.6
3 x 1.25	7/36/0.08	1.66	2.10	6.9	18.9
4 x 1.25	7/36/0.08	1.66	2.10	7.5	15.1
6 x 1.25	7/36/0.08	1.66	2.10	8.8	13.2

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously Super flexible
- Low friction of fluorine insulation
- Superior resistance to oil, abrasion, chemical
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

Super Flexible Shieldid Core Type

KIFLEX RFHU - SB

E 150633 AWM 20233 80°C 300V VW-1 c AWM I/II A/B 80°C 300V
FT1 KIFLEX RFHU - SB 15C X 24AWG KWANGIL CE RoHS = M =

Super fine conductor / Fluorine Insulation / Colour coded / Braid shielded / Special TPU sheath

KIFLEX RFHU - SB is signal interconnecting or power supply cable used for the high speed cable chains of manufacturing automatic machine or arm of the industrial robots.

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Fluorine compound
Filler	Fabric
Stranding	in layers
Wrapping	Special non-woven Tape
Shield	Tinned copper braid shield
Sheath	Special Poly Vinyl Chloride
Sheath Color	Black(Color can be changed after consulation)

Technical Data

Nomianl Rating	80°C, 300V
Insulation Resistance	Min. 1000MΩ/km
Spark Test Voltage	AC 2500V
Dielectric Test Voltage	
Core/Core	AC 200V / 1 min
Core/Screen	AC 1200V / 1 min
Min. bending radius	
fixed laying	Overall diameter x 8
flexble application	Overall diameter x 10
Temperature range	
fixed laying	-20°C ~ +80°C
flexble application	-10°C ~ +80°C
Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)	Max. current (A)
2 x 0.2	40/0.08	0.58	0.95	4.5	6.4
3 x 0.2	40/0.08	0.58	0.95	4.6	5.6
4 x 0.2	40/0.08	0.58	0.95	4.9	4.5
6 x 0.2	40/0.08	0.58	0.95	5.5	3.9
8 x 0.2	40/0.08	0.58	0.95	6.2	3.6
10 x 0.2	40/0.08	0.58	0.95	6.8	3.4
12 x 0.2	40/0.08	0.58	0.95	6.7	3.4
15 x 0.2	40/0.08	0.58	0.95	7.2	3.3
20 x 0.2	40/0.08	0.58	0.95	7.9	3.0
2 x 0.3	60/0.08	0.72	1.15	4.8	8.0
3 x 0.3	60/0.08	0.72	1.15	5.0	7.0
4 x 0.3	60/0.08	0.72	1.15	5.3	5.6
6 x 0.3	60/0.08	0.72	1.15	6.0	4.9
8 x 0.3	60/0.08	0.72	1.15	6.7	4.5
10 x 0.3	60/0.08	0.72	1.15	7.2	4.3
12 x 0.3	60/0.08	0.72	1.15	7.4	4.2
15 x 0.3	60/0.08	0.72	1.15	7.9	4.1
20 x 0.3	60/0.08	0.72	1.15	8.6	3.8
2 x 0.5	7/14/0.08	1.04	1.40	5.3	11.2
3 x 0.5	7/14/0.08	1.04	1.40	5.5	9.8
4 x 0.5	7/14/0.08	1.04	1.40	5.9	7.8
6 x 0.5	7/14/0.08	1.04	1.40	6.7	6.9
8 x 0.5	7/14/0.08	1.04	1.40	7.6	6.3
10 x 0.5	7/14/0.08	1.04	1.40	8.2	6.0
12 x 0.5	7/14/0.08	1.04	1.40	8.4	5.9
15 x 0.5	7/14/0.08	1.04	1.40	9.0	5.7
20 x 0.5	7/14/0.08	1.04	1.40	9.9	5.3
2 x 0.75	7/20/0.08	1.24	1.70	6.2	16.0
3 x 0.75	7/20/0.08	1.24	1.70	6.4	14.0
4 x 0.75	7/20/0.08	1.24	1.70	6.9	11.2
6 x 0.75	7/20/0.08	1.24	1.70	8.0	9.8
8 x 0.75	7/20/0.08	1.24	1.70	9.1	9.0
10 x 0.75	7/20/0.08	1.24	1.70	10.4	8.6
2 x 1.25	7/36/0.08	1.66	2.10	7.0	21.6
3 x 1.25	7/36/0.08	1.66	2.10	7.4	18.9
4 x 1.25	7/36/0.08	1.66	2.10	7.9	15.1
6 x 1.25	7/36/0.08	1.66	2.10	9.3	13.2

Other dimensions and colors are possible on request.

Outstanding Features

- Small outer diameter and small bending radius
- Continuously Super flexible
- Good EMC characteristics
- Low friction of fluorine insulation
- Superior resistance to oil, abrasion, chemical
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

Flexible Control Cables

KIFLEX SVV

E 150633 AWM 20233 80°C 300V VW-1 AWM I/II A/B 80°C 300V
FT1 KIFLEX SVV 5C X 10㎟ KWANGIL CE RoHS = M =

Bare Anneal Copper / Color Core PVC Insulation / PVC Control Cable

Construction

Conductor	Bare copper strands acc. DIN VDE 0295 Class 4 + IEC 60228 Class 5 + HD 383 Class 5
Insulation	Special Poly Vinyl Chloride / VDE 0207 part 4
Core code	Colored acc. to DIN VDE 0293 + HD 186 : Green - Yellow earth wire from 3 cores
Stranding	in layers
Sheath	Poly Vinyl Chloride, acc. to DIN VDE 0207
Sheath Color	Grey(RAL 7001)

Technical Data

Nomianl Rating	0.5㎟ ~ 1.5㎟ : Uo/U 300/500V 2.5㎟ ~ 50㎟ : Uo/U 450/750V
Testing Voltage	C / C 400V
Min. bending radius	
Fixed laying	4 x d
Flexible application	15 x d
Temperature range	
fixed laying	-30°C ~ +70°C
flexble application	-5°C ~ +70°C
Fire performance	Flame relardanl and self - exlinguishing Acc. 10 IEC
Oil Resistance	Acc. to internal standard

No. of Cores x cross section (No. / ㎟)	Largest Single Wire (㎜)	Outer - Ø ± 5% (㎜)	Copper Figure (kg/km)	Cable Weight (kg/km)
2 x 0.50	0.21	4.8	9.6	33
3 x 0.50	0.21	5.1	14.4	40
4 x 0.50	0.21	5.5	19.2	47
5 x 0.50	0.21	6.2	24.0	61
7 x 0.50	0.21	6.7	33.6	74
2 x 0.75	0.21	5.6	14.4	46
3 x 0.75	0.21	5.7	21.6	52
4 x 0.75	0.21	6.2	28.8	64
5 x 0.75	0.21	6.7	36.0	78
7 x 0.75	0.21	7.5	50.4	100
2 x 1.00	0.21	5.5	19.2	48
3 x 1.00	0.21	6.1	28.8	63
4 x 1.00	0.21	6.5	38.4	75
5 x 1.00	0.21	7.1	48.0	92
7 x 1.00	0.21	8.0	67.2	120
2 x 1.50	0.26	6.2	28.8	64
3 x 1.50	0.26	6.5	43.2	79
4 x 1.50	0.26	7.6	57.6	103
5 x 1.50	0.26	8.0	72.0	121
7 x 1.50	0.26	4.8	100.8	160
2 x 2.50	0.26	8.8	48.0	121
3 x 2.50	0.26	9.5	72.0	151
4 x 2.50	0.26	10.6	96.0	190
5 x 2.50	0.26	11.6	120.0	232
7 x 2.50	0.26	12.8	168.0	297
3 x 4.00	0.31	10.8	115.2	213
4 x 4.00	0.31	12.0	153.6	267
5 x 4.00	0.31	13.1	192.0	327
2 x 6.00	0.31	11.2	115.2	239
3 x 6.00	0.31	12.7	172.8	303
4 x 6.00	0.31	14.1	230.4	381
5 x 6.00	0.31	15.7	288.0	466
7 x 6.00	0.31	17.3	403.2	613
3 x 10.0	0.41	15.8	288.0	492
4 x 10.0	0.41	17.8	384.0	627
5 x 10.0	0.41	19.7	480.0	783
4 x 16.0	0.41	21.1	614.4	935
4 x 25.0	0.41	25.5	960.0	1456
4 x 35.0	0.41	28.8	1344.0	1978

All measure have tolerances. (Tolerance of external diameter : ± 5% less / Tolerance of thickness : ± 15% less)
Manufacture SQ Size : 0.5㎟ ~ 35㎟

RoHS

Flexible Control Cables

KIFLEX SVV - SB

E 150633 AWM 2464 80°C 300V VW-1 c AWM I/II A/B 80°C 300V
FT1 KIFLEX SVV - SB 5C x 10㎟ KWANGIL CE RoHS = M =

Super fine conductor / Fluorine Insulation / Colour coded / Braid shielded / Special TPU sheath

Construction

Conductor	Bare copper strands acc. to DIN VDE 0295 class 5 + IEC 60228 class 5 + HD 383 class 5
Insulation	Special Poly Vinyl Chloride / VDE 0207 part 4
Core code	Black cores with consecutive numbers Acc. to DIN VDE + HD 186; Green - Yellow earth wire form 3 cores
Stranding	in layers
Wrapping	PETP foil
Screen	Tinned copper braiding
Sheath	Poly Vinyl Chloride, VDE 0207 part 5
Sheath Color	Grey (RAL 7001)

Technical Data

Nomianl Rating	Uo/u 300 / 500V
Testing Voltage	4000V acc. to DIN VDE 0472 part 508; Core / screen 1000V
Min. bending radius	
Fixed laying	5 X d
Flexible application	10 X d
Temperature range	
fixed laying	-30°C ~ +70°C
flexble application	-5°C ~ +70°C
Fire performance	Flame relardanl and self - exlinguishing Acc. 10 IEC

No. of Cores x cross section (No. / ㎟)	Largest Single Wire (㎜)	Outer - Ø ± 5% (㎜)	Copper Figure (kg/km)	Cable Weight (kg/km)
3 x 0.50	0.21	5.6	30.7	47
4 x 0.50	0.21	6.2	48.0	59
5 x 0.50	0.21	6.7	55.9	71
7 x 0.50	0.21	7.2	71.1	84
10 x 0.50	0.21	9.3	98.1	124
12 x 0.50	0.21	9.6	108.1	140
18 x 0.50	0.21	11.4	143.3	214
25 x 0.50	0.21	13.8	189.7	284
40 x 0.50	0.21	16.8	299.4	452
2 x 0.75	0.21	5.7	31.1	46
3 x 0.75	0.21	6.4	50.6	62
4 x 0.75	0.21	6.7	61.1	73
5 x 0.75	0.21	7.2	73.7	87
7 x 0.75	0.21	8.0	89.0	112
10 x 0.75	0.21	10.1	127.4	157
12 x 0.75	0.21	10.8	142.4	195
18 x 0.75	0.21	12.6	197.9	275
25 x 0.75	0.21	15.2	284.6	371
32 x 0.75	0.21	16.7	358.2	477
40 x 0.75	0.21	18.5	422.5	589
3 x 1.00	0.21	6.6	58.2	69
4 x 1.00	0.21	7.1	75.7	86
5 x 1.00	0.21	7.8	86.1	103
7 x 1.00	0.21	8.5	108.2	130
10 x 1.00	0.21	11.1	152.2	201
12 x 1.00	0.21	11.8	172.1	237
18 x 1.00	0.21	13.6	242.1	331
25 x 1.00	0.21	16.5	346.5	465
32 x 1.00	0.21	17.8	437.3	574
40 x 1.00	0.21	19.9	521.3	710
2 x 1.50	0.26	7.1	60.7	72
3 x 1.50	0.26	7.5	80.5	91
4 x 1.50	0.26	8.0	95.6	111
5 x 1.50	0.26	8.5	113.2	132
7 x 1.50	0.26	9.7	151.2	175
10 x 1.50	0.26	12.3	202.8	261
12 x 1.50	0.26	13.3	240.8	309
18 x 1.50	0.26	15.0	362.3	432
25 x 1.50	0.26	18.2	492.1	611
32 x 1.50	0.26	19.7	597.7	756
3 x 2.50	0.26	9.0	113.0	135
4 x 2.50	0.26	9.7	146.2	167
5 x 2.50	0.26	11.0	175.0	217
7 x 2.50	0.26	12.1	225.1	284
10 x 2.50	0.26	15.7	342.7	434
12 x 2.50	0.26	16.4	392.0	490
18 x 2.50	0.26	19.3	564.1	712
25 x 2.50	0.26	23.4	770.1	959
34 x 2.50	0.26	26.3	997.8	1299
4 x 4.00	0.31	11.3	210.7	252
5 x 4.00	0.31	12.6	260.0	313
4 x 6.00	0.31	13.6	298.4	359
5 x 6.00	0.31	15.1	358.7	444
4 x 10.0	0.41	17.2	517.1	615
5 x 10.0	0.41	19.3	620.5	776
4 x 16.0	0.41	20.8	756.0	917
5 x 16.0	0.41	23.1	944.0	1135
4 x 25.0	0.41	25.3	1145.7	1419
5 x 25.0	0.41	28.2	1399.2	1779

All measure have tolerances. (Tolerance of external diameter : ± 5% less / Tolerance of thickness : ± 15% less)
Manufacture SQ Size : 0.5㎟ ~ 35㎟

FIELDBUS
CABLES

RoHS

CC - LINK Cable Fixed Type

KICC - 110SB - F

CC-Link Ver.1.10 (110Ω) KICC - 110SB - F E150633 AWM
2464 AME-SB 80°C 300V VW-1 3C X 20AWG KWANGIL RoHS

Foamed polyethylene Insulation / Colour coded / Braid Shield

Construction

Conductor	Annealed bare copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 2
Insulation	Special foamed polyethylene
Filler	If necessary
Stranding	in layers
Wrapping	Aluminiwm Mylar Foil Shield Tape
Drain Wire	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 5
Shield	Tinned copper braid shield
Sheath	Special Poly Vinyl Chloride
Sheath Color	Dark Brown

Technical Data

Nomianl Rating	80°C, 300V	
Insulation Resistance	Min. 10000MΩ/km	
Spark Test Voltage	AC 500V	
Dielectric Test Voltage		
Core/Core	AC 500V / 1 min	
Core/Screen	AC 300V / 1 min	
Conductor Resistance	Max. 37.80Ω/km	
Capacitance	Max. 60pF/m	
Characteristics impedance	1 MHz	110 ± 15Ω
	5 MHz	110 ± 6Ω
Attenuation	1 MHz	Max. 1.6 dB/100m
	5 MHz	Max. 3.5 dB/100m

Each Equipment Connection

inner Core	Equipment
Blue	DA
White	DB
Yellow	DG
Drain Wire	SLD

Toxicity	acc. to RoHS
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060

CC-Link

Certificate

This is to certify that
the following product of
KWANG IL Electric Wire Co.,Ltd
has passed a CC-Link Conformance Test

Description of product: CC-Link Fixed Cable

Type: KICC-110SB-F

Ver. : CC-Link: 1.10

Date of Issue January 7, 2014

Reference Number 882

Chairman

CLPA CC-Link Partner Association

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)
3 x 0.5	7/0.32	0.64	2.50	8.0

Outstanding Features

- CLPA Certified CC - Link Ver. 1. 10
- Standard CC-Link Cable for high speed data transmission
- Corresponds to 10 Mbps transmission
- Variations prepared to match various use environment.
- Good EMC characteristics
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

CC - LINK Cable Flexible Type

KICC - 110SB - M

CC-Link Ver.1.10 (110Ω) KICC - 110SB - M (70% Spec) E150633 AWM
2464 AM-SB 80℃ 300V VW-1 3C X 20AWG KWANGIL RoHS

Super fine conductor / Polyethylene Insulation / Colour coded / Braid shielded

Construction

Conductor	Annealed bare copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	Special Polyethylene compound
Filler	IF necessary
Stranding	in layers
Wrapping	Special non-woven Tape
Shield	Tinned copper braid shield
Sheath	Special Poly Vinyl Chloride
Sheath Color	Light Brown

Technical Data

Nomianl Rating	80℃, 300V	
Insulation Resistance	Min. 10000MΩ/km	
Spark Test Voltage	AC 500V	
Dielectric Test Voltage		
Core/Core	AC 500V / 1 min	
Core/Screen	AC 300V / 1 min	
Conductor Resistance	Max. 37.80Ω/km	
Capacitance	Max. 60pF/m	
Characteristics impedance	1 MHz	110 ±15Ω
	5 MHz	110 ±6Ω
Attenuation	1 MHz	Max. 1.6 dB/100m
	5 MHz	Max. 3.5 dB/100m
Each Equipment Connection	inner Core	Equipment
	Blue	DA
	White	DB
	Yellow	DG
	Drain Wire	SLD
Toxicity	acc. to RoHS	
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060	

CC-Link

Certificate

This is to certify that
the following product of
KWANG-IL ELECTRIC WIRE CO., Ltd.
has passed a CC-Link Conformance Test

Description of product: Flexible Cable
Type: KICC-110SB-M
(CC-Link:1.10)

Date of Issue January 17, 2013
Reference Number 841

Chairman
CLPA CC-Link Partner Association

No. of Cores x cross section (No. / ㎟)	Conductor strands (EA / ㎜)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)
3 x 0.5	7/14/0.08	1.04	2.70	8.5

Outstanding Features

- CLPA Certified CC - Link Ver. 1. 10
- Standard CC-Link Cable for high speed data transmission
- Corresponds to 10 Mbps transmission
- Variations prepared to match various use environment.
- Good EMC characteristics
- Continuously high flexible
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

RoHS

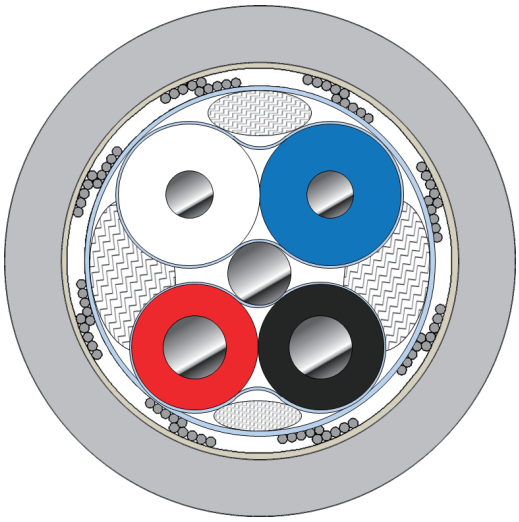
DeviceNet™ cables

KITRONIC DNET

E 150633 AWM 2464 80°C 300V VW-1 c AWM I/II A/B 80°C 300V FT1 DeviceNet. (Thick) 1P X 18AWG + 1P X 15AWG KWANGIL RoHS

Fine Conductor / Foamed PE & PVC Insulation / Braid Shielded

DeviceNet is a bus system developed by Allen Bradley (Rockwell Automation). These cables are used to interconnect various industrial devices, such as SPS controls or limit switches. The special characteristic of this bus system is that a data pair and a power supply pair are integrated in one cable. These cables with PVC sheath are designed for fixed installation.



Technical Data

Certification	DeviceNet.,		
Nomianl Rating	80°C, 300V		
Spark Test Voltage	AC 500V		
Dielectric Test Voltage			
Core/Core	AC 500V / 1 min		
Core/Screen	AC 300V / 1 min		
Conductor Resistance	Thick	18AWG	Max. 22.60 Ω/km
		15AWG	Max. 11.80 Ω/km
	Thin	24AWG	Max. 91.80 Ω/km
		22AWG	Max. 57.40 Ω/km
Insulation Resistance	Thick	18AWG	Min. 10,000 MΩ/km
		15AWG	Min. 100 MΩ/km
	Thin	24AWG	Min. 10,000 MΩ/km
		22AWG	Min. 100 MΩ/km
Mutual Capacitance	Max. 39.8 nF/m		
Characteristics impedance	120 ± 12 Ω		
Attenuation	Thick	125kHz	Max. 0.42 dB/100m
		500kHz	Max. 0.81 dB/100m
	Thin	125kHz	Max. 0.95 dB/100m
		500kHz	Max. 1.64 dB/100m
Toxicity	acc. to RoHS		
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060		

Construction

Conductor	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 6
Insulation	18, 24AWG : Foamed Polyethylene compound 15, 22AWG : Special Poly Vinyl Chloride
Insulation	18, 24AWG : White, Blue 15, 22AWG : Black, Red
Filler	If necessary
Wrapping	Aluminium Mylar Foil Shield Tape
Drain Wire	Tinned annealed copper standard acc. to IEC 60228 EN 60228, VDE 0295 Class 5
Shield	Tinned copper wire Braid Shielded
Sheath	Special Poly Vinyl Chloride
Sheath Color	Gray

Outstanding Features

- Certified ODVA DeviceNet.
- Standard DeviceNet. Cable for data transmission
- Variations prepared to match various use environment
- Good EMC characteristics
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

Type	No. of Cores x cross section (No. / ㎟)	Conductor diameter (㎜)	Insulation diameter (㎜)	Overall diameter (㎜)
THICK	1 x 2 x 18	1.20	3.70	11.70
	1 x 2 x 15	1.70	2.90	
THIN	1 x 2 x 24	0.60	1.95	6.90
	1 x 2 x 22	0.80	1.50	

RoHS

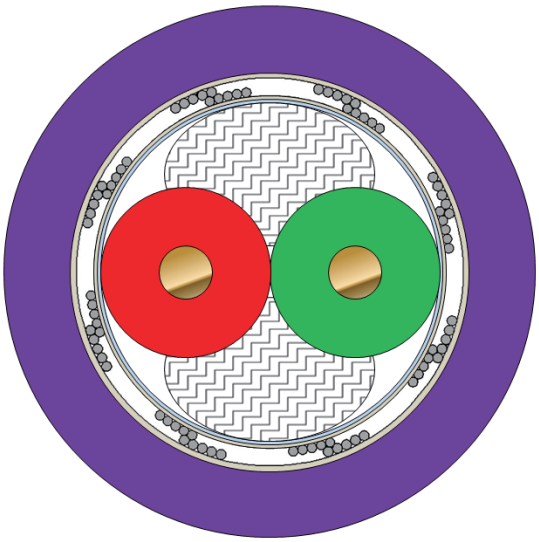
PROFI BUS

Profibus Cables
KITRONIC PB

FA Network Cable for PROFIBUS E150633 AWM
2464 80°C 300V VW-1 1P x 0.65mm KWANGIL RoHS

Foamed polyethylene / Braid Shielded

This system cable is used to interconnect L2-BUS components. This cable is an economical solution for the cell and field area. For the information exchange between different automation systems as well as for communication with the connected decentralized field units, serial field bus systems are used. The types mentioned here are suitable for indoor laying and are equipped with a special PVC sheath.



Technical Data

Nomianl Rating	80°C, 300V		
Insulation Resistance	Min. 1,000 MΩ/km		
Spark Test Voltage	AC 500V		
Dielectric Test Voltage Core/Core Core/Screen	 AC 500V / 1 min AC 300V / 1 min		
Conductor Resistance	Solid Type	Max. 55.00 Ω/km	
	Stranded Type	Max. 86.70 Ω/km	
Mutual Capacitance	Max. 30.0 nF/m		
Characteristics impedance	150 ± 15 Ω		
Attenuation	Solid Type	9.6 kHz	Max. 2.5 dB/km
		38.4 kHz	Max. 4.2 dB/km
		4.0 kHz	Max. 22.0 dB/km
		16.0 kHz	Max. 42.0 dB/km
Insulation Resistance	Stranded type	9.6 kHz	Min. 3.0 dB/km
		38.4kHz	Min. 5.0 dB/km
		4.0kHz	Min. 26.0 dB/km
		16.0kHz	Min. 55.0 dB/km
Toxicity	acc. to RoHS		
Fire performance	Flame retardant and self-extinguishing acc. to IEC 60332-1, EN 60332-1 VW-1 acc. to UL 1581 section 1080 FT1 acc. to UL 1581 section 1060		

Outstanding Features

- PROFIBUS Certified
- Standard PROFIBUS cable for data transmission.
- Variations prepared to match various use environment
- Good EMC characteristics
- No toxicity
- No flame propagation
- Flame retardant and self-extinguishing

Construction

Conductor	Solid or stranded Bare copper standard acc to IEC 60228, EN 60228, VDE 0295 Class 1 or class 6
Insulation	Soamed Polyethylene
Insulation Color	Red, Green
Filler	If necessary
Wrapping	Aluminium Mylar Foil Shield Tape
Shield	Tinned copper Braid Shielded
Sheath	Special Poly Vinyl Chloride
Sheath Color	Violet

Type	Conductor		Insulation Size (mm)	Sheath Size (mm)
	Size	Class		
Solid	22AWG	1	2.60	8.10
Stranded	22AWG	6	2.75	8.40

CUSTOM Cable

Over the past three decades, KWANGIL has been a market leader in manufacturing custom cables and engineering and designing high performance cables. KWANGIL takes pride in delivering unmatched quality and performance through our custom cable designs for diverse applications such as military, aerospace, industrial electronics, transportation, medical, commercial, undersea, and marine. KWANGIL's experienced engineers analyze our customer's specific requirements to provide the best design solutions for optimal performance. Every custom cable is made with thorough selections of insulation, shielding, fillers and jacketing material to maximize its performance and working life.

Conductor	
Size	32 - 2 AWG
Copper	Bare Copper
	Tinned Copper
Insulation	
Fluoropolymers	ETFE (Ethylene Tetrafluoroethylene)
	FEP (Fluorinated Ethylene Propylene)
PE (Polyethylene)	Foamed HDPE (High Density)
	HDPE (High Density)
	LDPE (Low Density)
	XLPE (Cross-Link)
PVC (Poly Vinyl Chloride)	Flexible PVC
	SR-PVC(Semi-Rigid)
TPE	Thermoplastic Elastomer
TPR	Thermoplastic Rubber
Fillers	
PP (Polypropylene)	
Nylon	
Cotton	
Paper	

Shielding	
Aluminum Foil Tape	
Braid	
Spiral	
Galvanized Steel Wire	
Sheath	
Fluoropolymers	ETFE (Ethylene Tetrafluoroethylene)
	FEP (Fluorinated Ethylene Propylene)
PE (Polyethylene)	HDPE (High Density)
	XLPE (Cross-Link)
PVC (Poly Vinyl Chloride)	Flexible PVC
	Rubber added PVC
	SR-PVC(Semi-Rigid)
TPE	Thermoplastic Elastomer
TPR	Thermoplastic Rubber
TPU	Thermoplastic Polyurethane

Designation Code For Robotics Cable

ex) KIFLEX R FHV ESB 1PX0.2㎟+5CX0.5㎟ KWANGIL

Robotics Model Name

Application

R : Cable Track
T : Torsion
S : Setting (Singnal & Control)

Material

V : Special Poly Vinyl Chloride
IRE : Special Polyethylene
TPE : Thermo Plastic Elastomer
U : Special Poly Urethane
FH : ETFE
HF : Halogen Free Compound

Shield Type

SB : Braid Shield
SW : Wrap or Screw Shield
ESB : Drain Wire + Braid Shield
AMS : AL Mylar Foil Shield
AMS - S : ETFE
AMS - SB : Halogen Free Compound
etc.

Inner Construction

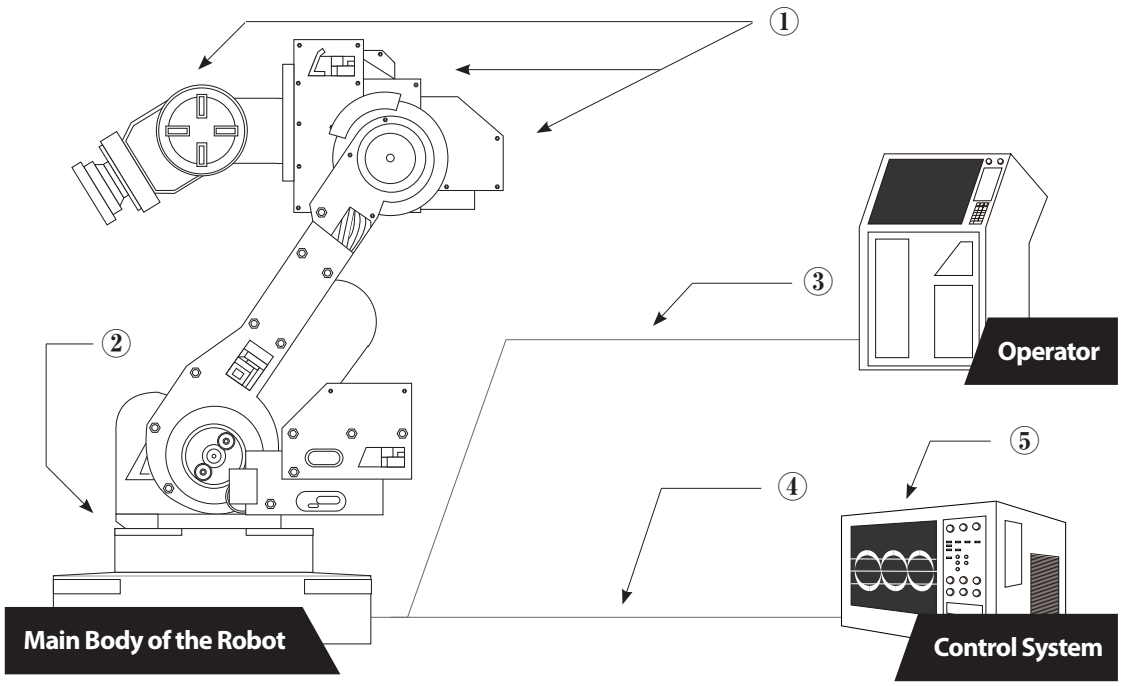
C : Core
P : Pair
T : Trial
SQ, ㎟ : Square
etc. : Hybrid & Customizing

Manufacture Name

Addition Surface Marking

1) Certification
2) Rating (Voltage & Temperature)
3) Customer requirements are determined after consultation

Application Part of Robotics Cable



Uses and Characteristics for each part

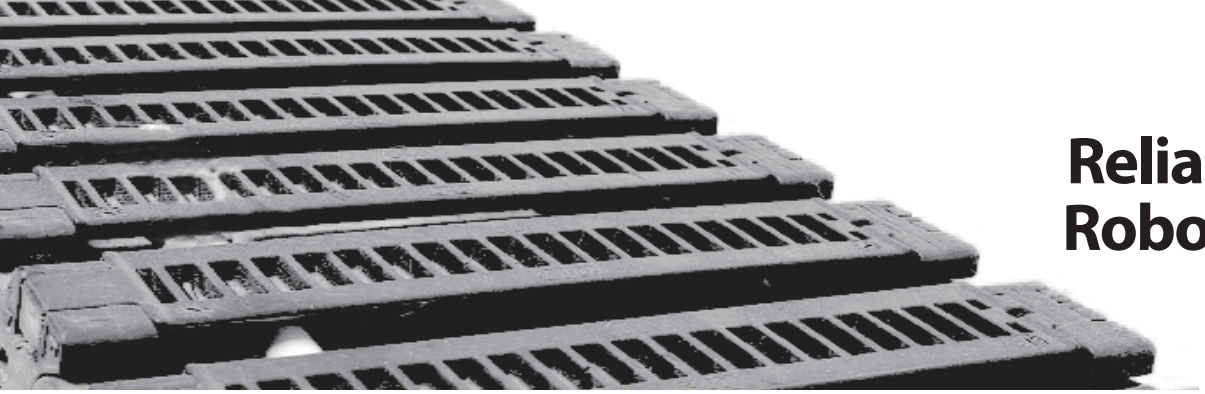
Application Part	Uses		Characteristics	Recommendation Model
①	Siganl	Super Flexible	High Speed, It performed many repeated movements	KIFLEX RFHV, KIFLEX RFHVU
	Power	Super Flexible		KIFLEX RFHV, KIFLEX RFHVU
②	Signal	High Flexible	Medium Speed, It performed many repeated movements.	KIFLEX RFHV - SB, KIFLEX RFHVU - SB
	Power	High Flexible		KIFLEX RVV, KIFLEX RFHV
③	Signal	Flexible	Low Speed, Lead for controlling the operation.	KIFLEX RVV - SB
④	Signal	Flexible	Assumes using a cable suitable for the purpose of each part of a connection cable of each operationg equipment into portions with a fixed part and movement.	KIFLEX RVVU, KIFLEX RFHVU
	Power	Fixed		KIFLEX RVV, UL 2464, UL 2969
		Flexible		KIFLEX RVVU, KIFLEX RFHVU
		Fixed		KIFLEX RVV, VCT, CVV
⑤	Signal	Fixed	Assumes the use of wires and cables used for internal control device.	PVC Insulation Wire & Cable
	Power	Fixed		PVC Insulation Wire & Cable

Addition Surface Marking

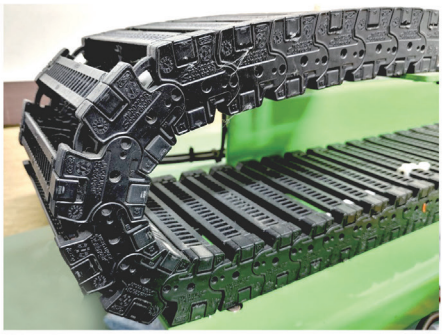
1) Development
2) Unified
3) Collaboration can be developed with our customers regarding the use environment.

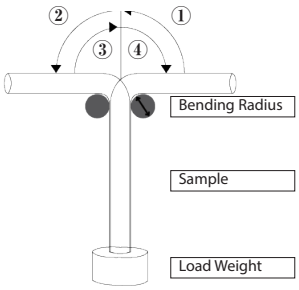
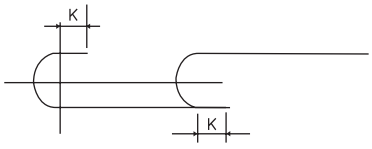
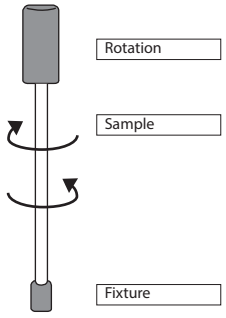
General Characteristics of Insulation & Sheath Materials

Material		PVC Type			Polyethylene type		Poly-propylene	Fluorine Type		
		PVC	Heat Resistance PVC	Cross-linked PVC	Poly-ethylene	Cross-linked Poly-ethylene		Ethylene-tetra Fluoro-ethylene	Fluoro-ethylene Propylene	Poly-tetra Fluoro-ethylene
Symbol		PVC	H-PVC	XLPVC	PE	XLPE	PP	ETFE	FEP	PTFE
Electrical	Dielectric Strength (kV/mm)	20~35	20~35	20~40	35~50	35~50	35~50	20~35	15~30	20~30
	Volume Resistivity (ℓ/cm)	10^{12}~10^{15}	10^{12}~10^{15}	10^{18}	10^{18}	10^{18}	10^{18}	10^{16}	10^{18}	10^{18}
	Dielectric Constant	6~8	6~8	3.5.5	2	2.3	2.3	2.6	2.1	2.1
	Dielectric Power Factor (%)	4~12	4~12	3~10	0.02~0.05	0.02~0.05	0.02~0.05	0.2	0.03	0.02
Physical	Tensile Strength	1.0~2.5	1.0~2.5	1.5~3.0	1.2~1.5	1.2~1.5	2.5~1.5	6~7	6~7	1.5~3.0
	Elongation	100~400	100~400	100~300	500~700	200~500	500~700	200~300	100~300	100~300
Specific Gravity		1.25~1.40	1.25~1.40	1.25~1.40	0.92~0.95	0.92~0.95	0.89~0.90	1.7	2.2	2.2
Softening Temperature (℃)		120	150	-	105~115	-	160	270	285	327
Rated Temperature (℃)		60	75~105	105	75	75~105	105	150	200	250
Flame Retardant		Very Good	Very Good	Very Good	Unsatis-factory	Unsatis-factory	Unsatis-factory	Excellent	Excellent	Excellent
Heat Resis-tance	Aiging Resistance	Fair	Good	Very Good	Good	Very Good	Very Good	Excellent	Excellent	Excellent
	Heat Deformation Resistance	Fair	Fair	Excellent	Very Good	Very Good	Good	Excellent	Excellent	Excellent
Cold Resistance		Fair	Fair	Fair	Very Good	Very Good	Fair	Excellent	Excellent	Excellent
Weather Resistance		Excellent	Excellent	Excellent	Unsatis-factory	Unsatis-factory	Unsatis-factory	Excellent	Excellent	Excellent
O-Zone Resistance		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent
Oil Resistance		Good	Good	Good	Good	Excellent	Excellent	Highly Excellent	Highly Excellent	Highly Excellent
Acid Resistance		Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Highly Excellent	Highly Excellent
Alkali Resistance		Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Highly Excellent	Highly Excellent



Reliance of the Robotics Cable

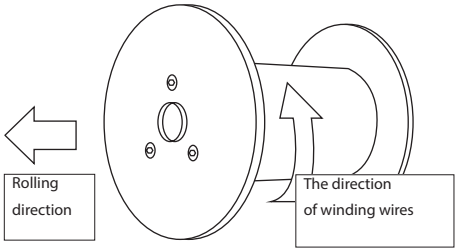


Test / Item	90°C Left & Right Bending Test	U-Bending Test	Torsion Test
Condition	• Bending Radius : Cable Diameter X 10 • Load Weight : 500g • Speed : 40 Cycle/min • Cycle : ① → ② → ③ → ④	• Bending Radius : Cable Diameter X 7.5 • Speed : 40 Cycle/min • Acceleration : 2G (20m/s²) • Stroke length : 1200mm	• Torsion angle : ±90°C, ±180°C, ±360°C • Load Weight : 250g • Speed : 60 Cycle/min • Stroke length : 1000mm
Movement			
Data	• Fixed Type : 100,000 Cycle • Flexible Type : 2,000,000 Cycle • High Flexible Type : 10,000,000 Cycle	• Fixed Type : 6,000 Cycle • Flexible Type : 8,000,000 Cycle • High Flexible Type : 15,000,000 Cycle	• Fixed Type : 1,000 Cycle • Flexible Type : 2,000,000 Cycle • High Flexible Type : 1,000,000 Cycle

Installing Information

Shipment Precautions

- Typically, wires and cables requires special attention because of weak line when the physical impact of the exterior
- If the drum is used fork lifts, and do not drop, and roll if you are careful to load in order not to shock rather than throw by default.

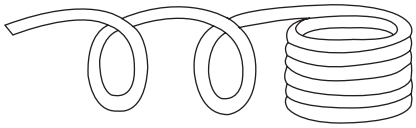


Way to release the wire

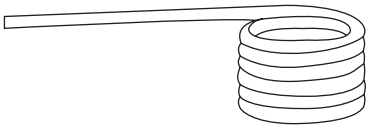
: This phenomenon must be twisted does not occur.

Case 1 : Roll Product

1) Wrong

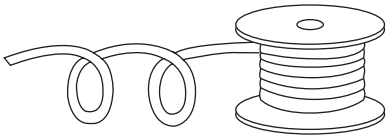


2) Correct

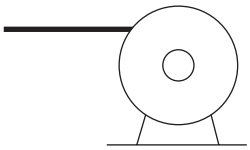


Case 2 : Drum Product

1) Wrong



2) Correct

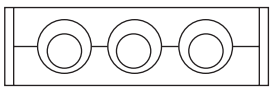


Install of Cable Track

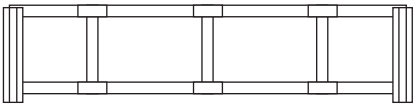
1) The Cable weight should be distributed symmetrically across the width of the chain.

2) When cable diameter is no more than 50% of chain inner height, separation must be made.

3) The free space for the cables in the guide stay shoul be 20% of the cable diameter.



<Normal Type>



<Separation Type>

<Double Type>

Identification of Insulation Color

Core Cable

Core	Color
2C	White, Black
3C	White, Red, Black
4C	White, Red, Green, Black
5C	White, Yellow, Red, Green, Black
6C	White, Yellow, Red, Green, Blue, Black
7C	White, Brown, Yellow, Red, Green, Blue, Black
8C	White, Gray, Yellow, Red, Brown, Green, Blue, Black
9C	White, Gray, Yellow, Orange, Red, Brown, Green, Blue, Black
10C	White, Gray, Yellow, Orange, Red, Brown, Green, Blue, Purple, Black
11C	White, Gray, Yellow, Orange, Red, Brown, Green, Blue, Purple, Black, Pink
12C	White, Gray, Yellow, Orange, Red, Brown, Green, Blue, Purple, Black, Pink, Light Blue
13C	White, Gray, Yellow, Orange, Red, Brown, Green, BLue, Purple, Black, Pink, Light Blue, Light Green
15C	White, Gray, Yellow, Orange, Red, Brown, Green, Blue, Purple, Black, White/Red, Yellow/Red, Red/White, Green/White, Blue/White
20C	White, Gray, Yellow, Orange, Red, Brown, Green, Blue, Purple, Black, White/Red, Gray/Red, Yellow/Red, Orange/White, Red/White, Brown/White, Green/White, Blue/White, Purple/White, Black/White
25C	White, Gray, Yellow, Orange, Red, Brown, Green, Blue, Purple, Black, White/Red, Gray/Red, Yellow/Red, Orange/White, Red/White, Brown/White, Green/White, Blue/White, Purple/White, Black/White, White/Blue, Yellow/Blue, Red/Yellow, Green/Yellow, Blue/Yellow
30C	White, Gray, Yellow, Orange, Red, Brown, Green, Blue, Purple, Black, White/Red, Gray/Red, Yellow/Red, Orange/White, Red/White, Brown/White, Green/White, Blue/White, Purple/White, Black/White, White/Blue, Yellow/Blue, Red/Yellow, Green/Yellow, Blue/Yellow, White/Green, Yellow/Green, Red/Green, Green/Red, Blue/Red

Pair Identification - 6 Pair

Core	Color	Core	Color	Core	Color
1P	White + Black	3P	Yellow + Blue	5P	Orange + Purple
2P	Red + Green	4P	Gray + Brown	6P	Pink + Light Blue

Pair Identification - 7 Pair

Core	Color	Core	Color	Core	Color
1P	White + White/Red	6P	Blue + Blue/White	11P	Pink + Pink/Black
2P	Yellow + Yellow/ Red	7P	Black + Black/White	12P	Light Blue + Light Blue/Black
3P	Red + Red/White	8P	Gray + Gray/Red	13P	Light Green + Light Green/Black
4P	Brown + Brown/White	9P	Orange + Orange/White	14P	Light Gray + Light Gray/Black
5P	Green + Green/White	10P	Purple + Purple/White	15P	Light Purple + Light Purple/Black

FA

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