



## **Product Overview**

Cable and CONNECTivity



# Cables, special cables, connectivity and accessories.

We offer our customers a wide range of products for various applications in almost all industries. **Everything around the cable, all from one source.** 

We are represented in more than 40 countries worldwide with strong partners. True to our motto "Cables in Motion", we are committed on a daily basis to ensuring that your applications are continuously in motion and thus remain economically successful.

You cannot find the right cable in our portfolio? Then contact us. We develop and construct for you individually exactly the cables, connectivity solutions, or systems that are tailored to your applications.

#### **TKD Product Overview**

TKD is the German distributor of the Cable Connectivity Group, an Infinite Electronics company, specialized in all types of cables. TKD has decades of experience in design and application technology, combined with a strong awareness of quality and environment. This gives our customers the security of receiving innovative and high-quality products, even for the most demanding requirements.



## Footprint in 8 countries, and active globally with our partner network.

#### Own branches in:

- Germany
- Belgium
- Netherlands
- Poland
- Italy
- France
- China
- USA



## **Globally active**

Welcome to the product portfolio of TKD Kabel GmbH. We are one of the world's leading suppliers of cables, ready-to-connect cable systems and cable accessories.

Since 2019 we are part of the Cable Connectivity Group, an Infinite Electronics company, and since then a progressive and international player in the specialty cable and connectivity solutions market.

CCG was formed from the merger of several successful companies in the cable and connectivity industry. The group of companies produces, distributes and assembles special cables as well as cable harnesses and accessories.

#### Distribution

knowledge company with added value in cables and accessories for wholesale and OEM customers with branches in the Netherlands, Belgium, Germany, Italy, Poland, France, China and the USA.



#### Assembly

customer-specific assembly of connectivity solutions for OEM customers with own locations in the Netherlands, Poland and Germany.



#### **Production**

the production of a wide range of special cables.

We provide the expertise to safely and reliably connect for a faster, smarter and sustainable world.

## Portfolio Overview Contents at a glance

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#### **Flexible control cables**

Flexible control cables are widely used across all different industries and applications. They connect electrical equipment like motors, switching devices and connect different electrical cabinets or simply distribute LV power across your industrial applications.

We are offering different voltage ranges starting with 300/500V up to 1kV to cope with different requirements inside of the application.

A wide range of different combination of insulations and sheath compounds suitable for all demands and regulations i.e., PVC or halogen free compounds or extremely robust PUR (Polyurethan) or TPE cables are available.

Depending on the application, we have cables in unshielded or shielded version to cope with EMC (Electromagnetic compatibility) requirements, as well as complying to different national standards like VDE and multinational standards like HAR and UL/CSA.

As a highlight, we have a wide range of cables that meet the CPR requirements in different classifications. Here especially our **FLAME-JZ/OZ-H FRNC** families, which are Dca and Cca classified or the shielded versions **FLAME-JZ/OZ-CH FRNC**, which even meets the B2ca requirement.

On top of it we are also able to offer extreme resistant cables like **KAWEFLEX® CONTROL ROBUST TPE** in for instance food or healthcare applications.





#### **Flexible control cables**



#### **PVC-control cables**

ÖPVC-JB/OB ÖPVC-JB/OB-YCY ÖPVC-JZ/OZ ÖPVC-OZ-Yö 1.000 V ÖPVC-JZ/OZ ARCTIC +UV BK ÖPVC-JZ/OZ-YCY ÖPVC-JZ/OZ-CY (LIYCY-JZ/OZ) ÖPVC-JB/OB-YSY ÖPVC-JZ/OZ ÖPVC-JZ/OZ

#### **Approved PVC-control cables**

H05VV5-F H05VVC4V5-K MULTINORM H05VV5-F, 2-NORM (H)05VV5-F MULTINORM-CY H05VVC4V5-K,... 2-NORM-CY (H)05VVC4V5-K 2-NORM +UV 1.000V GY | BK 2-NORM-CY +UV 1.000V GY | BK 2-NORM TRAY TC-ER MTW GY

2-NORM TRAY-CY TC-ER MTW GY

2-NORM TRAY+UV DB TC-ER MTW BK

2-NORM TRAY-CY+UV DB TC-ER MTW BK

#### Halogen-free control cables

FLAME-JZ/OZ-H FRNC - Dca FLAME-JZ/OZ-H FRNC - Cca FLAME-JZ/OZ-CH FRNC - Dca FLAME-JZ/OZ-CH FRNC - Cca or B2ca

#### PUR-control cables, cables for hand-held machinery

PUR GREY & PUR YELLOW H05BQ-F, H07BQ-F KAWEFLEX® CONTROL YPUR KAWEFLEX® CONTROL C-PUR GY... KAWEFLEX® CONTROL ROBUST TPE KAWEFLEX® CONTROL ROBUST C-TPE ROCKERFLEX®

#### Special single cores

HIGHFLEX LIFY ESUY copper ground wire 300/500V, 450/750V, 0,6/1kV, unshielded, CPR Eca 300/500V, 0,6/1kV, shielded, transparent, CPR Eca 300/500V, unshielded, CPR Eca 450/750V (IEC), 1.000V (UL), unshielded UL/CSA 300/500V, unshielded, cold resistant -60°C 300/500V, shielded, transparent, CPR Eca 300/500V, shielded, CPR Eca 450/750V (IEC), 1.000V (UL), shielded UL/CSA 0,6/1kV, steel wire braided, CPR Eca 0,6/1kV BK 0,6/1kV, unshielded, UV resistant, CPR Eca 0,6/1kV BK 0,6/1kV, shielded, UV resistant, CPR Eca

300/500V, unshielded, HAR, CPR Eca 300/500V, shielded, HAR, CPR Eca 300/500V (IEC), 600V (UL), unshielded, HAR, UL/CSA, CPR Eca

300/500V (IEC), 600V (UL), unshielded, HAR, UL/CSA, CPR Eca

300/500V (IEC), 1.000V (UL), unshielded , UL/CSA, CPR Eca 300/500V (IEC), 1.000V (UL), shielded , UL/CSA, CPR Eca 0,6/1kV [IEC), 600V (UL:TC-ER & MTW), 1.000V (UL: WTTC & AWM), unshielded, grey, CPR Eca 0,6/1kV [IEC), 600V (UL:TC-ER & MTW), 1.000V (UL: WTTC & AWM), shielded, grey, CPR Eca 0,6/1kV [IEC), 600V (UL:TC-ER & MTW), 1.000V (UL: WTTC & AWM), unshielded, black, UV-resistant, direct burial, CPR Eca 0,6/1kV [IEC), 600V (UL:TC-ER & MTW), 1.000V (UL: WTTC & AWM), shielded, black, UV-resistant, direct burial, CPR Eca

300/500V, unshielded, CPR Dca 300/500V, unshielded, CPR Cca 300/500V, shielded, CPR Dca 300/500V, shielded, CPR Cca or B2ca

300/500V, unshielded, (N)YMH11YÖ 300/500V, 450/750V, unshielded, halogen-free, orange, HAR, CPR Eca 300/500V, unshielded 300/500V, shielded, (N)YMHC11YÖ 300/500V, unshielded, black. cold flexible 300/500V, shielded, black, cold flexible 0,6/1kV, unshielded, yellow, for extreme conditions

500V, 750V, 1.000V, high flexible 2 kV Earthing Wire, shielded, transparent



## Electronic (LF), instrumentation & telecommunication cables Cables for intrinsically safe circuits

Electronic (LF), Instrumentation & Telecommunication cables help to transmit analogue and digital data and signals in all kinds of process-controlled facilities as well as for telecommunication applications, i.e., fire detection applications.

Depending on the application the range is starting with cables for electronic data transmission in flexible and fixed installations with PVC insulation and PVC sheath as well as halogen free options or even extremely robust PUR (Polyurethan) versions. They are available in unshielded or shielded to cope with EMC (Electromagnetic compatibility) demands.

Furthermore you will find instrumentation cables acc. to EN 50288-7 suitable in all kinds of process-controlled factory applications for example in chemical plants with different kinds of mechanical protections like steel wire armouring or even ATEX certification.

As highlight we have a wide range of cables complying with CPR requirements in different classification.





#### **Electronic (LF), instrumentation &** telecommunication cables **Cables for intrinsically safe circuits**



#### **Electronic cables**

FLITRONIC® LIVY ELITRONIC®-CY LIYCY PAARTRONIC®-CY LIYCY (TP) PAARTRONIC®-CY-CY LIYCY-CY (TP)

#### Halogen-free electronic cables

ELITRONIC®-CH LIHCH PAARTRONIC®-CH LIHCH (TP)

ELITRONIC®-OZ-CY LIYCY-OZ EB

PAARTRONIC®-CY LIYCY (TP) EB

DIN47100, 250V, unshielded, CPR Eca DIN47100, 250V, shielded, CPR Eca DIN47100, 250V, twisted pairs, shielded, CPR Eca DIN47100, 250V, twisted pairs, double shielded, CPR Eca

DIN47100, 250V, shielded, CPR Eca DIN47100, 250V, twisted pairs, shielded, CPR Eca

Electronic and control cables for intrinsically safe circuits 300/500V, shielded, blue DIN47100, 250V, shielded, twisted pairs, blue

Approved electronic and data cables

ELITRONIC®-CY LIYCY PAARTRONIC®-CY LIYCY (TP) DATATRONIC®-CY

#### Low-capacity data cables

DATEX-CY LI2YCY (TP) / DATEX-CYv + UV LI2YCYv (TP) DATEX-PIMF-CY LI2YCY-PIMF

#### Hook up and installation cables

JE-Y(ST)Y Bd & JE-Y(ST)Y Bd EB JE-LIYCY Bd & JE-LIYCY Bd EB RD-Y(ST)Y Bd & RD-Y(St)Yv Bd | RD-Y(ST)Y Bd EB & RD-Y(St)Yv Bd EB

#### Instrumentation cables

INDUCOM® RE-2X(St)Yv-fl INDUCOM® RE-2X(St)Yv-fl PIMF INDUCOM® RE-2X(ST)YSWBY-FL INDUCOM® RE-2X(ST)YSWBY-FL PIMF INDUCOM® RE-2X(ST)YSWAY-FL INDUCOM® RE-2X(ST)YSWAY-FL PIMF

#### **Telecommunication cables**

J-Y(St)Y La J-H(ST)H Bd A-2Y(L)2Y St III Bd , A-2YF(L)2Y St III Bd DIN47100 or IEC, 300V, shielded, UL/CSA DIN47100 or IEC, 300V, shielded, twisted pairs, UL/CSA DIN47100, 250V, 300V, shielded, twisted pairs, UL/CSA, AWG

DIN47100, 250V, shielded, twisted pairs DIN47100, 250V, shielded, pairs in metal foil DIN47100, 250V, shielded, pairs in metal foil

VDE0815, 225V, shielded, CPR Eca VDE0815, 225V, shielded, CPR Eca VDE0815, 225V, shielded, CPR Eca

300V, shielded, EN50288-7, CPR Eca 300V, shielded, pairs in metal foil, EN50288-7, CPR Eca 300V, shielded, steel wire braid, EN50288-7, CPR Eca 300V, shielded, pairs in metal foil, steel wire braid, EN50288-7, CPR Eca 300V, shielded, steel wire armour, EN50288-7, CPR Eca 300V, shielded, pairs in metal foil, steel wire armour, EN50288-7, CPR Eca

VDE0815, 300V, shielded, CPR Eca VDE0815, 300V, shielded, halogen free, different CPR versions available VDE0816, 300V, shielded, UV-resistant

#### BUS, LAN, coaxial & video cables

BUS, LAN, coaxial & video cables are used for transmission of all bus and LAN communication like i.e., PROFIBUS, CAN BUS or other relevant protocols as well as Coaxial and video cables for transmission of high frequency data.

They are used in fixed installations for Network infrastructure, as well as flexible cables for connection of different devices along the whole industrial application i.e. in drag chain systems or elevators and comply with the different standard transmission rates Cat.5 up to Cat.7A.

Depending on the application and environmental requirements, the cables comply with different standards like i.e. UL/CSA listings and partly classified according to the CPR regulations.

A specific focus is set on the Industrial Ethernet portfolio with cables complying with PROFINET and SPE organisation requirements, as well as cables for other industrial ethernet applications and divided to the different installation categories. i.e., Type A for fixed installations, Type B for flexible installations as well as Type C and R for high dynamic usage.

TKD is member of the SPE (Single Pair Ethernet) Industrial Partner Network.

#### BUS | FIELDBUS technology - for industrial, process & building automation

**PROFIBUS DP / FMS / FIP 150 Ω** PROFIBUS DP / FMS / FIP

PROFIBUS DP / FMS / FIP - HF

PROFIBUS PA 100 Ω PROFIBUS PA

MULTIBUS & INTERBUS 100 - 120 Ω MULTIBUS & INTERBUS MULTIBUS & INTERBUS - HF

CAN BUS - ControlerAreaNetwork 120  $\Omega$  CAN BUS CAN BUS - HF

**DeviceNet 120 Ω** DeviceNet DeviceNet - HF

Foundation Fieldbus 100  $\Omega$ Foundation Fieldbus fixed installation & limited flexible applications, UL/CSA, available acc. to CPR Eca and Dca for high flexible applications (drag chain, robotic & festoon) UL/CSA

for fixed installation & limited flexible applications, UL/CSA

for fixed installation & limited flexible applications, UL/CSA for high flexible applications (drag chain) UL/CSA

for fixed installation & limited flexible applications, UL/CSA for high flexible applications (drag chain) UL/CSA

for fixed installation & limited flexible applications, UL/CSA for high flexible applications (drag chain) UL/CSA

for fixed installation & limited flexible applications, UL/CSA



#### BUS, LAN, coaxial & video cables

ASi-BUS Aktor Sensor Interface ASi-BUS for fixed installation & limited flexible applications, UL/CSA ASi-BUS - HF for high flexible applications (drag chain) UL/CSA SafetyBUS 100 - 120 Ω for fixed installation & limited flexible applications, UL/CSA SafetvBUS SafetyBUS - HF for high flexible applications (drag chain) UL/CSA EIB/KNX BUS 75 Ω - building automation EIB/KNX BUS 75 for fixed installation, PVC or halogen-free, CPR Eca LAN | ETHERNET-Technology - for structured industry & building cabling structured industry cabling for fixed installation, limited flexible & flexible use, UL/CSA, **PROFINET** Cat.5e different CPR versions available for high flexible applications (drag chain, robotic & festoon) PROFINET Cat.5e - HF UL/CSA, CPR Eca versoion available INDUSTRIAL ETHERNET Cat.5e - Cat.7A for fixed installation, limited flexible & flexible use, UL/CSA, CPR Eca Version erhältlich INDUSTRIAL ETHERNET Cat.5e - Cat.7A - HF for high flexible applications (drag chain, robotic, reeling & festoon) UL/CSA INDUSTRIAL ETHERNET Cat.5e - Cat.7A - Special for fixed installation, special applications, fire resistant SPE - Single Pair Ethernet for fixed installation, limited flexible & flexible use, UL/CSA SPE - Single Pair Ethernet - HF for high flexible applications (drag chain, robotic) UL/CSA INDUSTRIAL EtherCAT for fixed installation, limited flexible & high flexible use, UL/CSA structured building cabling

for fixed installation & patch applications	
LAN Cat.5e - 200 MHz	PVC or halogen free, different CPR versions available
LAN Cat.6 - 250 MHz	PVC or halogen free, different CPR versions available
LAN Cat.6A - 500 MHz	PVC or halogen free, different CPR versions available
LAN Cat.7 - 600 MHz	PVC or halogen free, different CPR versions available
LAN Cat.7A - 1000 MHz	PVC or halogen free, different CPR versions available
LAN Cat.7e - 12001500 MHz	PVC or halogen free, different CPR versions available

#### FO BUS-Technology - optical data transmission for industrial and building automation

for fixed installation, limited flexible & flexible use, UL/CSA

#### **Coaxial cable**

POF - SIMPLEX, DUPLEX & BUS

for fixed installation & limited flexible useRG coaxial cable 50 Ω50 Ohm, UL MIL C 17, CPR Eca version availableRG coaxial cable 75 Ω75 Ohm, UL MIL C 17, CPR Eca version availableRG coaxial cable PTFE/FEP50/75/95 Ω 50, 75, 95 Ohm, FEP, UL MIL C 17

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## Control and data cables – high flexible – for use in drag chains & robotic applications

Control and data cables - high flexible - are the complementary versions of our standard control and electronic cables but for extreme harsh applications such as drag chain systems or robotic applications where an outstanding mechanical performance is needed.

Similar as the standard portfolio they are available in different voltage classes and depending on the application in different designs related to material choice as well as national and international standards.

The specific designs allow our cables to be capable of withstanding the specific requirements in drag chain systems as well as robotic applications with continuous movement cycles or a lot of bending cycles occur. Available in various versions where a high number of bending cycles or high accelerations are required due to the application.

The KAWEFLEX® 6 series allows due to its specific design up to 10 Mio. bending cycles and is available in halogen free and UV resistant versions, UL/CSA approved

The KAWEFLEX® ALLROUND series allows due to its specific design traverse lengths up to 400m and is also available in halogen free and UV resistant versions, UL/CSA approved.

For sure all versions are available in shielded and unshielded versions to cope with EMC (Electromagnetic compatibility) requirements. Thanks to the specific design developed inhouse, the reliability of shielded versions are outstanding even to high mechanical requirements.







## Control and data cables – high flexible – for use in drag chains & robotic applications

300/500V, unshielded, UL/CSA

0,6/1kV, unshielded, halogen-free, UL/CSA

0,6/1kV, unshielded, halogen-free, UL/CSA

0,6/1kV, shielded, halogen-free UL/CSA

0,6/1kV, shielded, halogen-free, UL/CSA

DIN47100, 300V, unshielded, UL/CSA

DIN47100, 300V, twisted pairs, shielded, UL/CSA

DIN47100, 300V, unshielded, halogen-free, UL/CSA

DIN47100, 300V, twisted pairs, shielded, halogen-free, UL/CSA

DIN47100, 300V, shielded, halogen-free, UL/CSA

300V, shielded, halogen-free, UL/CSA

DIN47100, 300V, shielded, UL/CSA

300/500V, shielded, UL/CSA

0,6/1kV, unshielded, UL/CSA

0,6/1kV, shielded, UL/CSA

300/500V, shielded, UL/CSA

300/500V, shielded, UL/CSA

300/500V, shielded, UL/CSA

#### KAWEFLEX® Control cables for use in drag chains

for light to medium requirements KAWEFLEX® 6100 ECO SK-PVC KAWEFLEX® 6200 ECO SK-C-PVC

#### for normal requirements

KAWEFLEX® 6110 SK-PVC KAWEFLEX® 6110 TRAY SK-PVC KAWEFLEX® 6210 SK-C-PVC KAWEFLEX® 6210 TRAY SK-C-PVC KAWEFLEX® Allround 7110 SK-PVC BK

for increased requirements KAWEFLEX® 6120 SK-PUR KAWEFLEX® Allround 7210 SK-C-PVC BK

#### for high requirements

KAWEFLEX® 6130 SK-PUR KAWEFLEX® 6230 SK-C-PUR KAWEFLEX® Allround 7130 SK-PUR BK KAWEFLEX® Allround 7230 SK-C-PUR BK

#### for highest requirements

KAWEFLEX® Allround 714.0 SK-TPE BK KAWEFLEX® Allround 7240 SK-C-TPE BK

#### **KAWEFLEX® Electronic cables for use in drag chains**

for normal requirements KAWEFLEX® 6310 SK-PVC KAWEFLEX® 6410 SK-C-PVC KAWEFLEX® 6510 SK-TP-C-PVC

#### for increased requirements

KAWEFLEX® Allround 7710 SK-TP-C-PVC BK

#### for high requirements

KAWEFLEX® 6330 SK-PUR KAWEFLEX® 6430 SK-C-PUR KAWEFLEX® 6530 SK-TP-C-PUR KAWEFLEX® Allround 7720 SK-TP-C-PUR BK

#### for highest requirements

KAWEFLEX® Allround 7730 SK-TP-C-TPE BK

300V. shielded. UL/CSA

300V shielded UI /CSA

#### KAWEFLEX® KINEMATICS® 3D Control & Electronic robotic cables for torsional stress for bending and torsion applications KAWEFLEX® KINEMATICS® 3D Control & Power 0,6/1kV, unshielded, halogen-free, UL/CSA

 KAWEFLEX® KINEMATICS® 3D Control & Power
 0,0 (kV, disinletded, halogen-free, UL/CSA

 DIN47100, 300V, unshielded, halogen-free, UL/CSA

#### Servo-drives, measurement & system cables - flexible & high flexible - for use in drag chains and robot applications

This Chapter includes Servo-drives, measurement & system cables for the electric drive technology variants for fixed installation as well as high flexible cables for use in permanent (highly) dynamic applications like drag chain or robotic.

The **KAWEFLEX® Servo 2X... EMC** double screened versions for fixed installation and casually movement as Power, control and connecting cable for drive systems with frequency converter technology - The XLPE core insulation offer the same reliability as the standard PE version but thanks to the choice of insulation system it could operate at a higher core temperature (2X: 90°C max conductor temp. vs 2Y: 70°C for standard PE versions).

Starting with a cross section of 10mm<sup>2</sup> they are available in optimized design where the earth conductor is located in the interstices of the conductor assembly resulting in much lower diameter and reduced weight.

This is complemented by the **KAWEFLEX® 5 series** for high flexible use in drag chains as Servo-Drive, feedback, encoder, resolver, spedo sensor, signal & system cables for EMC compatible connecting. These cables are according to Siemens (MC 500, MC800PLUS), Bosch Rexroth, SEW Eurodrive, Lenze standard and other also compatible systems available.

Our **KINEMATICS® 3D series** additionally withstands a large number of cycles in torsional operation in robotic applications.





#### Servo-drives, measurement & system cables - flexible & high flexible - for use in drag chains and robot applications

#### Cables for servo-drives 0,6/1kV

KAWEFLEX® SERVO 2YSL(St)CY... & 2YSL(St)CYK KAWEFLEX® SERVO 2XSL(St)CY... & 2XSL(St)CYK

KAWEFLEX® SERVO 9YSL(St)CY...VFD

KAWEFLEX® SERVO 2XSL(St)CYK...VFD TRAY

KAWEFLEX® SERVO 2XSL(St)CHK...FRNC

#### KAWEFLEX® 5 Series – Cables for servo-drives 0,6/1kV

for flexible applications KAWEFLEX® 5268 C-PVC SERVO KAWEFLEX® 52DSL C-PVC

#### for drag chain applications

KAWEFLEX® 5178 SC SK-PVC KAWEFLEX® 5278 SC SK-C-PVC KAWEFLEX® 5278 SK-C-PVC SERVO KAWEFLEX® 5288 SK-C-PUR SERV KAWEFLEX® 52DSL SK-C-PUR 0,6/1kV, EMC optimized, double shielded, K: UV-resistant 0,6/1kV, EMC optimized, double shielded, K: cold flexible, UV-resistant 0,6/1kV, EMC optimized, double shielded, BK: UV-resistant,

direkt burial, UL/CSA, CPR Eca 0,6/1kV, EMC optimized, double shielded, K: cold flexible, UV-resistant, direkt burial, UL/CSA, CPR Eca 0,6/1kV, EMC optimized, double shielded , halogen-free, K: cold flexible, UV-resistant, CPR Cca

0,6/1kV, shielded, UL/CSA, acc. MC500 0,6/1kV, shielded, DSL Hybrid, UL/CSA

0,6/1kV, single core, unshielded, UL/CSA 0,6/1kV, single core, shielded, UL/CSA 0,6/1kV, shielded, UL/CSA , acc. MC500PLUS 0,6/1kV, shielded, UV-resistant, UL/CSA, ,acc. MC800PLUS 0,6/1kV, shielded, DSL Hybrid, UV-resistant, UL/CSA

#### KAWEFLEX® 5 Series – Measurement & System cables (feedback, encoder, resolver, speedo sensor, signal)

for flexible applications KAWEFLEX® 5468 C-PVC for drag chain applications KAWEFLEX® 5488 SK-C-PUR

300V, shielded, UL/CSA, acc. MC500

300V, shielded, UL/CSA, acc. MC5200

300V, shielded, UL/CSA, acc. MC500

300V, shielded, halogen-free, UV-res., UL/CSA acc. MC800PLUS

#### KAWEFLEX® ServoDriveQ UL/CSA - cables for DRIVE-CLiQ applications for fixed installation & flexible applications

KAWEFLEX® ServoDriveQ C-PVC KAWEFLEX® ServoDriveQ FLEX-C-PVC for drag chain applications

KAWEFLEX® ServoDriveQ Plus SK-C-PUR

# KAWEFLEX® Allround Motor cables 0,6/1kV for use in drag chainsfor increased requirementsKAWEFLEX® Allround 7310 SK-PVC0,6/1kV, unshielded, UL/CSAKAWEFLEX® Allround 7410 SK-C-PVC0,6/1kV, shielded, UL/CSAfor highest requirementsKAWEFLEX® Allround 7510 SK-TPE (NATURAL)0,6/1kV, single core, unshieldedKAWEFLEX® Allround 7520 SK-TPE (ONYE)0,6/1kV, single core, unshieldedKAWEFLEX® Allround 7610 SK-C-TPE (NATURAL)0,6/1kV, single core, shielded, hKAWEFLEX® Allround 7610 SK-C-TPE (NATURAL)0,6/1kV, single core, shielded, hKAWEFLEX® Allround 7320 SK-TPE0,6/1kV, unshielded, halogen-f

KAWEFLEX® Allround 7420 SK-C-TPE

#### . .

300/V, shielded, halogen-free, UV-res., UL/CSA, acc. MC800PLUS

0,6/1kV, single core, unshielded, halogen-free, UV-res., UL/CSA 0,6/1kV, single core, unshielded, halogen-free, UV-res., UL/CSA 0,6/1kV, single core, shielded, halogen-free, UV-res., UL/CSA 0,6/1kV, unshielded, halogen-free, UV-res., UL/CSA 0,6/1kV, shielded, halogen-free, UV-res., UL/CSA

#### KAWEFLEX KINEMATICS® 3D Servo, MeSys & Hybrid robotic cables for torsional stress

#### for bending and torsion applications

KAWEFLEX KINEMATICS® 3D Servo KAWEFLEX KINEMATICS® 3D Measure & System cable KAWEFLEX KINEMATICS® 3D Hybrid 0,6/1kV, shielded, halogen-free, UV-res., UL/CSA 300V, shielded, , halogen-free, UV-res., UL/CSA 0,6/1kV, shielded elements, halogen-free, UV-res., UL/CSA

#### Crane, conveyor and lift cables

Crane, conveyor cables are used in all applications related to material handling and lift applications describe specific solutions for either passenger transportation or freight lifts.

Specific cables are needed for both applications as they are working with heigh speeds and / or permanent movement where on top of it cables need to carry its own weight.

In our **LIFTTEC®** portfolio dedicated for lift applications we see mainly PVC flat cables, partly with supporting elements. As communication inside of passenger lifts is today state of the art, we also offer cables for lift applications which can transport signals and even CAT.7 cables for fast data communication.

For crane systems there is a wide range of different cables needed which are in many cases subject to reeling or festoon applications, where either cables with improved mechanical performance due to the nature of the reeling application or fast trolley speeds in festoon usage are needed.

Travelling speeds of up to 180m/min in reeling operations and up to 240m/min in festoon applications are requiring an adapted design to withstand this kind of mechanical stress.

On both application we see rubber or PUR cable designs where especially PUR designs offer improved weight and diameter combined with extra mechanical performance and on top halogen free compounds are used.

Our **REELTEC® PUR-HF** and **FESTOONTEC® PUR-HF** are developed specially to combine those features and are available in shielded and unshielded designs.

Other than cables for standard installations crane and lift cables are not subject to any CPR ratings.





#### Crane, conveyor and lift cables

**PVC-flat cables** 

for festoon & lift applications

FESTOONTEC® H05VVH6-F, (H)05VVH6-F 300/500V, unshielded, HAR FESTOONTEC® H07VVH6-F, (H)07VVH6-F 450/750V, unshielded, HAR

#### PVC special flat cables, unshielded and shielded

for festoon & lift applications

FESTOONTEC® YCFLY, YFLCYK (EMC) FESTOONTEC® KYCFLY, KYFLCY (EMC) FESTOONTEC® H05VVD3H6-F FESTOONTEC® KYFLTY, KYFLTFY FESTOONTEC® KYCFLTY, KYFLTCY (EMC) for lift applications LIFTTEC® (H)05VE7A7VH6-F

300/500V, shielded 300/500V, shielded 300/500V, unshielded, steel supporting element 300/500V, unshielded, steel supporting element 300/500V, shielded, steel supporting element

300/500V, shielded data pairs

300/500V. unshielded 0,6/1kV, shielded

up to 06/1kV, unshielded, halogen-free

300/500V, unshielded, textile supporting element

DIN47100, 300V, shielded, steel supporting element

300/500V, shielded, textile supporting element

Cat7, shielded, steel supporting elements

300/500V, unshielded, textile supporting element, for mid rise

300/500V, shielded, textile supporting element, mid rise supported

300/500V, unshielded, halogen-free, textile supporting element

300/500V, element shielded, halogen-free, textile supporting element

**PVC lift cables** LIFTTEC® KYSTY, KYSTUY LIFTTEC® KYSTY-MR

**Polychloropren flat cables** for festoon & lift applications FESTOONTEC® NGFLGÖU, (N)GFLGÖU

Halogen-free flat cables for festoon & lift applications FESTOONTEC® LSOH, LSOH-C (EMC)

FESTOONTEC® M(StD)HÖU (EMC)

LIFTTEC® YSSTCY, YSSTVCY LIFTTEC® KYSTCY, KYSTCUY, KYSTFUY LIFTTEC® KYSTCY-MR KYSTEY-MR LIFTTEC® CAT.7 - PVC

#### Halogen-free lift cables

LIFTTEC® K12YSTU11Y LIFTTEC® K9YSTFU11Y, K9YSTCU11Y LIFTTEC® CAT.7 - H LIFTTEC® CAT.7 - H-LC

Cat.7, shielded, halogen-free, steel supporting elements, premium version Cat.7, shielded, halogen-free, steel supporting elements

#### PVC control cables with and without supporting element

for lift applications LIFTTEC® YMHY-KT LIFTTEC® YMHY-KST LIFTTEC® FYMYTW

300/500V, unshielded, textile supporting element 300/500V, unshielded, steel supporting element 300/500V, unshielded, 2 steel supporting elements, unshielded

#### Polychloropren control cables with supporting element

for lift applications

LIFTTEC® FLGÖU LIFTTEC® STN LIFTTEC® STCN (EMC) 300/500V, unshielded, textile supporting element 300/500V, unshielded, textile supporting element 300/500V, shielded, textile supporting element



#### Crane, conveyor and lift cables



#### Reelable cables

REELTEC® PUR-HF REELTEC® (K) NSHTÖU, (N)SHTÖU REELTEC® KSM-S (N)SHTÖU REELTEC® KSM-S (N)SHTÖU+FO

Cables for usage in baskets SPREADERFLEX 3GSLTOE

Trailing cables 1-30 kV for reeling applications REELTEC® KSM-S (N)TSCGEWÖU REELTEC® KSM-S (N)TSCGEWÖU + FO 0,6/1kV, unshielded, halogen-free 0,6/1kV, unshielded 0,6/1kV, unshielded 0,6/1kV, unshielded, failure-free datatransmission via FO

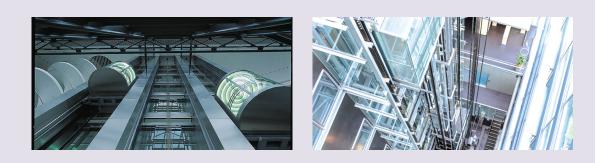
0,6/1kV, unshielded

3,6/6kV to 12/20kV, unshielded 3,6/6kV to 12/20kV, unshielded, failure-free datatransmission via FO

Control cables for cable trolley systemsFESTOONTEC® PUR-HF0,6/11FESTOONTEC® C-PUR-HF0,6/11FESTOONFIBERFLEX PUR-HFfiber

Battery charge cable WYBLYK 0,6/1kV, unshielded, halogen-free 0,6/1kV, shielded, halogen-free fiber optic, halogen-free

80V, Battery cable





State-of-the-art cables that deliver extreme performance.



#### **Rubber cables**

Rubber cables are widely used when a specific flexibility or high mechanical stress is needed, they are used for connection of tools and mobile equipment or i.e., on construction sites or as connection for distribution cabinets and also suitable in wet or humid environment and partly even in application in water.

Different other applications require specific designs like i.e., welding applications or short circuit proof cables.

Specific highlight is our **H07RN-F PREMIUM** which combines the features of different other designs in one unique cable design where we have an answer for 5 different designs (low and high temperature, halogen free and underwater application) combined in only one cable.





#### **Rubber cables**

07

Light and middle rubber-sheathed flexible cables H05RR-F, H05RN-F 30

Heavy rubber-sheathed flexible cables H07RN-F, A07RN-F H07RN-F PREMIUM NSSHÖU

Welding cables H01N2-D, H01N2-E

**Special rubber core** NSGAFÖU NSHXAFÖ

**Cables for permanent use in water** TML N-RD round, TML N-F flat TML T-RD round, TML T-F flat 300/500V, unshielded, HAR, CPR Eca

450/750V, unshielded, HAR, CPR Eca 450/750V, +90 °C, unshielded, halogen-free, HAR, CPR Eca 0,6/1kV, unshielded, VDE

100V, unshielded, HAR

1,8/3kV, unshielded, VDE, CPR Eca 1,8/3kV, unshielded, halogen-free, VDE, CPR Eca

450/750V, 0,6/1kV, waste water 450/750V, 0,6/1kV, drinking water



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## (08)

#### **Extreme temperature cables**

For applications where either due to electrical requirements a higher temperature on the core is needed or environmental conditions ask for higher temperatures, we have a wide range of different cables which answering this demand.

The scope depending on the application is as wide as the temperature range available as there are different solutions available to answer demands **from -190°C up to +350°C.** 

Materials incorporated could be Silicone, FEP, PTFE and others.





#### **Extreme temperature cables**

#### Silicone insulated cables for temperatures up to +180°C

SiD, SiD/GL, SiF, SiF/GL, SiFF, SiFv, SiZ	300/500V, singles cores & twin cable, halogen-free, solid &
	fine stranded, GL:glass silk braid
ZKSi ignition cable	20kV, halogen-free, fine stranded
HZLSi high volt age ignition cable	15 & 20kV, halogen-free, fine stranded
SiL neon cable	10kV, halogen-free, fine stranded
SIHF-J	300/500V, unshielded, halogen-free, fine stranded
SIHF+C / SIHF-SI+C	300/500V, shielded, halogen-free, fine stranded
SIHF-J/GLP	300/500V, halogen-free, fine stranded, glass-silk and steel wire braided
H05SS-F	300/500V, halogen-free, fine stranded, HAR
H05SS-F EWKF	300/500V, halogen-free, fine stranded, initial tear, tear growth &
	notch resistant, HAR

#### FEP/PTFE insulated cables for temp. up to +205°C / +260°C

THERM-205-FEP-EA	600V, up to 205°C, single cores, tinned or silvered
THERM-260-PTFE-EA	600V, up to 260°C, single cores, silvered or nickel plated
THERM-260-PTFE/GLP	600V, up to 260°C, multi core, glass-silk and steel wire braided



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#### Cables and wires for fixed installation

Cables and wires for fixed installation can be found in almost every kind of electrical installation such as building and infrastructure or in many kinds of switchboard or cabinet installations.

The portfolio includes single wires with only insulation with different properties and approvals as well as multicore cables. As such kind of wires and cables are used in fixed installations there is very often a requirement for specific CPR approval and classification, therefore almost all our designs are CPR classified.

One of the focus areas is the wide portfolio of different single core cables like i.e., the harmonized **H05V-K / H07V-K** or their relevant halogen free versions **H05Z-K/H07Z-K**, as well as the types with multi approval like the **MULTINORM H07V2-K** coping with harmonized and UL/CSA standards.





#### Cables and wires for fixed installation

**PVC-insulated wiring cables** LIYvz, H05V-K, H07V-K

300/500V, 450/750V, Hook-up wires, HAR, CPR Eca

300/500V, 450/750V, Hook-up wires, HAR,UL/CSA, CPR Eca

#### PVC-insulated wiring cables with UL/CSA approval

Multinorm H05V2-K, H07V2-K Wire

Halogen-free wiring cables LIHvz, H05Z-K, H07Z-K

300/500V, 450/750V, Hook-up wires, CPR Eca

300V, 600V, Hook-up wires, UL/CSA

Installation cable

300/500V, CPR Eca

Halogen-free installation cable NHXMH

300/500V, CPR Dca

#### **High voltage cables**

NYY 0,6/1kV NYCY 0,6/1kV NYCWY 0,6/1kV NAYY 0,6/1kV 0,6/lkV, UV-resistant, direct burial, VDE, CPR Eca 0,6/lkV, shielded, UV-resistant, direct burial, VDE, CPR Eca 0,6/lkV, shielded, UV-resistant, direct burial, VDE, CPR Eca 0,6/lkV, AL-conductor, UV-resistant, direct burial, VDE, CPR Eca





#### **Fuel resistant cables**

Special solutions for safety-relevant applications in the field of petroleum and filling station technology.

Based on special sheathing compounds, our cables withstand the extreme demands placed on plastics by contact with various fuels.





#### Fuel resistant cables

#### Data transmission cables, resistant to oil and petrol

A-Y(ST)YÖ

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240V, element shielded, UV-resistant, direct burial

#### Cables for probes and limiting value transmitters, resistant to oil and petrol

KOAX-Kabel RG 59 blau LIYCYÖ, LI2YCYVÖ-OB LIY(ST)YÖ, LI2Y(ST)YÖ RE-2Y(ST)YÖ 75 Ohm, shielded, blue, direct burial 300V, 500V, shielded, blue, direct burial 500V, 900V, shielded, blue, direct burial 300V, shielded, blue, direct burial

High voltage cables, resistant to oil and petrol (N)YYÖ

0.6/1kV, shielded, black or blue, UV-resistant, direct burial





#### CONNECTivity

Connectivity consolidates all different cable solutions together with activities like cutting, labelling, printing or preparation with cable lugs, end sleeves or connectors to an either ready to install or even plug and play solution.

It could also include further preparation with cables hoses or even spiral cables or cables ready to install for i.e., servo motors in line with requirements from well know companies like Bosch Rexroth. SEW Eurodrive, Siemens, Lenze Sick and many others.

For any demand on Connectivity solutions / cable preparation / ready to install solutions feel free to contact us.





#### CONNECTivity

#### Spiral cables

#### Connection and control cables

KAWEFLEX® SPIKA H05VV-F KAWEFLEX® SPIKA H05BQ-F KAWEFLEX® SPIKA H07BQ-F

#### **Control & Power cables**

REELTEC® PUR-HF SPIKA

#### **Electronic cables**

KAWEFLEX® SPIKA Li12Y11Y KAWEFLEX® SPIKA Li12YD11Y

#### Ready made cable assemblies...

• Servo assemblies acc. to system standards ... compatible systems such as e.g.: 300/500V, PVC, black, HAR 300/500V, PUR, orange and black, HAR 450/750V, PUR, orange and black, HAR

0,6/1kV, PUR, black

250V, PUR, black 250V, shielded, PUR, black

B&R , Baumüller, Berger Lahr, Control Techniques, ELAU, Fagor, FANUC, Heidenhain, Jetter, Lenze, LTi DRiVES, NUM, Omron, Rexroth, SEW, Siemens, Sick, Stöber, u.a.

- Woven ribbon cable
- Assembled reeling cables
- Fiber Optic Assemblies
- assembled drag chain systems
- assembled fiber optic cable car
- Assemblies for elevator industry
- etc.

#### ... for

- Engines and controls
- Operating devices/controls for machine tools, mobile concrete pumps,
- robots and operational equipment
- Measuring systems for the process industry
- Operating devices for hospital beds
- Power and data transmission in surgical tables
- Mechanical & Plant engineering
- Building and mining machines
- Passenger and goods elevators
- Space and aviation technology
- Crane and harbour constructions
- etc.



## Notes

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# TKD worldwide

Our companies are active in a broad selection of industries. Contact us to discuss our custom solutions for your specific industry.

- Machine building
- Industrial automation
- Energy
- Marine & offshore
- Automotive
- Public infrastructure
- Agriculture

- Lifts and escalators
- Transportation infrastructure
- Cranes & material handling
- Train, tram and metro industry
- Telecommunication and datacentres
- Food & beverage





#### About Infinite Electronics

Infinite Electronics has a global portfolio of leading in-stock connectivity solution brands. Infinite's brands help propel the world's innovators forward by working urgently to provide products, solutions, and real-time support for their customers. Backed by Warburg Pincus, Infinite's brands serve customers across a wide range of industries with a broad inventory selection, same-day shipping and 24/7 customer service. Learn more at infiniteelectronics.com.

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