



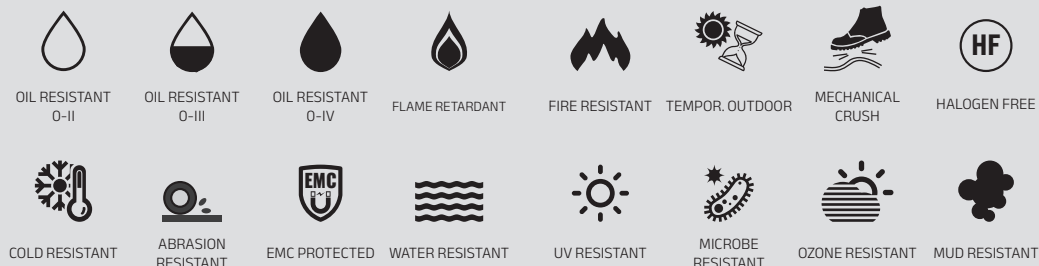
MOTION**STANDARD**

CONTROL, MULTIWIRE, POWER STANDARD CABLE SOLUTIONS

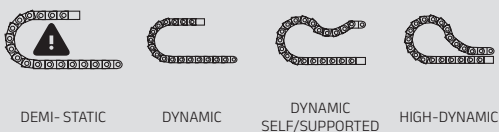
ICONS

Summary of the icons you will find in the catalogue pages, grouped by relevant area

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



DURABILITY IN MECHANICAL & THERMAL CONDITIONS



BALANCED APPLICATION & STANDARD INTEGRATED COMPLIANCE



ELECTRICAL PROPERTIES



Use the icons for a fast summary and a general idea of the related product features. More details on product characteristics are available in the proper sections of each product page.

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Safety notice.

The cables and wires described in the catalogue are produced in accordance with national and international standards, as well as plant standards; application safety, as stipulated in the safety directives, standards, and statutory regulations, as amended, are provided. Following proper installation and usage guidelines, the possibility of product-specific dangers can be excluded. This catalogue describes general information for each product's use. Installation and processing must only be executed by qualified electricians.

CONTENTS

MOTION**CONTROL**

MOTION**MULTIWIRE**

MOTION**WIRE**

MOTION**POWER**

MOTIONCONTROL

FOR STATIC AND DYNAMIC APPLICATIONS – SHIELDED AND UNSHIELDED VERSIONS FROM 2 TO 65 CONDUCTORS.

This type of low-capacitance incremental feedback and position indicator cable is designed to transmit control pulses for precise servo motor positioning and travel. They also serve as connection cables for tachometers, brakes, and pulse generators in plant, mechanical, and automation technology.

For use in drag chains, always adhere to the manufacturer's assembly guidelines. To ensure optimal electromagnetic compatibility (EMC), a double-sided and all-around extensive contact area of the copper braiding is recommended.

**INCREASED
OPERATIVE
TENSION TO**

600 V

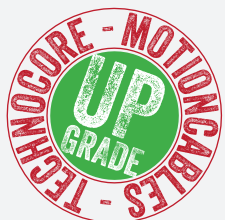
PERFORMANCE LEVEL	Suggested Usage Conditions	Insulation	Outer Sheath	Key Features
DYNAMIC PERFORMANCE	Dynamic installation (cable carriers)	Polypropylene (PP)	PVC TM5	Designed for repeated bending, high performance in dynamic environments
HIGH DYNAMIC PERFORMANCE	Severe dynamic, robotics	Polypropylene (PP)	Polyurethane (PUR FRHF)	High flexibility even at low temperatures, chemical resistance, halogen-free

CONSTRUCTION

- ▶ Bare Copper wire, finely stranded acc. to DIN VDE 0295 cl.5 / IEC 60228 cl. 5 extra finely stranded acc. to DIN VDE 0295 cl. 6 / IEC 60228 cl. 6
- ▶ Core insulation: Special-PP.
- ▶ Core identification: according to DIN 47100 colour codification (See DIN 47100 table at page 244).
- ▶ Tape: Fleece Tape.
- ▶ Shield: tinned copper wire braid, approx. optical coverage 85% .
- ▶ Separator: Fleece Tape.
- ▶ Outer sheath: PVC TM5 (level DP), PUR FRHF (level HP). Outer sheath colour: Grey RAL 7001 (level DP), Black RAL 9005 (level HP).

MAIN PROPERTIES

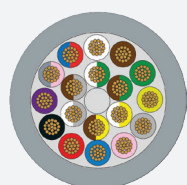
- ▶ Resistant to: UV radiation, oil, grease, coolants, hydraulic fluids, microbes, numerous alkalis and solvents.
- ▶ Optimum compliance with requirements for electromagnetic compatibility (EMC) by approx. 85% coverage from the braided screen.
- ▶ Designed for min. 100.000 bending cycles these cables are produced to high quality specifications.
- ▶ The materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers.



All MOTION**C**ONTROL cables have been designed to **operate up to 600 V**, enabling a simplification of distribution systems:

Advantage	Description
Increased Compatibility	Connection between AC and DC circuits without the need for isolating components
Reduced Cable Count	Enables consolidation within control panels
Insulation Optimization	Utilizes materials with a low dielectric constant ($\epsilon_r \leq 2,3$)
Superior Service Life	MTBF > 100.000 hours, resulting in a 40% reduction in failures

CABLES TYPES



**DYNAMIC PERFORMANCE
UNSHIELDED**

**PVC
TM5**

600 V

**-30 °C
+80 °C**

94



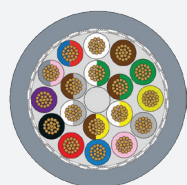
**HIGH DYNAMIC PERFORMANCE
UNSHIELDED**

**PUR
FRHF**

600 V

**-50 °C
+80 °C**

96



**DYNAMIC PERFORMANCE
SHIELDED**

**PVC
TM5**

600 V

**-30 °C
+80 °C**

98



**HIGH DYNAMIC PERFORMANCE
SHIELDED**

**PUR
FRHF**

600 V

**-50 °C
+80 °C**

100



**DYNAMIC PERFORMANCE
SHIELDED TWISTED PAIRS**

**PVC
TM5**

600 V

**-30 °C
+80 °C**

102



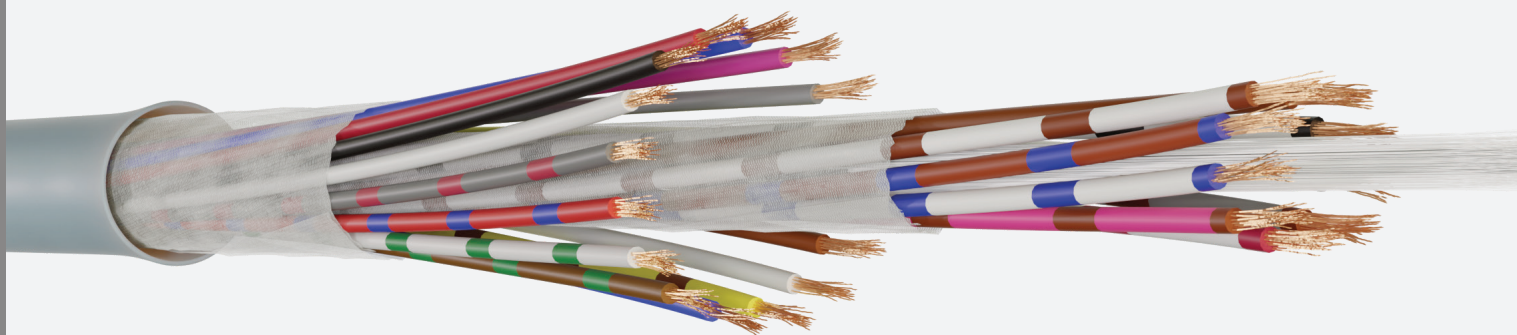
**HIGH DYNAMIC PERFORMANCE
SHIELDED TWISTED PAIRS**

**PUR
FRHF**

600 V

**-50 °C
+80 °C**

104

UL 2570
80 °C - 600VAWM I/II A/B
80 °C - 600VLABS
Free

5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED

20 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +80	-5 / +80	-5 / +80

ELECTRICAL PROPERTIES

	Test Voltage	4,0 kV x 5 min acc.to EN 50395 Cl. 10.3
	Insulation Resistance	≥ 1.0 GΩ x km @ 20 °C acc.to EN 50395 Cl. 8.1
	Max. Short Circuit Temperature	160 °C (≤ 1s)
	Operating Voltage	600 V (UL/CSA)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS

OIL RESISTANT	FLAME RETARDANT	WATER RESISTANT	EMC PROTECTED	TEMPOR. OUTDOOR	MECHANICAL CRUSH

MAIN ADVANTAGES

High-Conductivity Flexible Copper Conductors	Stable signal transmission for automation with standard requirements.
Low Dielectric Constant Insulation	Reduced losses and better signal quality even over medium-to-long distances.
Ordered Layer Construction	Compact structure and easily manageable during installation.
Flexible PVC TM5 Jacket	Good resistance to abrasion, oils, and mechanical agents in standard industrial environments.
Low-Adhesion Surface	Easy sliding in cable trays and ease of wiring in confined spaces.
Suitable for Control Voltages up to 600 V	Allows for the integration of signals and auxiliary power in a single cable.
No EMC Shielding	Ideal for installations in protected environments or those with a low risk of electromagnetic interference.
Compatibility with Decentralized Networks	Suitable for digital and analog signals in remote I/O, PLCs, and field modules.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,14	LDN26X02UR-G	MC.21022627	2 x 0.14	26	3.7	3
	LDN26X03UR-G	MC.21032627	3 x 0.14	26	3.8	4
	LDN26X04UR-G	MC.21042627	4 x 0.14	26	4.1	6
	LDN26X05UR-G	MC.21052627	5 x 0.14	26	4.4	7
	LDN26X07UR-G	MC.21072627	7 x 0.14	26	4.7	10
	LDN26X08UR-G	MC.21082627	8 x 0.14	26	5.0	11
	LDN26X10UR-G	MC.21102627	10 x 0.14	26	5.7	14
	LDN26X12UR-G	MC.21122627	12 x 0.14	26	5.9	17
	LDN26X14UR-G	MC.21142627	14 x 0.14	26	6.3	19
	LDN26X18UR-G	MC.21182627	18 x 0.14	26	6.8	24
	LDN26X25UR-G	MC.21252627	25 x 0.14	26	8.1	34
	LDN26X37UR-G	MC.21372627	37 x 0.14	26	9.6	50
0,25	LDN24X02UR-G	MC.21022427	2 x 0.25	24	4.1	4
	LDN24X03UR-G	MC.21032427	3 x 0.25	24	4.3	6
	LDN24X04UR-G	MC.21042427	4 x 0.25	24	4.5	8
	LDN24X05UR-G	MC.21052427	5 x 0.25	24	4.8	11
	LDN24X07UR-G	MC.21072427	7 x 0.25	24	5.5	15
	LDN24X08UR-G	MC.21082427	8 x 0.25	24	5.9	18
	LDN24X10UR-G	MC.21102427	10 x 0.25	24	6.2	21
	LDN24X12UR-G	MC.21122427	12 x 0.25	24	6.8	25
	LDN24X14UR-G	MC.21142427	14 x 0.25	24	7.0	30
	LDN24X18UR-G	MC.21182427	18 x 0.25	24	7.7	38
	LDN24X25UR-G	MC.21252427	25 x 0.25	24	8.9	53
	LDN24X37UR-G	MC.21372427	37 x 0.25	24	9.8	78
0,34	LDN22X02UR-G	MC.21022227	2 x 0.34	22	4.6	7
	LDN22X03UR-G	MC.21032227	3 x 0.34	22	4.8	10
	LDN22X04UR-G	MC.21042227	4 x 0.34	22	5.1	13
	LDN22X05UR-G	MC.21052227	5 x 0.34	22	5.5	16
	LDN22X07UR-G	MC.21072227	7 x 0.34	22	6.4	23
	LDN22X08UR-G	MC.21082227	8 x 0.34	22	6.8	26
	LDN22X10UR-G	MC.21102227	10 x 0.34	22	7.2	33
	LDN22X12UR-G	MC.21122227	12 x 0.34	22	7.8	40
	LDN22X14UR-G	MC.21142227	14 x 0.34	22	8.1	46
	LDN22X18UR-G	MC.21182227	18 x 0.34	22	8.9	59
	LDN22X25UR-G	MC.21252227	25 x 0.34	22	10.4	82
	LDN22X37UR-G	MC.21372227	37 x 0.34	22	11.5	121

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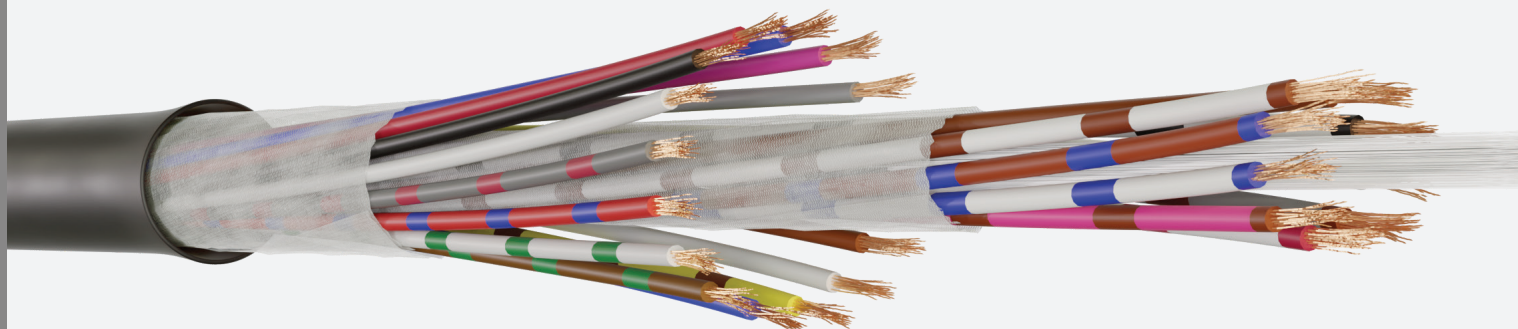
All the codes are available in the EPLAN PLAN8 System (use the EPLAN code in the relevant column).



SPAC CAVI

All the codes are available in the SPAC CAVI system (use MotionCables item code).

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UL 21223
80 °C - 600VAWM I/II A/B
80 °C - 600VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +80	-40 / +80	-40 / +80	-40 / +80

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage

600 V (UL/CSA)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

Extra-Flexible Copper Conductors

Signal stability even with repeated bending.

Low Dielectric Constant Insulation

Low attenuation and fast response in control signals.

Layered Construction

High flexibility with good mechanical resistance.

Anti-Abrasion PUR FRHF Jacket

Long service life even in harsh industrial environments.

Anti-Adhesion Surface

Smooth sliding in cable carriers and movable conduits.

Halogen-Free and Silicone-Free Materials

Compatibility with sensitive environments and painting processes.

No EMC Shielding

Designed for protected routing or separation from sources of interference.

Optimized for Moving Applications

Ideal for axis control, pneumatic systems, and mobile modules.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm ²			mm ²		mm	kg / km
0.14	LDN26X02UP-N ●	MC.31022635	2 x 0.14	26	3.7	3
	LDN26X03UP-N ●	MC.31032635	3 x 0.14	26	3.8	4
	LDN26X04UP-N ●	MC.31042635	4 x 0.14	26	4.1	6
	LDN26X05UP-N ●	MC.31052635	5 x 0.14	26	4.4	7
	LDN26X07UP-N ●	MC.31072635	7 x 0.14	26	4.7	10
	LDN26X08UP-N ●	MC.31082635	8 x 0.14	26	5.0	11
	LDN26X10UP-N ●	MC.31102635	10 x 0.14	26	5.7	14
	LDN26X12UP-N ●	MC.31122635	12 x 0.14	26	5.9	17
	LDN26X14UP-N ●	MC.31142635	14 x 0.14	26	6.3	19
	LDN26X18UP-N ●	MC.31182635	18 x 0.14	26	6.8	24
	LDN26X25UP-N ●	MC.31252635	25 x 0.14	26	8.1	34
	LDN26X37UP-N ●	MC.31372635	37 x 0.14	26	9.6	50
0.25	LDN24X02UP-N ●	MC.31022435	2 x 0.25	24	4.1	4
	LDN24X03UP-N ●	MC.31032435	3 x 0.25	24	4.3	6
	LDN24X04UP-N ●	MC.31042435	4 x 0.25	24	4.5	8
	LDN24X05UP-N ●	MC.31052435	5 x 0.25	24	4.8	11
	LDN24X07UP-N ●	MC.31062435	7 x 0.25	24	5.5	15
	LDN24X08UP-N ●	MC.31082435	8 x 0.25	24	5.9	18
	LDN24X10UP-N ●	MC.31102435	10 x 0.25	24	6.2	21
	LDN24X12UP-N ●	MC.31122435	12 x 0.25	24	6.8	25
	LDN24X14UP-N ●	MC.31142435	14 x 0.25	24	7.0	30
	LDN24X18UP-N ●	MC.31182435	18 x 0.25	24	7.7	38
	LDN24X25UP-N ●	MC.31252435	25 x 0.25	24	8.9	53
	LDN24X37UP-N ●	MC.31372435	37 x 0.25	24	9.8	78
0.34	LDN22X02UP-N ●	MC.31022235	2 x 0.34	22	4.6	7
	LDN22X03UP-N ●	MC.31032235	3 x 0.34	22	4.8	10
	LDN22X04UP-N ●	MC.31042235	4 x 0.34	22	5.1	13
	LDN22X05UP-N ●	MC.31052235	5 x 0.34	22	5.5	16
	LDN22X07UP-N ●	MC.31072235	7 x 0.34	22	5.8	23
	LDN22X08UP-N ●	MC.31082235	8 x 0.34	22	6.8	26
	LDN22X10UP-N ●	MC.31102235	10 x 0.34	22	7.2	33
	LDN22X12UP-N ●	MC.31122235	12 x 0.34	22	7.8	40
	LDN22X14UP-N ●	MC.31142235	14 x 0.34	22	8.1	46
	LDN22X18UP-N ●	MC.31182235	18 x 0.34	22	8.9	59
	LDN22X25UP-N ●	MC.31252235	25 x 0.34	22	10.4	82
	LDN22X37UP-N ●	MC.31372235	37 x 0.34	22	11.5	121

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EPLAN

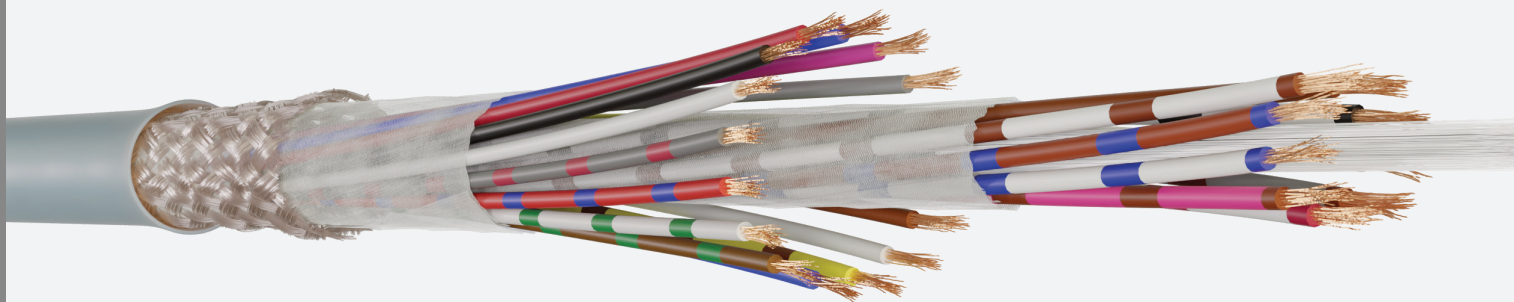
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SPAC CAVI

All the codes are available in the SPAC CAVI system (use MotionCables item code).

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UL 2570
80 °C - 600VAWM I/II A/B
80 °C - 600VLABS
Free

5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED

20 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +80	-5 / +80	-5 / +80

ELECTRICAL PROPERTIES

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage

600 V (UL/CSA)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR



MECHANICAL CRUSH

MAIN ADVANTAGES

High-Conductivity Flexible Copper Conductors

Reliable signal transmission even over medium-to-long distances.

Low Dielectric Value Insulation

Good signal integrity for precise commands and feedback.

Concentric Layered Construction

Stable and neat structure even in environments with contained vibrations.

High-Coverage Copper Braid Shielding

Effective protection against external electromagnetic interference.

Oil and Abrasion-Resistant PVC Jacket

Guaranteed durability in dynamic applications.

Anti-Adhesion Surface

Facilitated sliding in cable trays or complex control cabinets.

Suitable for Control Voltages up to 600 V

Integration of signal and auxiliary power in a single line.

Suitable for Sensitive Signals

Protects analog or digital signals in mixed EMC environments.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,14	LDS26X02UR-G	MC.22022627	(2 x 0.14)	26	4.1	10
	LDS26X03UR-G	MC.22032627	(3 x 0.14)	26	4.2	11
	LDS26X04UR-G	MC.22042627	(4 x 0.14)	26	4.5	13
	LDS26X05UR-G	MC.22052627	(5 x 0.14)	26	4.8	16
	LDS26X07UR-G	MC.22072627	(7 x 0.14)	26	5.1	19
	LDS26X08UR-G	MC.22082627	(8 x 0.14)	26	5.4	21
	LDS26X10UR-G	MC.22102627	(10 x 0.14)	26	6.1	27
	LDS26X12UR-G	MC.22122627	(12 x 0.14)	26	6.3	30
	LDS26X14UR-G	MC.22142627	(14 x 0.14)	26	6.7	33
	LDS26X18UR-G	MC.22182627	(18 x 0.14)	26	7.2	41
	LDS26X25UR-G	MC.22252627	(25 x 0.14)	26	8.5	54
	LDS26X37UR-G	MC.22372627	(37 x 0.14)	26	10.0	75
0,25	LDS24X02UR-G	MC.22022427	(2 x 0.25)	24	4.6	12
	LDS24X03UR-G	MC.22032427	(3 x 0.25)	24	4.8	15
	LDS24X04UR-G	MC.22042427	(4 x 0.25)	24	5.0	18
	LDS24X05UR-G	MC.22052427	(5 x 0.25)	24	5.3	21
	LDS24X07UR-G	MC.22072427	(7 x 0.25)	24	6.0	27
	LDS24X08UR-G	MC.22082427	(8 x 0.25)	24	6.4	30
	LDS24X10UR-G	MC.22102427	(10 x 0.25)	24	6.7	43
	LDS24X12UR-G	MC.22122427	(12 x 0.25)	24	7.3	45
	LDS24X14UR-G	MC.22142427	(14 x 0.25)	24	7.5	49
	LDS24X18UR-G	MC.22182427	(18 x 0.25)	24	8.2	64
	LDS24X25UR-G	MC.22252427	(25 x 0.25)	24	9.4	88
	LDS24X37UR-G	MC.22372427	(37 x 0.25)	24	10.3	115
0,34	LDS22X02UR-G	MC.22022227	(2 x 0.34)	22	5.1	16
	LDS22X03UR-G	MC.22032227	(3 x 0.34)	22	5.3	19
	LDS22X04UR-G	MC.22042227	(4 x 0.34)	22	5.6	24
	LDS22X05UR-G	MC.22052227	(5 x 0.34)	22	6.0	28
	LDS22X07UR-G	MC.22072227	(7 x 0.34)	22	6.9	38
	LDS22X08UR-G	MC.22082227	(8 x 0.34)	22	7.3	42
	LDS22X10UR-G	MC.22102227	(10 x 0.34)	22	7.7	51
	LDS22X12UR-G	MC.22122227	(12 x 0.34)	22	8.3	59
	LDS22X14UR-G	MC.22142227	(14 x 0.34)	22	8.6	72
	LDS22X18UR-G	MC.22182227	(18 x 0.34)	22	9.4	85
	LDS22X25UR-G	MC.22252227	(25 x 0.34)	22	10.9	122
	LDS22X37UR-G	MC.22372227	(37 x 0.34)	22	12.0	162

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EPLAN

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SPAC CAVI

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UL 21223
80 °C - 600VAWM I/II A/B
80 °C - 600VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +80	-40 / +80	-40 / +80	-40 / +80

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage

600 V (UL/CSA)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

Extra-Flexible Copper Conductors

Consistent electrical performance even during intensive motion.

Low Dielectric Constant Insulation

High signal quality for precise synchronization.

Layered Structure with Shielding

Protection and mechanical robustness in cable carriers.

High-Coverage Copper Braid

High EMC immunity in disturbed environments.

Oil and Chemical-Resistant PUR Jacket

Long service life even in oily environments or with coolants.

Anti-Adhesion Surface

Prevents wear from prolonged friction.

Halogen-Free and Silicone-Free Materials

Suitable for cleanrooms, food automation, and painting processes.

Ideal for Dynamic Feedback Systems

Supports encoders, motors, and high-frequency control.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,14	LDS26X02UP-N ●	MC.32022635	(2 x 0.14)	26	4.1	10
	LDS26X03UP-N ●	MC.32032635	(3 x 0.14)	26	4.2	11
	LDS26X04UP-N ●	MC.32042635	(4 x 0.14)	26	4.5	13
	LDS26X05UP-N ●	MC.32052635	(5 x 0.14)	26	4.8	16
	LDS26X07UP-N ●	MC.32072635	(7 x 0.14)	26	5.1	19
	LDS26X08UP-N ●	MC.32082635	(8 x 0.14)	26	5.4	21
	LDS26X10UP-N ●	MC.32102635	(10 x 0.14)	26	6.1	27
	LDS26X12UP-N ●	MC.32122635	(12 x 0.14)	26	6.3	30
	LDS26X14UP-N ●	MC.32142635	(14 x 0.14)	26	6.7	33
	LDS26X18UP-N ●	MC.32182635	(18 x 0.14)	26	7.2	41
	LDS26X25UP-N ●	MC.32252635	(25 x 0.14)	26	8.5	54
	LDS26X37UP-N ●	MC.32372635	(37 x 0.14)	26	10.0	75
0,25	LDS24X02UP-N ●	MC.32022435	(2 x 0.25)	24	4.6	12
	LDS24X03UP-N ●	MC.32032435	(3 x 0.25)	24	4.8	15
	LDS24X04UP-N ●	MC.32042435	(4 x 0.25)	24	5.0	18
	LDS24X05UP-N ●	MC.32052435	(5 x 0.25)	24	5.3	21
	LDS24X07UP-N ●	MC.32072435	(7 x 0.25)	24	6.0	27
	LDS24X08UP-N ●	MC.32082435	(8 x 0.25)	24	6.4	30
	LDS24X10UP-N ●	MC.32102435	(10 x 0.25)	24	6.7	43
	LDS24X12UP-N ●	MC.32122435	(12 x 0.25)	24	7.3	45
	LDS24X14UP-N ●	MC.32142435	(14 x 0.25)	24	7.5	49
	LDS24X18UP-N ●	MC.32182435	(18 x 0.25)	24	8.2	64
	LDS24X25UP-N ●	MC.32252435	(25 x 0.25)	24	9.4	88
	LDS24X37UP-N ●	MC.32372435	(37 x 0.25)	24	10.3	115
0,34	LDS22X02UP-N ●	MC.32022235	(2 x 0.34)	22	5.1	16
	LDS22X03UP-N ●	MC.32032235	(3 x 0.34)	22	5.3	19
	LDS22X04UP-N ●	MC.32042235	(4 x 0.34)	22	5.6	24
	LDS22X05UP-N ●	MC.32052235	(5 x 0.34)	22	6.0	28
	LDS22X07UP-N ●	MC.32072235	(7 x 0.34)	22	6.9	38
	LDS22X08UP-N ●	MC.32082235	(8 x 0.34)	22	7.3	42
	LDS22X10UP-N ●	MC.32102235	(10 x 0.34)	22	7.7	51
	LDS22X12UP-N ●	MC.32122235	(12 x 0.34)	22	8.3	59
	LDS22X14UP-N ●	MC.32142235	(14 x 0.34)	22	8.6	72
	LDS22X18UP-N ●	MC.32182235	(18 x 0.34)	22	9.4	85
	LDS22X25UP-N ●	MC.32252235	(25 x 0.34)	22	10.9	122
	LDS22X37UP-N ●	MC.32372235	(37 x 0.34)	22	12.0	162

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UL 2570
80 °C - 600V



AWM I/II A/B
80 °C - 600V



LABS
Free



5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED



20 m / s²

ACCELERATION



≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +80	-5 / +80	-5 / +80

ELECTRICAL PROPERTIES



Test
Voltage

4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3



Insulation
Resistance

≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1



Max. Short
Circuit
Temperature

160 °C (≤ 1s)



Operating
Voltage

600 V (UL/CSA)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR



MECHANICAL CRUSH

MAIN ADVANTAGES

Flexible Copper Conductors

Transmission reliability for control and I/O signals.

Twisted Pairs without Shielding

Reduction of internal crosstalk even without EMC protection.

Low Dielectric Constant Insulation

High transmission quality even on parallel channels.

Compact Twisted-Pair Structure

Best electrical balance for multi-signal systems.

Flexible PVC Jacket

Good mechanical resistance for fixed installation in control cabinets and cable trays.

Low-Adhesion Surface

Ease of installation in neat bundles or vertical cable trays.

No EMC Shielding

Ideal for environments with low electromagnetic interference.

Optimized for Digital or Analog Signals

Suitable for sensors, I/O modules, and internal machine connections.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,14	LDS26P02UR-G	MC.23042627	(2 x 2 x 0.14)	26	5.8	17
	LDS26P03UR-G	MC.23062627	(3 x 2 x 0.14)	26	6.1	20
	LDS26P04UR-G	MC.23082627	(4 x 2 x 0.14)	26	6.5	24
	LDS26P05UR-G	MC.23102627	(5 x 2 x 0.14)	26	7.0	28
	LDS26P06UR-G	MC.23122627	(6 x 2 x 0.14)	26	7.6	33
	LDS26P10UR-G	MC.23202627	(10 x 2 x 0.14)	26	9.7	49
	LDS26P12UR-G	MC.23242627	(12 x 2 x 0.14)	26	10.1	55
	LDS26P14UR-G	MC.23282627	(14 x 2 x 0.14)	26	10.5	62
	LDS26P18UR-G	MC.23362627	(18 x 2 x 0.14)	26	12.0	83
	LDS26P25UR-G	MC.23502627	(25 x 2 x 0.14)	26	14.0	110
	LDS26P30UR-G	MC.23602627	(30 x 2 x 0.14)	26	14.4	125
	LDS26P50UR-G	MC.231002627	(50 x 2 x 0.14)	26	18.5	192
0,25	LDS24P02UR-G	MC.23042427	(2 x 2 x 0.25)	24	6.0	27
	LDS24P03UR-G	MC.23062427	(3 x 2 x 0.25)	24	6.5	33
	LDS24P04UR-G	MC.23082427	(4 x 2 x 0.25)	24	7.0	39
	LDS24P05UR-G	MC.23102427	(5 x 2 x 0.25)	24	7.5	45
	LDS24P06UR-G	MC.23122427	(6 x 2 x 0.25)	24	8.5	53
	LDS24P07UR-G	MC.23142427	(7 x 2 x 0.25)	24	9.0	58
	LDS24P08UR-G	MC.23162427	(8 x 2 x 0.25)	24	9.5	64
	LDS24P10UR-G	MC.23202427	(10 x 2 x 0.25)	24	10.5	72
	LDS24P12UR-G	MC.23242427	(12 x 2 x 0.25)	24	11.0	79
	LDS24P14UR-G	MC.23282427	(14 x 2 x 0.25)	24	11.4	94
	LDS24P18UR-G	MC.23362427	(18 x 2 x 0.25)	24	12.3	120
	LDS24P25UR-G	MC.23502427	(25 x 2 x 0.25)	24	15.0	160
	LDS24P30UR-G	MC.23602427	(30 x 2 x 0.25)	24	17.5	185
	LDS24P50UR-G	MC.231002427	(50 x 2 x 0.25)	24	22.0	310
0,34	LDS22P02UR-G	MC.23042227	(2 x 2 x 0.34)	22	7.0	34
	LDS22P03UR-G	MC.23062227	(3 x 2 x 0.34)	22	7.3	42
	LDS22P04UR-G	MC.23082227	(4 x 2 x 0.34)	22	7.6	48
	LDS22P05UR-G	MC.23102227	(5 x 2 x 0.34)	22	8.6	54
	LDS22P06UR-G	MC.23122227	(6 x 2 x 0.34)	22	9.3	63
	LDS22P07UR-G	MC.23142227	(7 x 2 x 0.34)	22	9.6	68
	LDS22P08UR-G	MC.23162227	(8 x 2 x 0.34)	22	10.0	75
	LDS22P10UR-G	MC.23202227	(10 x 2 x 0.34)	22	11.5	100
	LDS22P12UR-G	MC.23242227	(12 x 2 x 0.34)	22	11.8	120
	LDS22P14UR-G	MC.23282227	(14 x 2 x 0.34)	22	12.2	133
	LDS22P18UR-G	MC.23362227	(18 x 2 x 0.34)	22	14.0	167
	LDS22P25UR-G	MC.23502227	(25 x 2 x 0.34)	22	17.1	222
	LDS22P30UR-G	MC.23602227	(30 x 2 x 0.34)	22	17.9	220
	LDS22P50UR-G	MC.231002227	(50 x 2 x 0.34)	22	22.5	440

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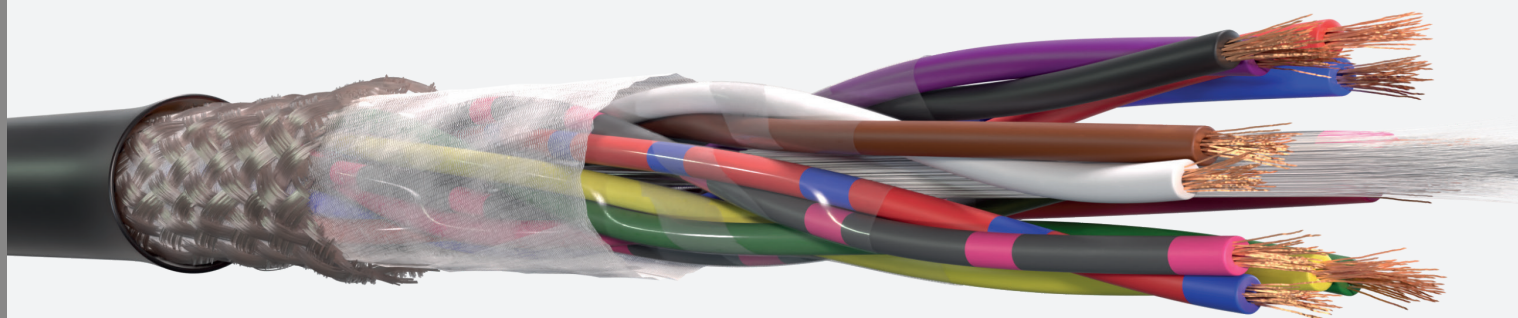
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SPAC CAVI

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UL 21223
80 °C - 600VAWM I/II A/B
80 °C - 600VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +80	-40 / +80	-40 / +80	-40 / +80

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage

600 V (UL/CSA)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

High-Purity Extra-Flexible Copper

Stable signal even in the presence of vibrations and torsion.

Twisted Pairs with Optimized Pitch

Reduced crosstalk for clear and reliable communication.

High-Coverage Copper Braid Shielding

Maximum EMC protection even in complex electronic environments.

Flexible and Resistant PUR FRHF Jacket

Exceptional durability in intense dynamic cycles.

Anti-Adhesion Surface

Smooth sliding without the risk of sticking.

Halogen-Free and Silicone-Free Materials

Perfect for electronics and sensitive applications.

Optimized for High-Precision Feedback

Ideal for encoders, servo motors, and position control.

Electrical Stability over Long Distances

Consistent performance even in long lines or at high frequency.

Sez.	MotionCables code	EPLAN Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,14	LDS26P02UP-N ●	MC.33042635	(2 x 2 x 0.14)	26	5.8	17
	LDS26P03UP-N ●	MC.33062635	(3 x 2 x 0.14)	26	6.1	20
	LDS26P04UP-N ●	MC.33082635	(4 x 2 x 0.14)	26	6.5	24
	LDS26P05UP-N ●	MC.33102635	(5 x 2 x 0.14)	26	7.0	28
	LDS26P06UP-N ●	MC.33122635	(6 x 2 x 0.14)	26	7.6	33
	LDS26P10UP-N ●	MC.33202635	(10 x 2 x 0.14)	26	9.7	49
	LDS26P12UP-N ●	MC.33242635	(12 x 2 x 0.14)	26	10.1	55
	LDS26P14UP-N ●	MC.33282635	(14 x 2 x 0.14)	26	10.5	62
	LDS26P18UP-N ●	MC.33362635	(18 x 2 x 0.14)	26	12.0	83
	LDS26P25UP-N ●	MC.33502635	(25 x 2 x 0.14)	26	14.0	110
	LDS26P30UP-N ●	MC.33602635	(30 x 2 x 0.14)	26	14.4	125
	LDS26P50UP-N ●	MC.331002635	(50 x 2 x 0.14)	26	18.5	192
0,25	LDS24P02UP-N ●	MC.33042435	(2 x 2 x 0.25)	24	6.0	27
	LDS24P03UP-N ●	MC.33062435	(3 x 2 x 0.25)	24	6.5	33
	LDS24P04UP-N ●	MC.33082435	(4 x 2 x 0.25)	24	7.0	39
	LDS24P05UP-N ●	MC.33102435	(5 x 2 x 0.25)	24	7.5	45
	LDS24P06UP-N ●	MC.33122435	(6 x 2 x 0.25)	24	8.5	53
	LDS24P07UP-N ●	MC.33142435	(7 x 2 x 0.25)	24	9.0	58
	LDS24P08UP-N ●	MC.33162435	(8 x 2 x 0.25)	24	9.5	64
	LDS24P10UP-N ●	MC.33202435	(10 x 2 x 0.25)	24	10.5	72
	LDS24P12UP-N ●	MC.33242435	(12 x 2 x 0.25)	24	11.0	79
	LDS24P14UP-N ●	MC.33282435	(14 x 2 x 0.25)	24	11.4	94
	LDS24P18UP-N ●	MC.33362435	(18 x 2 x 0.25)	24	12.3	120
	LDS24P25UP-N ●	MC.33502435	(25 x 2 x 0.25)	24	15.0	160
	LDS24P30UP-N ●	MC.33602435	(30 x 2 x 0.25)	24	17.5	185
	LDS24P50UP-N ●	MC.331002435	(50 x 2 x 0.25)	24	22.0	310
0,34	LDS22P02UP-N ●	MC.33042235	(2 x 2 x 0.34)	22	7.0	34
	LDS22P03UP-N ●	MC.33062235	(3 x 2 x 0.34)	22	7.3	42
	LDS22P04UP-N ●	MC.33082235	(4 x 2 x 0.34)	22	7.6	48
	LDS22P05UP-N ●	MC.33102235	(5 x 2 x 0.34)	22	8.6	54
	LDS22P06UP-N ●	MC.33122235	(6 x 2 x 0.34)	22	9.3	63
	LDS22P07UP-N ●	MC.33142235	(7 x 2 x 0.34)	22	9.6	68
	LDS22P08UP-N ●	MC.33162235	(8 x 2 x 0.34)	22	10.0	75
	LDS22P10UP-N ●	MC.33202235	(10 x 2 x 0.34)	22	11.5	100
	LDS22P12UP-N ●	MC.33242235	(12 x 2 x 0.34)	22	11.8	120
	LDS22P14UP-N ●	MC.33282235	(14 x 2 x 0.34)	22	12.2	133
	LDS22P18UP-N ●	MC.33362235	(18 x 2 x 0.34)	22	14.0	167
	LDS22P25UP-N ●	MC.33502235	(25 x 2 x 0.34)	22	17.1	222
	LDS22P30UP-N ●	MC.33602235	(30 x 2 x 0.34)	22	17.9	220
	LDS22P50UP-N ●	MC.331002235	(50 x 2 x 0.34)	22	22.5	440

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MOTIONMULTIWIRE

FOR STATIC AND DYNAMIC APPLICATIONS – SHIELDED AND UNSHIELDED VERSIONS

The MOTIONMULTIWIRE series includes the most widely cables used in the wiring to control and power machine and industrial machines in general. Suitable for a pose that goes from fixed (BP version with PVC sheath) to high-end (HP version with PUR sheath), they have flexibility, reduced bending radius and chemical resistance in general. The tinned copper braid shield with a high coverage factor preserves the electromagnetic disturbance cable. The whole series is UL / CSA approved.

**INCREASED MAX
CONDUCTOR
TEMPERATURE**

90°C

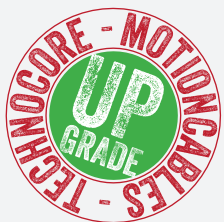
PERFORMANCE LEVEL	Suggested Usage Conditions	Insulation	Outer Sheath	Key Features
BASIC PERFORMANCE	Static or Demi-Static installation	Polypropylene (PP)	PVC	Flexibility, Oil/Fluid Resistance, Flame Retardant
DYNAMIC PERFORMANCE	Dynamic installation (cable carriers)	Polypropylene (PP)	PVC TM5	Designed for Repeated Bending, High performance in Dynamic Environments
HIGH DYNAMIC PERFORMANCE	Severe dynamic, robotics	Polypropylene (PP)	Polyurethane (PUR FRHF)	High flexibility even at low temperatures, Chemical Resistance, Halogen-Free

CONSTRUCTION

- ▶ Bare Copper wire, finely stranded acc. to DIN VDE 0295 cl.5 / IEC 60228 cl. 5 extra finely stranded acc. to DIN VDE 0295 cl. 6 / IEC 60228 cl. 6.
- ▶ Core insulation: Special-PP.
- ▶ Core identification: generally black conductors with white progressive numbers + Green/Yellow.
- ▶ Tape: Fleece Tape.
- ▶ Shield: tinned copper wire braid, approx. optical coverage 85%.
- ▶ Separator: Fleece Tape.
- ▶ Outer sheath: PVC (BP), PVC TM5 (DP), PUR FRHF (level HP). Outer sheath colour: Grey RAL 7001 (level BP & DP), Black RAL 9005 (level HP).

MAIN PROPERTIES

- ▶ Resistant to: UV radiation, oil, grease, coolants, hydraulic fluids, microbes, numerous alkalis and solvents.
- ▶ Optimum compliance with requirements for electromagnetic compatibility (EMC) by approx. 85% coverage from the braided screen.
- ▶ Designed for min. 100.000 bending cycles these cables are produced to high quality specifications.
- ▶ The materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers.

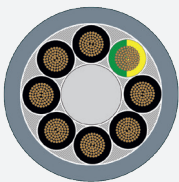


All MOTIONMULTIWIRE cables have been designed to meet the industry's evolution towards greater miniaturization and installation density, offering:

Enhanced Feature	MOTIONMULTIWIRE Value	Standard Market Value
Max. Operating temperature	90 °C	70 – 80 °C

This upgrade ensures greater thermal safety and reliability, particularly near compact motors or high heat-dissipating equipment.

CABLES TYPES



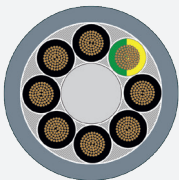
**BASIC PERFORMANCE
UNSHIELDED**

PVC

**600 V
1000 V**

**-25 °C
+90 °C**

108



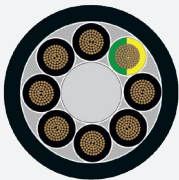
**DYNAMIC PERFORMANCE
UNSHIELDED**

**PVC
TM5**

**600 V
1000 V**

**-30 °C
+90 °C**

110



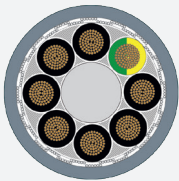
**HIGH DYNAMIC PERFORMANCE
UNSHIELDED**

**PUR
FRHF**

**600 V
1000 V**

**-50 °C
+90 °C**

112



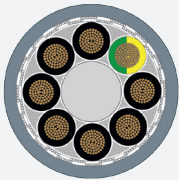
**BASIC PERFORMANCE
SHIELDED**

PVC

**600 V
1000 V**

**-25 °C
+90 °C**

114



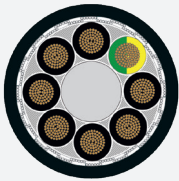
**DYNAMIC PERFORMANCE
SHIELDED**

**PVC
TM5**

**600 V
1000 V**

**-30 °C
+90 °C**

116



**HIGH DYNAMIC PERFORMANCE
SHIELDED**

**PUR
FRHF**

**600 V
1000 V**

**-50 °C
+90 °C**

118

MM.BP 180

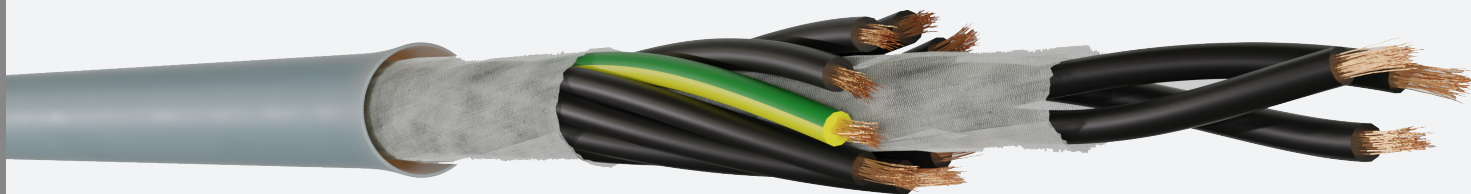
MOTIONMULTIWIRE

Power-Signal cables, PVC sheath, Oil Resistant, Demi-Static Application

BASIC PERFORMANCE

BP

PVC

600 V
1000 V-25 °C
+90 °CUL 21179
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

200.000

DEMI-STATIC



12 x O.D.

MIN. BENDING RADIUS



180 m/min

MAX. SPEED

2.0 m/sec²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



-

TORSION



-

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

CYCLES

m.u.



MIL

0,2

MIN. BENDING RADIUS

x O.D.

12

MAXIMUM SPEED

m/min

180

MAXIMUM ACCELERATION

m/s²

2,0

PULLING FORCE

N/mm²

≤ 50

TORSION

°/m

-

MAX. HORIZONTAL TRAVEL

m

-

TEMPERATURE

°C

+5 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR

MAIN ADVANTAGES

Finely Stranded Copper Conductors

Reliable signal transmission for control and low-dynamic power applications.

Polypropylene (PP) Insulation

Good electrical resistance and thermal stability up to 90°C

RAL 7001 Gray PVC Outer Jacket

Basic protection against oils and abrasion in standard industrial environments.

Unshielded Structure (No EMC Shielding)

Greater flexibility and simplicity in environments with low risk of interference.

Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)

Supports both signals and power with a single cable.

CE / UL / CSA Compliance

Usable on systems certified according to international standards.

Metric Marking on Outer Jacket

Facilitates correct cutting during installation and managing lengths.

Progressive Conductor Numbering + G/Y (Green/

Faster and more traceable wiring in control cabinets and cable trays

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,50	MFN21X02UR-G ●	MC.14022117	2 x 0.50	21	5.5	10
	MFN21G03UR-G ●	MC.14032117	3 G 0.50	21	5.5	14
	MFN21G04UR-G ●	MC.14042117	4 G 0.50	21	6.2	19
	MFN21G05UR-G ●	MC.14052117	5 G 0.50	21	6.7	24
	MFN21G07UR-G ●	MC.14072117	7 G 0.50	21	7.9	34
	MFN21G12UR-G ●	MC.14122117	12 G 0.50	21	9.3	58
	MFN21G18UR-G ●	MC.14182117	18 G 0.50	21	11.2	86
	MFN21G25UR-G ●	MC.14252117	25 G 0.50	21	13.2	120
	MFN21G34UR-G ●	MC.14342117	34 G 0.50	21	14.7	163
	MFN21G41UR-G ●	MC.14412117	41 G 0.50	21	16.3	197
0,75	MFN19X02UR-G ●	MC.14041917	2 x 0.75	19	5.9	14
	MFN19G03UR-G ●	MC.14061917	3 G 0.75	19	6.2	22
	MFN19G04UR-G ●	MC.14081917	4 G 0.75	19	6.7	29
	MFN19G05UR-G ●	MC.14051917	5 G 0.75	19	7.3	36
	MFN19G07UR-G ●	MC.14071917	7 G 0.75	19	8.6	50
	MFN19G12UR-G ●	MC.14121917	12 G 0.75	19	10.1	86
	MFN19G18UR-G ●	MC.14181917	18 G 0.75	19	12.2	130
	MFN19G25UR-G ●	MC.14251917	25 G 0.75	19	14.4	180
	MFN19G34UR-G ●	MC.14341917	34 G 0.75	19	16.1	245
	MFN19G41UR-G ●	MC.14411917	41 G 0.75	19	17.8	295
1,0	MFN17X02UR-G ●	MC.14021717	2 x 1.0	18	6.2	19
	MFN17G03UR-G ●	MC.14031717	3 G 1.0	18	6.5	29
	MFN17G04UR-G ●	MC.14041717	4 G 1.0	18	7.1	38
	MFN17G05UR-G ●	MC.14051717	5 G 1.0	18	7.7	48
	MFN17G07UR-G ●	MC.14071717	7 G 1.0	18	9.1	67
	MFN17G12UR-G ●	MC.14121717	12 G 1.0	18	11.1	115
	MFN17G18UR-G ●	MC.14181717	18 G 1.0	18	12.9	173
	MFN17G25UR-G ●	MC.14251717	25 G 1.0	18	15.7	240
	MFN17G34UR-G ●	MC.14341717	34 G 1.0	18	17.5	326
	MFN17G41UR-G ●	MC.14411717	41 G 1.0	18	19	394
1,50	MFN15X02UR-G ●	MC.14041517	2 x 1.5	16	6.8	29
	MFN15G03UR-G ●	MC.14031517	3 G 1.5	16	7.2	43
	MFN15G04UR-G ●	MC.14041517	4 G 1.5	16	7.8	58
	MFN15G05UR-G ●	MC.14051517	5 G 1.5	16	8.5	72
	MFN15G07UR-G ●	MC.14071517	7 G 1.5	16	10.1	101
	MFN15G12UR-G ●	MC.14121517	12 G 1.5	16	12.4	173
	MFN15G18UR-G ●	MC.14181517	18 G 1.5	16	14.4	259
	MFN15G25UR-G ●	MC.14251517	25 G 1.5	16	17.6	360
	MFN15G34UR-G ●	MC.14341517	34 G 1.5	16	19.6	490
	MFN15G41UR-G ●	MC.14411517	41 G 1.5	16	21.7	590
2,50	MFN13X02UR-G ●	MC.14021317	2 x 2.5	14	8.0	48
	MFN13G03UR-G ●	MC.14031317	3 G 2.5	14	8.5	72
	MFN13G04UR-G ●	MC.14041317	4 G 2.5	14	9.2	96
	MFN13G05UR-G ●	MC.14051317	5 G 2.5	14	10.1	120
	MFN13G07UR-G ●	MC.14071317	7 G 2.5	14	12.5	168
	MFN13G12UR-G ●	MC.14121317	12 G 2.5	14	14.9	288
	MFN13G18UR-G ●	MC.14181317	18 G 2.5	14	17.8	432
	MFN13G25UR-G ●	MC.14251317	25 G 2.5	14	21.7	600
	MFN13G34UR-G ●	MC.14341317	34 G 2.5	14	24.2	816
	MFN13G41UR-G ●	MC.14411317	41 G 2.5	14	26.7	984

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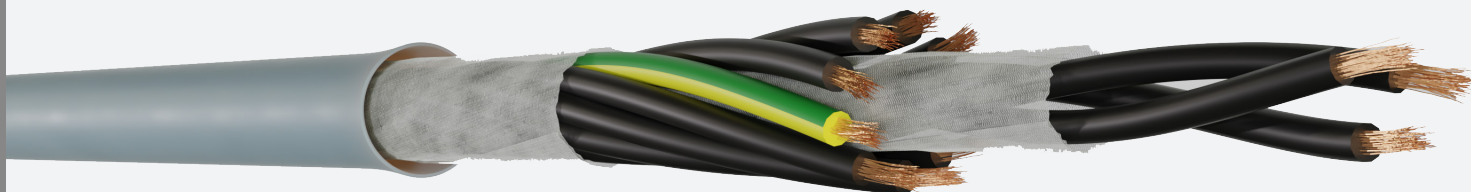
All the codes are available in the EPLAN PLAN8 System (use the EPLAN code in the relevant column).



SPAC CAVI

All the codes are available in the SPAC CAVI system (use MotionCables item code).

The names of trademarks and standards are provided for reference or information purposes only. These trademarks and standards are the exclusive property of their respective owners (see the complete list on the back cover).

UL 21179
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED

20 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +90	-5 / +90	-5 / +90

ELECTRICAL PROPERTIES

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR



MECHANICAL CRUSH

MAIN ADVANTAGES

Finely Stranded Copper Conductors	Increased flex resistance for installations with light motion.
Polypropylene (PP) Insulation	Consistent signal protection even under dynamic conditions.
RAL 7001 Gray PVC TM5 Jacket	Resistance to oils, chemical agents, and abrasion superior to standard PVC.
No EMC Shielding	Maximum flexibility and simple installation where no interference is present.
Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)	Supports both signals and power with a single cable.
CE / UL / CSA Compliance	Usable on systems certified according to international standards.
Metric Marking on Outer Jacket	Precise cutting of lengths directly in production.
Conductor Numbering + Y/G	Intuitive and fast wiring in control cabinet or on the machine.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,50	MDN21X02UR-G	MC.24022127	2 x 0.50	21	5.2	10
	MDN21G03UR-G	MC.24032127	3 G 0.50	21	5.5	14
	MDN21G04UR-G	MC.24042127	4 G 0.50	21	6.2	19
	MDN21G05UR-G	MC.24052127	5 G 0.50	21	6.7	24
	MDN21G07UR-G	MC.24072127	7 G 0.50	21	7.3	34
	MDN21G12UR-G	MC.24122127	12 G 0.50	21	9.3	58
	MDN21G18UR-G	MC.24182127	18 G 0.50	21	10.6	86
	MDN21G25UR-G	MC.24252127	25 G 0.50	21	12.9	120
	MDN21G34UR-G	MC.24342127	34 G 0.50	21	14.7	163
	MDN21G41UR-G	MC.24412127	41 G 0.50	21	16.3	197
0,75	MDN19X02UR-G	MC.24021927	2 x 0.75	19	5.9	14
	MDN19G03UR-G	MC.24031927	3 G 0.75	19	6.2	22
	MDN19G04UR-G	MC.24041927	4 G 0.75	19	6.5	29
	MDN19G05UR-G	MC.24051927	5 G 0.75	19	7.3	36
	MDN19G07UR-G	MC.24071927	7 G 0.75	19	8.6	50
	MDN19G12UR-G	MC.24121927	12 G 0.75	19	10.1	86
	MDN19G18UR-G	MC.24181927	18 G 0.75	19	12.2	130
	MDN19G25UR-G	MC.24251927	25 G 0.75	19	14.4	180
	MDN19G34UR-G	MC.24341927	34 G 0.75	19	16.1	245
	MDN19G41UR-G	MC.24411927	41 G 0.75	19	17.8	295
1,0	MDN17X02UR-G	MC.24021727	2 x 1.0	18	6.2	19
	MDN17G03UR-G	MC.24031727	3 G 1.0	18	6.5	29
	MDN17G04UR-G	MC.24041727	4 G 1.0	18	7.1	38
	MDN17G05UR-G	MC.24051727	5 G 1.0	18	7.7	48
	MDN17G07UR-G	MC.24071727	7 G 1.0	18	9.1	67
	MDN17G12UR-G	MC.24121727	12 G 1.0	18	11.1	115
	MDN17G18UR-G	MC.24181727	18 G 1.0	18	12.9	173
	MDN17G25UR-G	MC.24251727	25 G 1.0	18	15.7	240
	MDN17G34UR-G	MC.24341727	34 G 1.0	18	17.5	326
	MDN17G41UR-G	MC.24411727	41 G 1.0	18	19	394
1,50	MDN15X02UR-G	MC.24021527	2 x 1.5	16	6.8	29
	MDN15G03UR-G	MC.24031527	3 G 1.5	16	6.9	43
	MDN15G04UR-G	MC.24041527	4 G 1.5	16	7.8	58
	MDN15G05UR-G	MC.24051527	5 G 1.5	16	8.5	72
	MDN15G07UR-G	MC.24071527	7 G 1.5	16	10.1	101
	MDN15G12UR-G	MC.24121527	12 G 1.5	16	12.4	173
	MDN15G18UR-G	MC.24181527	18 G 1.5	16	14.4	259
	MDN15G25UR-G	MC.24251527	25 G 1.5	16	17.6	360
	MDN15G34UR-G	MC.24341527	34 G 1.5	16	19.6	490
	MDN15G41UR-G	MC.24411527	41 G 1.5	16	21.7	590
2,50	MDN13X02UR-G	MC.24021327	2 x 2.5	14	8.0	48
	MDN13G03UR-G	MC.24031327	3 G 2.5	14	8.5	72
	MDN13G04UR-G	MC.24041327	4 G 2.5	14	9.2	96
	MDN13G05UR-G	MC.24051327	5 G 2.5	14	10.1	120
	MDN13G07UR-G	MC.24071327	7 G 2.5	14	12.5	168
	MDN13G12UR-G	MC.24121327	12 G 2.5	14	14.9	288
	MDN13G18UR-G	MC.24181327	18 G 2.5	14	17.8	432
	MDN13G25UR-G	MC.24251327	25 G 2.5	14	21.7	600
	MDN13G34UR-G	MC.24341327	34 G 2.5	14	24.2	816
	MDN13G41UR-G	MC.24411327	41 G 2.5	14	26.7	984

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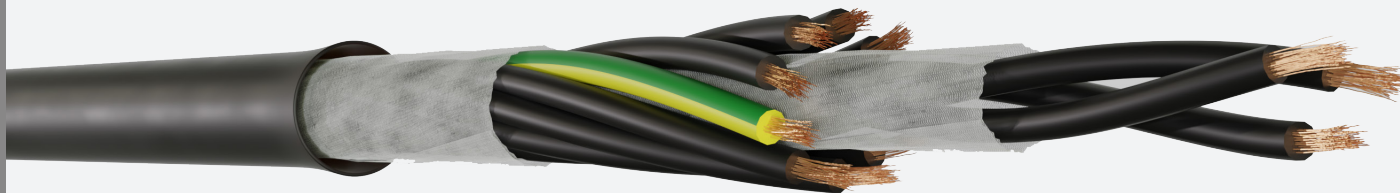
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SPAC CAVI

All the codes are available in the SPAC CAVI system (use MotionCables item code).

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UL 21209
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +90	-40 / +90	-40 / +90	-40 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

Extra-Flexible Copper Conductors (Class 6)

Ideal for intensive dynamic applications (robotics, cable carriers).

Polypropylene (PP) Insulation

Electrical stability even at high frequencies or distances.

RAL 9005 Black PUR FRHF Jacket

Exceptional resistance to oils, cutting, abrasion, and aggressive chemical agents.

No EMC Shielding

Superior flexibility where electromagnetic protection is not a priority.

Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)

Compatibility with advanced systems and power applications.

CE / UL / CSA Compliance

Guarantee of global quality and installability.

Metric Marking on Outer Jacket

Simplifies logistics and management of lengths in production.

Progressive Numbering + Y/G

Speed and reduced error risk in wiring.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,50	MDN21X02UP-N ●	MC.34022135	2 x 0.50	21	6.2	10
	MDN21G03UP-N ●	MC.34032135	3 G 0.50	21	6.5	14
	MDN21G04UP-N ●	MC.34042135	4 G 0.50	21	6.9	19
	MDN21G05UP-N ●	MC.34052135	5 G 0.50	21	7.4	24
	MDN21G07UP-N ●	MC.34072135	7 G 0.50	21	8.6	34
	MDN21G12UP-N ●	MC.34122135	12 G 0.50	21	10.0	58
	MDN21G18UP-N ●	MC.34182135	18 G 0.50	21	11.8	86
	MDN21G25UP-N ●	MC.34252135	25 G 0.50	21	13.8	120
	MDN21G34UP-N ●	MC.34342135	34 G 0.50	21	15.5	163
	MDN21G41UP-N ●	MC.34412135	41 G 0.50	21	16.7	197
0,75	MDN19X02UP-N ●	MC.34021935	2 x 0.75	19	6.6	14
	MDN19G03UP-N ●	MC.34031935	3 G 0.75	19	6.9	22
	MDN19G04UP-N ●	MC.34041935	4 G 0.75	19	7.4	29
	MDN19G05UP-N ●	MC.34051935	5 G 0.75	19	8.0	36
	MDN19G07UP-N ●	MC.34071935	7 G 0.75	19	9.3	50
	MDN19G12UP-N ●	MC.34121935	12 G 0.75	19	10.8	86
	MDN19G18UP-N ●	MC.34181935	18 G 0.75	19	12.8	130
	MDN19G25UP-N ●	MC.34251935	25 G 0.75	19	14.5	180
	MDN19G34UP-N ●	MC.34341935	34 G 0.75	19	16.9	245
	MDN19G41UP-N ●	MC.34411935	41 G 0.75	19	18.2	295
1,0	MDN17X02UP-N ●	MC.34021735	2 x 1.0	18	6.9	19
	MDN17G03UP-N ●	MC.34031735	3 G 1.0	18	7.2	29
	MDN17G04UP-N ●	MC.34041735	4 G 1.0	18	7.5	38
	MDN17G05UP-N ●	MC.34051735	5 G 1.0	18	8.4	48
	MDN17G07UP-N ●	MC.34071735	7 G 1.0	18	9.8	67
	MDN17G12UP-N ●	MC.34121735	12 G 1.0	18	11.7	115
	MDN17G18UP-N ●	MC.34181735	18 G 1.0	18	13.5	173
	MDN17G25UP-N ●	MC.34251735	25 G 1.0	18	16.1	240
	MDN17G34UP-N ●	MC.34341735	34 G 1.0	18	17.9	326
	MDN17G41UP-N ●	MC.34411735	41 G 1.0	18	19.4	394
1,50	MDN15X02UP-N ●	MC.34021535	2 x 1.5	16	7.5	29
	MDN15G03UP-N ●	MC.34031535	3 G 1.5	16	7.9	43
	MDN15G04UP-N ●	MC.34041535	4 G 1.5	16	8.5	58
	MDN15G05UP-N ●	MC.34051535	5 G 1.5	16	9.2	72
	MDN15G07UP-N ●	MC.34071535	7 G 1.5	16	11.0	101
	MDN15G12UP-N ●	MC.34121535	12 G 1.5	16	12.7	173
	MDN15G18UP-N ●	MC.34181535	18 G 1.5	16	14.7	259
	MDN15G25UP-N ●	MC.34251535	25 G 1.5	16	18.0	360
	MDN15G34UP-N ●	MC.34341535	34 G 1.5	16	20.0	490
	MDN15G41UP-N ●	MC.34411535	41 G 1.5	16	21.9	590
2,50	MDN13X02UP-N ●	MC.34021335	2 x 2.5	14	8.7	48
	MDN13G03UP-N ●	MC.34031335	3 G 2.5	14	9.2	72
	MDN13G04UP-N ●	MC.34041335	4 G 2.5	14	9.9	96
	MDN13G05UP-N ●	MC.34051335	5 G 2.5	14	11.1	120
	MDN13G07UP-N ●	MC.34071335	7 G 2.5	14	13.1	168
	MDN13G12UP-N ●	MC.34121335	12 G 2.5	14	15.7	288
	MDN13G18UP-N ●	MC.34181335	18 G 2.5	14	17.2	432
	MDN13G25UP-N ●	MC.34251335	25 G 2.5	14	21.9	600
	MDN13G34UP-N ●	MC.34341335	34 G 2.5	14	24.4	816
	MDN13G41UP-N ●	MC.34411335	41 G 2.5	14	26.7	984

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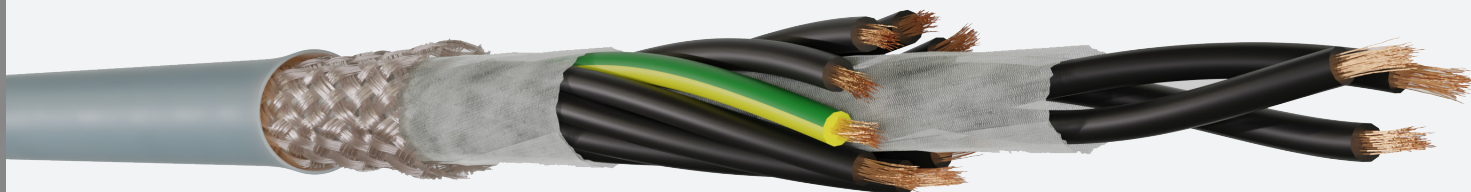
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SPAC CAVI

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UL 21179
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

200.000

DEMI-STATIC



12 x O.D.

MIN. BENDING RADIUS



180 m/min

MAX. SPEED

2.0 m/sec²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



-

TORSION



-

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

CYCLES

m.u.



MIL

0,2

MIN. BENDING RADIUS

x O.D.

12

MAXIMUM SPEED

m/min

180

MAXIMUM ACCELERATION

m/s²

2,0

PULLING FORCE

N/mm²

≤ 50

TORSION

°/m

-

MAX. HORIZONTAL TRAVEL

m

-

TEMPERATURE

°C

+5 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR

MAIN ADVANTAGES

Finely Stranded Copper Conductors

Stable transmission even in the presence of external interference.

Polypropylene (PP) Insulation

Good signal protection and temperature rating up to 90

RAL 7001 Gray PVC Outer Jacket

Resistance to light industrial oils and wear from contact.

Copper Braid Shielding (≥85% Coverage)

Effective protection from EMC disturbances in mixed or sensitive environments.

Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)

Suitable for control or power lines in industrial environments.

CE / UL / CSA Compliance

Compliant with major international regulations.

Metric Marking on Outer Jacket

Facilitates management and correct cutting during installation.

Progressive Conductor Numbering + G/Y (Green/Yellow)

Simplifies identification and verification during wiring.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,50	MFS21X02UR-G	● MC.15022117	(2 x 0.50)	21	5.9	33
	MFS21G03UR-G	● MC.15032117	(3 G 0.50)	21	6.2	39
	MFS21G04UR-G	● MC.15042117	(4 G 0.50)	21	6.6	46
	MFS21G05UR-G	● MC.15052117	(5 G 0.50)	21	7.1	54
	MFS21G07UR-G	● MC.15072117	(7 G 0.50)	21	8.3	70
	MFS21G12UR-G	● MC.15122117	(12 G 0.50)	21	9.7	100
	MFS21G18UR-G	● MC.15182117	(18 G 0.50)	21	11.7	153
	MFS21G25UR-G	● MC.15252117	(25 G 0.50)	21	13.7	202
	MFS21G34UR-G	● MC.15342117	(34 G 0.50)	21	15.2	258
	MFS21G41UR-G	● MC.15412117	(41 G 0.50)	21	16.8	311
0,75	MFS19X02UR-G	● MC.15021917	(2 x 0.75)	19	6.3	41
	MFS19G03UR-G	● MC.15031917	(3 G 0.75)	19	6.6	48
	MFS19G04UR-G	● MC.15041917	(4 G 0.75)	19	7.1	59
	MFS19G05UR-G	● MC.15051917	(5 G 0.75)	19	7.7	69
	MFS19G07UR-G	● MC.15071917	(7 G 0.75)	19	9.0	90
	MFS19G12UR-G	● MC.15121917	(12 G 0.75)	19	10.5	129
	MFS19G18UR-G	● MC.15181917	(18 G 0.75)	19	12.7	205
	MFS19G25UR-G	● MC.15251917	(25 G 0.75)	19	14.9	271
	MFS19G34UR-G	● MC.15341917	(34 G 0.75)	19	16.6	332
	MFS19G41UR-G	● MC.15411917	(41 G 0.75)	19	18.3	391
1,0	MFS17X02UR-G	● MC.15021717	(2 x 1.0)	18	6.6	46
	MFS17G03UR-G	● MC.15031717	(3 G 1.0)	18	6.9	57
	MFS17G04UR-G	● MC.15041717	(4 G 1.0)	18	7.5	70
	MFS17G05UR-G	● MC.15051717	(5 G 1.0)	18	8.1	81
	MFS17G07UR-G	● MC.15071717	(7 G 1.0)	18	9.5	110
	MFS17G12UR-G	● MC.15121717	(12 G 1.0)	18	11.6	182
	MFS17G18UR-G	● MC.15181717	(18 G 1.0)	18	13.4	254
	MFS17G25UR-G	● MC.15251717	(25 G 1.0)	18	16.3	365
	MFS17G34UR-G	● MC.15341717	(34 G 1.0)	18	18.1	463
	MFS17G41UR-G	● MC.15411717	(41 G 1.0)	18	19.6	542
1,50	MFS15X02UR-G	● MC.15021517	(2 x 1.5)	16	7.2	58
	MFS15G03UR-G	● MC.15031517	(3 G 1.5)	16	7.6	75
	MFS15G04UR-G	● MC.15041517	(4 G 1.5)	16	8.2	91
	MFS15G05UR-G	● MC.15051517	(5 G 1.5)	16	8.9	112
	MFS15G07UR-G	● MC.15071517	(7 G 1.5)	16	11.0	145
	MFS15G12UR-G	● MC.15121517	(12 G 1.5)	16	12.9	247
	MFS15G18UR-G	● MC.15181517	(18 G 1.5)	16	14.9	348
	MFS15G25UR-G	● MC.15251517	(25 G 1.5)	16	18.2	498
	MFS15G34UR-G	● MC.15341517	(34 G 1.5)	16	20.2	700
	MFS15G41UR-G	● MC.15411517	(41 G 1.5)	16	22.3	844
2,50	MFS13X02UR-G	● MC.15021317	(2 x 2.5)	14	8.4	95
	MFS13G03UR-G	● MC.15031317	(3 G 2.5)	14	8.9	115
	MFS13G04UR-G	● MC.15041317	(4 G 2.5)	14	9.6	155
	MFS13G05UR-G	● MC.15051317	(5 G 2.5)	14	10.9	185
	MFS13G07UR-G	● MC.15071317	(7 G 2.5)	14	12.9	250
	MFS13G12UR-G	● MC.15121317	(12 G 2.5)	14	15.8	388
	MFS13G18UR-G	● MC.15181317	(18 G 2.5)	14	18.3	552
	MFS13G25UR-G	● MC.15251317	(25 G 2.5)	14	22.3	750
	MFS13G34UR-G	● MC.15341317	(34 G 2.5)	14	24.8	1016
	MFS13G41UR-G	● MC.15411317	(41 G 2.5)	14	27.3	1234

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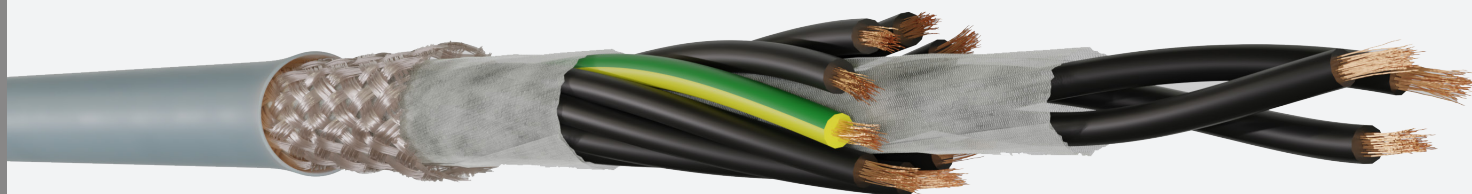
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SPAC CAVI

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UL 21179
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED

20 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +90	-5 / +90	-5 / +90

ELECTRICAL PROPERTIES

	Test Voltage	4,0 kV x 5 min acc.to EN 50395 Cl. 10.3
	Insulation Resistance	≥ 1.0 GΩ x km @ 20 °C acc.to EN 50395 Cl. 8.1
	Max. Short Circuit Temperature	160 °C (≤ 1s)
	Operating Voltage	1000 V (UL/CSA) U ₀ /U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS

OIL RESISTANT	FLAME RETARDANT	WATER RESISTANT	EMC PROTECTED	TEMPOR. OUTDOOR	MECHANICAL CRUSH

MAIN ADVANTAGES

Finely Stranded Copper Conductors	Reliable performance even after thousands of flex cycles.
Polypropylene (PP) Insulation	Electrical stability even in environments with thermal variations.
RAL 7001 Gray PVC TM5 Jacket	High resistance to abrasion, oils, and chemical agents.
Copper Braid Shielding	Effective protection against EMC disturbances in complex industrial environments.
Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)	Guaranteed safety for mixed power/control systems.
CE / UL / CSA Compliance	Suitable for use in certified control cabinets or export systems.
Metric Marking on Outer Jacket	Facilitates reel management and length optimization.
Progressive Numbering + Y/G	Reduces errors in conductor connection.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,50	MDS21X02UR-G ●	MC.25022127	(2 x 0.50)	21	5.9	33
	MDS21G03UR-G ●	MC.25032127	(3 G 0.50)	21	6.2	39
	MDS21G04UR-G ●	MC.25042127	(4 G 0.50)	21	6.6	46
	MDS21G05UR-G ●	MC.25052127	(5 G 0.50)	21	7.1	54
	MDS21G07UR-G ●	MC.25072127	(7 G 0.50)	21	8.3	70
	MDS21G12UR-G ●	MC.25122127	(12 G 0.50)	21	9.7	100
	MDS21G18UR-G ●	MC.25182127	(18 G 0.50)	21	11.7	153
	MDS21G25UR-G ●	MC.25252127	(25 G 0.50)	21	13.7	202
	MDS21G34UR-G ●	MC.25342127	(34 G 0.50)	21	15.2	258
	MDS21G41UR-G ●	MC.25412127	(41 G 0.50)	21	16.8	311
0,75	MDS19X02UR-G ●	MC.25021927	(2 x 0.75)	19	6.3	41
	MDS19G03UR-G ●	MC.25031927	(3 G 0.75)	19	6.6	48
	MDS19G04UR-G ●	MC.25041927	(4 G 0.75)	19	7.1	59
	MDS19G05UR-G ●	MC.25051927	(5 G 0.75)	19	7.7	69
	MDS19G07UR-G ●	MC.25071927	(7 G 0.75)	19	9.0	90
	MDS19G12UR-G ●	MC.25121927	(12 G 0.75)	19	10.5	129
	MDS19G18UR-G ●	MC.25181927	(18 G 0.75)	19	12.7	205
	MDS19G25UR-G ●	MC.25251927	(25 G 0.75)	19	14.9	271
	MDS19G34UR-G ●	MC.25341927	(34 G 0.75)	19	16.6	332
	MDS19G41UR-G ●	MC.25411927	(41 G 0.75)	19	18.3	391
1,0	MDS17X02UR-G ●	MC.25021727	(2 x 1.0)	18	6.6	46
	MDS17G03UR-G ●	MC.25031727	(3 G 1.0)	18	6.9	57
	MDS17G04UR-G ●	MC.25041727	(4 G 1.0)	18	7.5	70
	MDS17G05UR-G ●	MC.25051727	(5 G 1.0)	18	8.1	81
	MDS17G07UR-G ●	MC.25071727	(7 G 1.0)	18	9.5	110
	MDS17G12UR-G ●	MC.25121727	(12 G 1.0)	18	11.6	182
	MDS17G18UR-G ●	MC.25181727	(18 G 1.0)	18	13.4	254
	MDS17G25UR-G ●	MC.25251727	(25 G 1.0)	18	16.3	365
	MDS17G34UR-G ●	MC.25341727	(34 G 1.0)	18	18.1	463
	MDS17G41UR-G ●	MC.25411727	(41 G 1.0)	18	19.6	542
1,50	MDS15X02UR-G ●	MC.25021527	(2 x 1.5)	16	7.2	58
	MDS15G03UR-G ●	MC.25031527	(3 G 1.5)	16	7.6	75
	MDS15G04UR-G ●	MC.25041527	(4 G 1.5)	16	8.2	91
	MDS15G05UR-G ●	MC.25051527	(5 G 1.5)	16	8.9	112
	MDS15G07UR-G ●	MC.25071527	(7 G 1.5)	16	11.0	145
	MDS15G12UR-G ●	MC.25121527	(12 G 1.5)	16	12.9	247
	MDS15G18UR-G ●	MC.25181527	(18 G 1.5)	16	14.9	348
	MDS15G25UR-G ●	MC.25251527	(25 G 1.5)	16	18.2	498
	MDS15G34UR-G ●	MC.25341527	(34 G 1.5)	16	20.2	700
	MDS15G41UR-G ●	MC.25411527	(41 G 1.5)	16	22.3	844
2,50	MDS13X02UR-G ●	MC.25021327	(2 x 2.5)	14	8.4	95
	MDS13G03UR-G ●	MC.25031327	(3 G 2.5)	14	8.9	115
	MDS13G04UR-G ●	MC.25041327	(4 G 2.5)	14	9.6	155
	MDS13G05UR-G ●	MC.25051327	(5 G 2.5)	14	10.9	185
	MDS13G07UR-G ●	MC.25071327	(7 G 2.5)	14	12.9	250
	MDS13G12UR-G ●	MC.25121327	(12 G 2.5)	14	15.8	388
	MDS13G18UR-G ●	MC.25181327	(18 G 2.5)	14	18.3	552
	MDS13G25UR-G ●	MC.25251327	(25 G 2.5)	14	22.3	750
	MDS13G34UR-G ●	MC.25341327	(34 G 2.5)	14	24.8	1016
	MDS13G41UR-G ●	MC.25411327	(41 G 2.5)	14	27.3	1234

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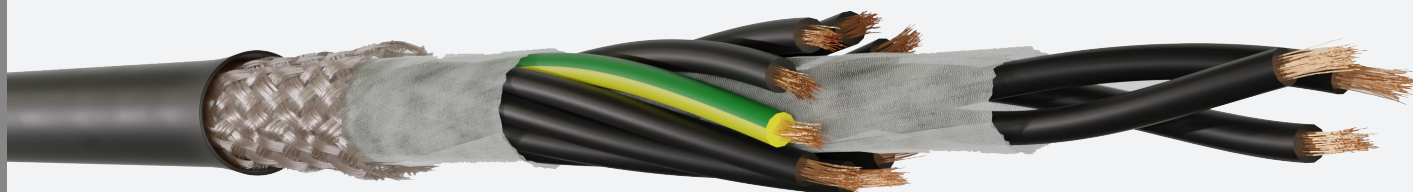
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SPAC CAVI

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UL 21209
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +90	-40 / +90	-40 / +90	-40 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

Extra-Flexible Copper Conductors (Class 6)

Signal stability even with intensive and continuous motion.

Polypropylene (PP) Insulation

Ensures low attenuation and clean transmission.

RAL 9005 Black PUR FRHF Jacket

Resistance to aggressive substances, abrasion, and high mechanical stress.

Copper Braid Shielding (≥85% Coverage)

Maximum EMC protection in systems with high electromagnetic interference.

Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)

Electrical safety on combined control and power lines.

CE / UL / CSA Compliance

Installable on machinery destined for the global market.

Metric Marking on Outer Jacket

Facilitates precise cutting and reduces waste during cabling.

Progressive Conductor Numbering + Y/G

Clarity in line identification for complex installations.

Sez.	MotionCables code	EPlan Code	Formation	AWG	Ø	Cu
mm²			mm²		mm	kg / km
0,50	MDS21X02UP-N ●	MC.35022135	(2 x 0.50)	21	6.6	33
	MDS21G03UP-N ●	MC.35032135	(3 G 0.50)	21	6.9	39
	MDS21G04UP-N ●	MC.35042135	(4 G 0.50)	21	7.3	46
	MDS21G05UP-N ●	MC.35052135	(5 G 0.50)	21	7.8	54
	MDS21G07UP-N ●	MC.35072135	(7 G 0.50)	21	9.0	70
	MDS21G12UP-N ●	MC.35122135	(12 G 0.50)	21	10.8	100
	MDS21G18UP-N ●	MC.35182135	(18 G 0.50)	21	12.3	153
	MDS21G25UP-N ●	MC.35252135	(25 G 0.50)	21	14.3	202
	MDS21G34UP-N ●	MC.35342135	(34 G 0.50)	21	16.1	258
	MDS21G41UP-N ●	MC.35412135	(41 G 0.50)	21	17.3	311
0,75	MDS19X02UP-N ●	MC.35021935	(2 x 0.75)	19	7.0	41
	MDS19G03UP-N ●	MC.35031935	(3 G 0.75)	19	7.3	48
	MDS19G04UP-N ●	MC.35041935	(4 G 0.75)	19	7.8	59
	MDS19G05UP-N ●	MC.35051935	(5 G 0.75)	19	8.4	69
	MDS19G07UP-N ●	MC.35071935	(7 G 0.75)	19	9.7	90
	MDS19G12UP-N ●	MC.35121935	(12 G 0.75)	19	11.6	129
	MDS19G18UP-N ●	MC.35181935	(18 G 0.75)	19	13.3	205
	MDS19G25UP-N ●	MC.35251935	(25 G 0.75)	19	15.5	271
	MDS19G34UP-N ●	MC.35341935	(34 G 0.75)	19	17.5	332
	MDS19G41UP-N ●	MC.35411935	(41 G 0.75)	19	18.8	391
1,0	MDS17X02UP-N ●	MC.35021735	(2 x 1.0)	18	7.3	46
	MDS17G03UP-N ●	MC.35031735	(3 G 1.0)	18	7.6	57
	MDS17G04UP-N ●	MC.35041735	(4 G 1.0)	18	8.2	70
	MDS17G05UP-N ●	MC.35051735	(5 G 1.0)	18	8.8	81
	MDS17G07UP-N ●	MC.35071735	(7 G 1.0)	18	10.2	110
	MDS17G12UP-N ●	MC.35121735	(12 G 1.0)	18	12.2	182
	MDS17G18UP-N ●	MC.35181735	(18 G 1.0)	18	14.0	254
	MDS17G25UP-N ●	MC.35251735	(25 G 1.0)	18	16.7	365
	MDS17G34UP-N ●	MC.35341735	(34 G 1.0)	18	18.5	463
	MDS17G41UP-N ●	MC.35411735	(41 G 1.0)	18	20	542
1,50	MDS15X02UP-N ●	MC.35021535	(2 x 1.5)	16	7.9	58
	MDS15G03UP-N ●	MC.35031535	(3 G 1.5)	16	8.3	75
	MDS15G04UP-N ●	MC.35041535	(4 G 1.5)	16	8.9	91
	MDS15G05UP-N ●	MC.35051535	(5 G 1.5)	16	9.6	112
	MDS15G07UP-N ●	MC.35071535	(7 G 1.5)	16	11.6	145
	MDS15G12UP-N ●	MC.35121535	(12 G 1.5)	16	13.5	247
	MDS15G18UP-N ●	MC.35181535	(18 G 1.5)	16	15.8	348
	MDS15G25UP-N ●	MC.35251535	(25 G 1.5)	16	18.6	498
	MDS15G34UP-N ●	MC.35341535	(34 G 1.5)	16	20.8	700
	MDS15G41UP-N ●	MC.35411535	(41 G 1.5)	16	22.5	844
2,50	MDS13X02UP-N ●	MC.35021335	(2 x 2.5)	14	9.1	95
	MDS13G03UP-N ●	MC.35031335	(3 G 2.5)	14	9.6	115
	MDS13G04UP-N ●	MC.35041335	(4 G 2.5)	14	10.3	155
	MDS13G05UP-N ●	MC.35051335	(5 G 2.5)	14	11.6	185
	MDS13G07UP-N ●	MC.35071335	(7 G 2.5)	14	13.6	250
	MDS13G12UP-N ●	MC.35121335	(12 G 2.5)	14	16.3	388
	MDS13G18UP-N ●	MC.35181335	(18 G 2.5)	14	18.8	552
	MDS13G25UP-N ●	MC.35251335	(25 G 2.5)	14	22.5	750
	MDS13G34UP-N ●	MC.35341335	(34 G 2.5)	14	25.0	1016
	MDS13G41UP-N ●	MC.35411335	(41 G 2.5)	14	27.3	1234

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SPAC CAVI

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MOTIONWIRE

FOR STATIC AND DYNAMIC APPLICATIONS – SHIELDED AND UNSHIELDED VERSIONS

Single core power cables for fixed installation (with limited movement) or mobile chains and machine parts with axial movement. Suitable for dry and/or wet environments. The resistance to oils and industrial fluids is optimized depending on the level of performance. The choice of specific conductors and insulation provides great flexibility by allowing you to choose the product best suited to the final application. The cables are UL / CSA approved.

**INCREASED MAX
CONDUCTOR
TEMPERATURE**

90°C

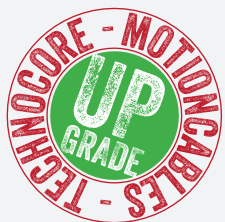
PERFORMANCE LEVEL	Suggested Usage Conditions	Insulation	Outer Sheath	Key Features
BASIC PERFORMANCE	Static or Demi-Static installation	XLPE	PVC	Flexibility, Oil/Fluid Resistance, Flame Retardant
DYNAMIC PERFORMANCE	Dynamic installation (cable carriers)	XLPE	PVC TM5	Designed for Repeated Bending, High performance in Dynamic Environments
HIGH DYNAMIC PERFORMANCE	Severe dynamic, robotics	XLPE	Polyurethane (PUR FRHF)	High flexibility even at low temperatures, Chemical Resistance, Halogen-Free

CONSTRUCTION

- ▶ Bare Copper wire, finely stranded acc. to DIN VDE 0295 cl.5 / IEC 60228 cl. 5 extra finely stranded acc. to DIN VDE 0295 cl. 6 / IEC 60228 cl. 6
- ▶ Core insulation: XLPE, Black RAL 9005.
- ▶ Shield: tinned copper wire braid, approx. optical coverage 85%
- ▶ Separator: Fleece Tape.
- ▶ Outer sheath: PVC (BP), PVC TM5 (DP), PUR FRHF (level HP). Outer sheath colour: Grey RAL 7001 (level BP & DP), Black RAL 9005 (level HP), YELLOW/GREEN RAL 1021/ RAL 6029 (BP, DP, HP).

MAIN PROPERTIES

- ▶ Resistant to: UV radiation, oil, grease, coolants, hydraulic fluids, microbes, numerous alkalis and solvents.
- ▶ Optimum compliance with requirements for electromagnetic compatibility (EMC) by approx. 85% coverage from the braided screen.
- ▶ Designed for min. 100.000 bending cycles these cables are produced to high quality specifications.
- ▶ The materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers.



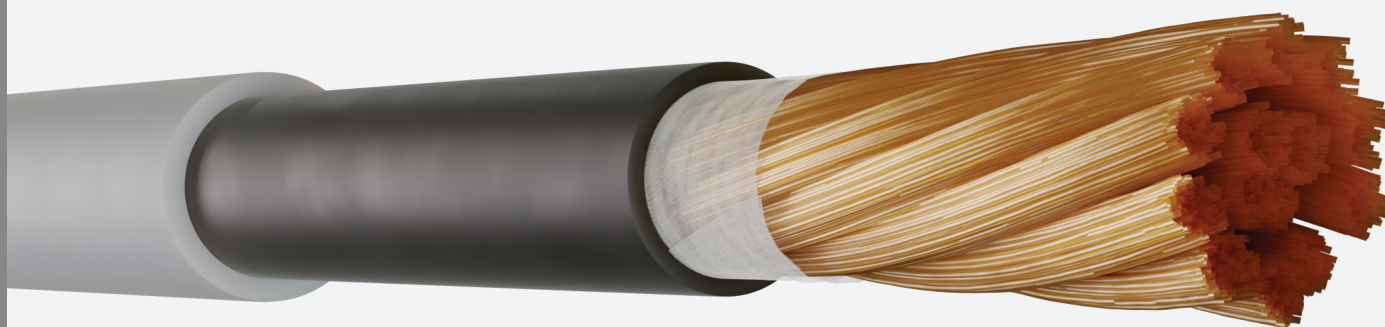
All MOTIONWIRE cables have been designed to meet the industry's evolution towards greater miniaturization and installation density, offering:

Enhanced Feature	MOTIONWIRE Value	Standard Market Value
Max. operating temperature	90 °C	70 – 80 °C

This upgrade ensures greater thermal safety and reliability, particularly near compact motors or high heat-dissipating equipment.

CABLES TYPES

	BASIC PERFORMANCE UNSHIELDED	PVC	600 V 1000 V	-25 °C +90 °C	122
	DYNAMIC PERFORMANCE UNSHIELDED	PVC TM5	600 V 1000 V	-30 °C +90 °C	124
	HIGH DYNAMIC PERFORMANCE UNSHIELDED	PUR FRHF	600 V 1000 V	-50 °C +90 °C	126
	BASIC PERFORMANCE SHIELDED	PVC	600 V 1000 V	-25 °C +90 °C	128
	DYNAMIC PERFORMANCE SHIELDED	PVC TM5	600 V 1000 V	-30 °C +90 °C	130
	HIGH DYNAMIC PERFORMANCE SHIELDED	PUR FRHF	600 V 1000 V	-50 °C +90 °C	132



UL 11846
90 °C - 1000V



AWM I/II A/B
90 °C - 1000V



LABS
Free



200.000

DEMI-STATIC



12 x O.D.

MIN. BENDING RADIUS



180 m/min

MAX. SPEED



2.0 m/sec²

ACCELERATION



≤ 50 N / mm²

PULLING FORCE



-

TORSION



-

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

CYCLES	m.u.	
	MIL	0,2
MIN. BENDING RADIUS	x O.D.	12
MAXIMUM SPEED	m/min	180
MAXIMUM ACCELERATION	m/s ²	2,0
PULLING FORCE	N/mm ²	≤ 50
TORSION	°/m	-
MAX. HORIZONTAL TRAVEL	m	-
TEMPERATURE	°C	+5 / +90

ELECTRICAL PROPERTIES



Test Voltage

4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3



Insulation Resistance

≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1



Max. Short Circuit Temperature

250 °C (≤ 1s)



Operating Voltage

1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR

MAIN ADVANTAGES

Flexible Copper Conductors Class 5	Ease of installation and good conductivity for general power systems.
XLPE Insulation with High Thermal Resistance	Increased safety even near heat sources (up to 90 °)
RAL 7001 Gray PVC Jacket	Basic protection against light oils and abrasion in standard environments.
Compact and Flexible Construction	Ease of installation even in narrow or curved conduits.
Suitable for Dry or Damp Environments	Application versatility for control cabinets, conduits, and machinery.
Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)	Safety of use for power and distribution systems.
CE / UL / CSA Compliance	Global installability according to international standards.
External Metric Marking (on the Jacket)	Precise cutting and simplified management of lengths.

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm ²		mm	kg / km
CFN09X01UR-G	●	MC.16010917	1 x 6	10	6.7	58
CFN07X01UR-G	●	MC.16010717	1 x 10	8	7.7	96
CFN05X01UR-G	●	MC.16010517	1 x 16	6	9.3	154
CFN03X01UR-G	●	MC.16010317	1 x 25	4	11.1	240
CFN02X01UR-G	●	MC.16010217	1 x 35	2	12.9	336
CFNA1X01UR-G	●	MC.1601A117	1 x 50	1	15.3	480
CFNA2X01UR-G	●	MC.1601A217	1 x 70	2/0	17.3	672
CFNA3X01UR-G	●	MC.1601A317	1 x 95	3/0	19.2	912
CFNA4X01UR-G	●	MC.1601A417	1 x 120	4/0	21.2	1152
CFNA5X01UR-G	●	MC.1601A517	1 x 150	250	23.7	1440
CFNB1X01UR-G	●	MC.1601B117	1 x 185	350	26.3	1776
CFNB2X01UR-G	●	MC.1601B217	1 x 240	450	27.4	2304
CFNB3X01UR-G	●	MC.1601B317	1 x 300	550	34.2	2880

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm ²		mm	kg / km
CFN09X01UR-GV	●	MC.16010919	1 x 6	10	6.7	58
CFN07X01UR-GV	●	MC.16010719	1 x 10	8	7.7	96
CFN05X01UR-GV	●	MC.16010519	1 x 16	6	9.3	154
CFN03X01UR-GV	●	MC.16010319	1 x 25	4	11.1	240
CFN02X01UR-GV	●	MC.16010219	1 x 35	2	12.9	336
CFNA1X01UR-GV	●	MC.1601A119	1 x 50	1	15.3	480
CFNA2X01UR-GV	●	MC.1601A219	1 x 70	2/0	17.3	672
CFNA3X01UR-GV	●	MC.1601A319	1 x 95	3/0	19.2	912
CFNA4X01UR-GV	●	MC.1601A419	1 x 120	4/0	21.2	1152
CFNA5X01UR-GV	●	MC.1601A519	1 x 150	250	23.7	1440
CFNB1X01UR-GV	●	MC.1601B119	1 x 185	350	26.3	1776
CFNB2X01UR-GV	●	MC.1601B219	1 x 240	450	27.4	2304
CFNB3X01UR-GV	●	MC.1601B319	1 x 300	550	34.2	2880

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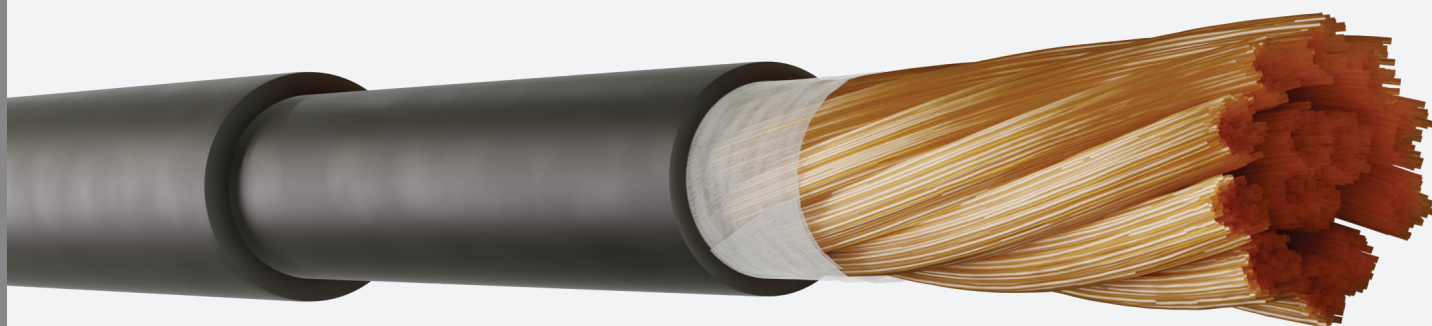
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SPAC CAVI

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the back cover).*

UL 11846
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED

20 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +90	-5 / +90	-5 / +90

ELECTRICAL PROPERTIES

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

250 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR



MECHANICAL CRUSH

MAIN ADVANTAGES

Flexible Copper Conductors Class 5	Ease of installation and good conductivity for general power systems.
XLPE Insulation with High Thermal Resistance	Increased safety even near heat sources (up to 90 °C)
RAL 9005 Black PVC Jacket	Basic protection against light oils and abrasion in standard environments.
Compact and Flexible Construction	Ease of installation even in narrow or curved conduits.
Suitable for Dry or Damp Environments	Application versatility for control cabinets, conduits, and machinery.
Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)	Safety of use for power and distribution systems.
CE / UL / CSA Compliance	Global installability according to international standards.
External Metric Marking (on the Jacket)	Precise cutting and simplified management of lengths.

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm²		mm	kg / km
CDN09X01UR-N	●	MC.26010927	1 x 6	10	6.7	58
CDN07X01UR-N	●	MC.26010727	1 x 10	8	7.7	96
CDN05X01UR-N	●	MC.26010527	1 x 16	6	9.3	154
CDN03X01UR-N	●	MC.26010327	1 x 25	4	11.1	240
CDN02X01UR-N	●	MC.26010227	1 x 35	2	12.9	336
CDNA1X01UR-N	●	MC.2601A127	1 x 50	1	15.3	480
CDNA2X01UR-N	●	MC.2601A227	1 x 70	2/0	17.3	672
CDNA3X01UR-N	●	MC.2601A327	1 x 95	3/0	19.2	912
CDNA4X01UR-N	●	MC.2601A427	1 x 120	4/0	21.2	1152
CDNA5X01UR-N	●	MC.2601A527	1 x 150	250	23.7	1440
CDNB1X01UR-N	●	MC.2601B127	1 x 185	350	26.3	1776
CDNB2X01UR-N	●	MC.2601B227	1 x 240	450	27.4	2304
CDNB3X01UR-N	●	MC.2601B327	1 x 300	550	34.2	2880

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm²		mm	kg / km
CDN09X01UR-GV	●	MC.26010929	1 x 6	10	6.7	58
CDN07X01UR-GV	●	MC.26010729	1 x 10	8	7.7	96
CDN05X01UR-GV	●	MC.26010529	1 x 16	6	9.3	154
CDN03X01UR-GV	●	MC.26010329	1 x 25	4	11.1	240
CDN02X01UR-GV	●	MC.26010229	1 x 35	2	12.9	336
CDNA1X01UR-GV	●	MC.2601A129	1 x 50	1	15.3	480
CDNA2X01UR-GV	●	MC.2601A229	1 x 70	2/0	17.3	672
CDNA3X01UR-GV	●	MC.2601A329	1 x 95	3/0	19.2	912
CDNA4X01UR-GV	●	MC.2601A429	1 x 120	4/0	21.2	1152
CDNA5X01UR-GV	●	MC.2601A529	1 x 150	250	23.7	1440
CDNB1X01UR-GV	●	MC.2601B129	1 x 185	350	26.3	1776
CDNB2X01UR-GV	●	MC.2601B229	1 x 240	450	27.4	2304
CDNB3X01UR-GV	●	MC.2601B329	1 x 300	550	34.2	2880

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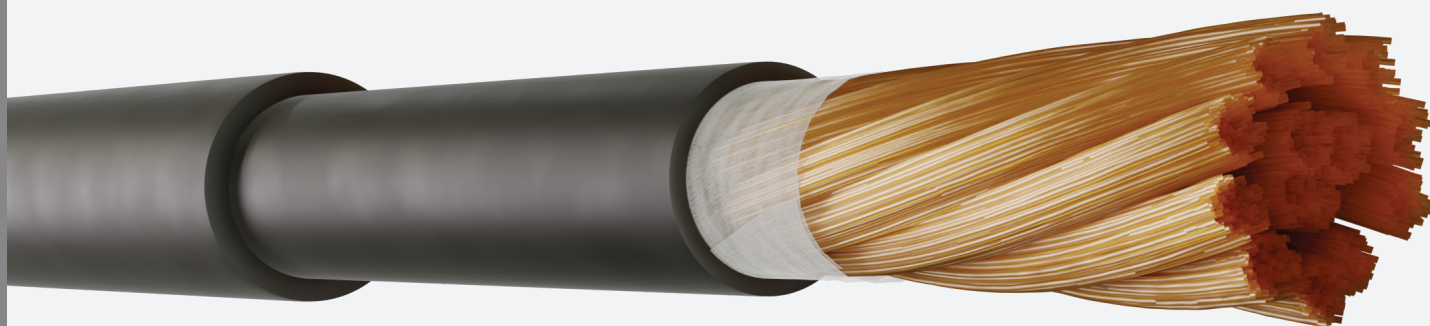
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UL 11773
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +90	-40 / +90	-40 / +90	-40 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

250 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

Extra-Flexible Copper Conductors Class 6

High resistance to repeated flexing in cable carriers.

XLPE Insulation

Excellent electrical performance even at high temperatures.

RAL 9005 Black PUR FRHF Jacket

Maximum resistance to cutting, oils, greases, and aggressive chemical substances.

Construction Designed for High Cyclicality

Ideal for robotics, machine tools, and dynamic automation.

Exceptional Flexibility even at Low Temperatures

Usable in cold storage rooms or cold environments.

Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)

Safety even on power lines in advanced systems.

CE / UL / CSA Compliance

Globally usable in systems with certification requirements.

Metric Marking on the Jacket

Facilitates precision in wiring and length management.

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm ²		mm	kg / km
CDN09X01UP-N	●	MC.36010935	1 x 6	10	6.7	58
CDN07X01UP-N	●	MC.36010735	1 x 10	8	7.7	96
CDN05X01UP-N	●	MC.36010535	1 x 16	6	9.3	154
CDN03X01UP-N	●	MC.36010335	1 x 25	4	11.1	240
CDN02X01UP-N	●	MC.36010235	1 x 35	2	12.9	336
CDNA1X01UP-N	●	MC.3601A135	1 x 50	1	15.8	480
CDNA2X01UP-N	●	MC.3601A235	1 x 70	2/0	17.3	672
CDNA3X01UP-N	●	MC.3601A335	1 x 95	3/0	19.2	912
CDNA4X01UP-N	●	MC.3601A435	1 x 120	4/0	21.2	1152
CDNA5X01UP-N	●	MC.3601A535	1 x 150	250	23.7	1440
CDNB1X01UP-N	●	MC.3601B135	1 x 185	350	26.3	1776
CDNB2X01UP-N	●	MC.3601B235	1 x 240	450	27.4	2304
CDNB3X01UP-N	●	MC.3601B335	1 x 300	550	34.2	2880

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm ²		mm	kg / km
CDN09X01UP-GV	●	MC.36010939	1 x 6	10	6.7	58
CDN07X01UP-GV	●	MC.36010739	1 x 10	8	7.7	96
CDN05X01UP-GV	●	MC.36010539	1 x 16	6	9.3	154
CDN03X01UP-GV	●	MC.36010339	1 x 25	4	11.1	240
CDN02X01UP-GV	●	MC.36010239	1 x 35	2	12.9	336
CDNA1X01UP-GV	●	MC.3601A139	1 x 50	1	15.8	480
CDNA2X01UP-GV	●	MC.3601A239	1 x 70	2/0	17.3	672
CDNA3X01UP-GV	●	MC.3601A339	1 x 95	3/0	19.2	912
CDNA4X01UP-GV	●	MC.3601A439	1 x 120	4/0	21.2	1152
CDNA5X01UP-GV	●	MC.3601A539	1 x 150	250	23.7	1440
CDNB1X01UP-GV	●	MC.3601B139	1 x 185	350	26.3	1776
CDNB2X01UP-GV	●	MC.3601B239	1 x 240	450	27.4	2304
CDNB3X01UP-GV	●	MC.3601B339	1 x 300	550	34.2	2880

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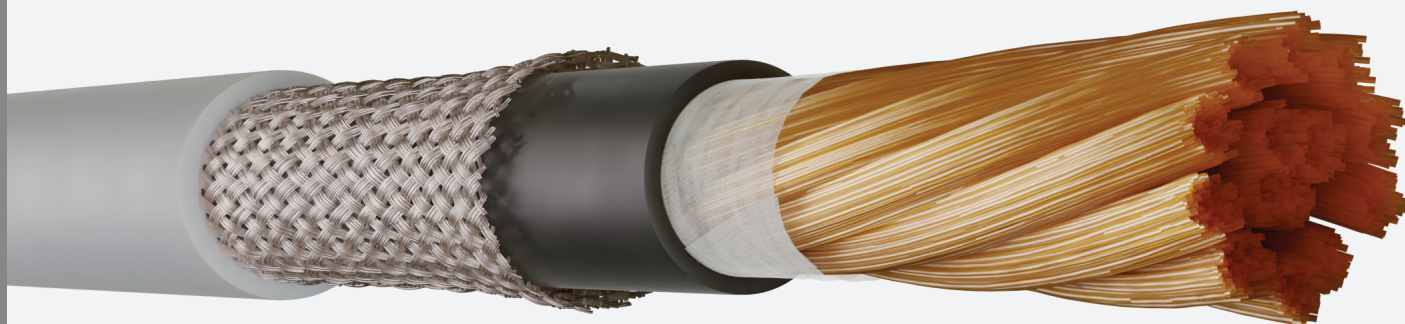
All the codes are available in the EPLAN PLAN8 System (use the EPLAN code in the relevant column).



SPAC CAVI

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The names of trademarks and standards are provided for reference or information purposes only. These trademarks and standards are the exclusive property of their respective owners (see the complete list on the back cover).

UL 11846
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

200.000

DEMI-STATIC



12 x O.D.

MIN. BENDING RADIUS



180 m/min

MAX. SPEED

2.0 m/sec²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



-

TORSION



-

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

CYCLES	m.u.	
	MIL	0,2
MIN. BENDING RADIUS	x O.D.	12
MAXIMUM SPEED	m/min	180
MAXIMUM ACCELERATION	m/s ²	2,0
PULLING FORCE	N/mm ²	≤ 50
TORSION	°/m	-
MAX. HORIZONTAL TRAVEL	m	-
TEMPERATURE	°C	+5 / +90

ELECTRICAL PROPERTIES

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

250 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR

MAIN ADVANTAGES

Flexible Copper Conductors Class 5	Good conductivity even over medium-to-long distances.
Thermo-Resistant XLPE Insulation	Thermal protection up to 90 °C
RAL 7001 Gray PVC Jacket	Resistance to abrasion and light chemical agents.
Copper Braid Shielding (≥85% Coverage)	Protection from EMC disturbances and improved signal integrity.
Flexibility for Installation in Cabinets or Conduits	Ease of routing in confined or complex spaces.
Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)	Suitable for power lines in disturbed environments.
CE / UL / CSA Compliance	Compatible with export systems and international standards.
Metric Marking on the Jacket	Facilitates correct cutting and length control during wiring.

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm ²		mm	kg / km
CFS09X01UR-G	●	MC.17010917	(1 x 6)	10	7.3	79
CFS07X01UR-G	●	MC.17010717	(1 x 10)	8	8.3	122
CFS05X01UR-G	●	MC.17010517	(1 x 16)	6	9.9	183
CFS03X01UR-G	●	MC.17010317	(1 x 25)	4	11.7	269
CFS02X01UR-G	●	MC.17010217	(1 x 35)	2	13.5	399
CFS1X01UR-G	●	MC.1701A117	(1 x 50)	1	15.9	581
CFA2X01UR-G	●	MC.1701A217	(1 x 70)	2/0	18.1	766
CFA3X01UR-G	●	MC.1701A317	(1 x 95)	3/0	20.0	1011
CFA4X01UR-G	●	MC.1701A417	(1 x 120)	4/0	22.0	1271
CFA5X01UR-G	●	MC.1701A517	(1 x 150)	250	24.5	1711
CFSB1X01UR-G	●	MC.1701B117	(1 x 185)	350	27.1	2101
CFSB2X01UR-G	●	MC.1701B217	(1 x 240)	450	28.2	2640
CFSB3X01UR-G	●	MC.1701B317	(1 x 300)	550	35.0	2970

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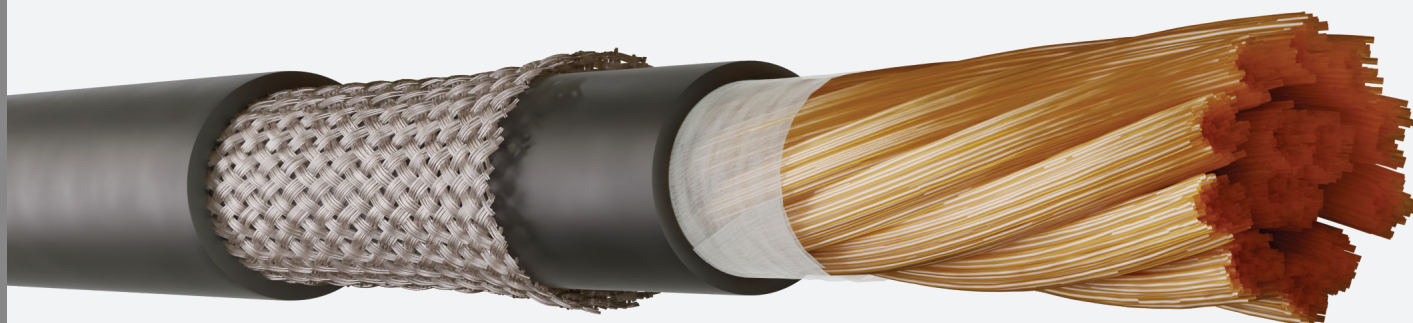
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SPAC CAVI

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UL 11846
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED

20 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +90	-5 / +90	-5 / +90

ELECTRICAL PROPERTIES

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395
Cl. 8.1Max. Short
Circuit
Temperature

250 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR



MECHANICAL CRUSH

MAIN ADVANTAGES

Flexible Copper Conductors Class 5

Suitable for frequent movement while maintaining conductivity.

XLPE Insulation

Thermal protection and effective insulation even under critical conditions.

RAL 9005 Black PVC TM5 Jacket

High resistance to abrasion, oils, and coolants.

High-Coverage Copper Braid Shielding

EMC protection for power systems in disturbed environments.

Above-Average Flexibility

Simple installation even in complex or movable sections.

Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)

Safe lines even for power supply in the presence of disturbances.

CE / UL / CSA Compliance

Compliant with major international requirements.

Metric Marking on the Jacket

Allows for precise cuts and efficient reel management.

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm ²		mm	kg / km
CDS09X01UR-N	●	MC.27010927	(1 x 6)	10	7.3	79
CDS07X01UR-N	●	MC.27010727	(1 x 10)	8	8.3	122
CDS05X01UR-N	●	MC.27010527	(1 x 16)	6	9.9	183
CDS03X01UR-N	●	MC.27010327	(1 x 25)	4	11.7	269
CDS02X01UR-N	●	MC.27010227	(1 x 35)	2	13.5	399
CDSA1X01UR-N	●	MC.2701A127	(1 x 50)	1	15.9	581
CDSA2X01UR-N	●	MC.2701A227	(1 x 70)	2/0	18.1	766
CDSA3X01UR-N	●	MC.2701A327	(1 x 95)	3/0	20.0	1011
CDSA4X01UR-N	●	MC.2701A427	(1 x 120)	4/0	22.0	1271
CDSA5X01UR-N	●	MC.2701A527	(1 x 150)	250	24.5	1711
CDSB1X01UR-N	●	MC.2701B127	(1 x 185)	350	27.1	2101
CDSB2X01UR-N	●	MC.2701B227	(1 x 240)	450	28.2	2640
CDSB3X01UR-N	●	MC.2701B327	(1 x 300)	550	35.0	2970

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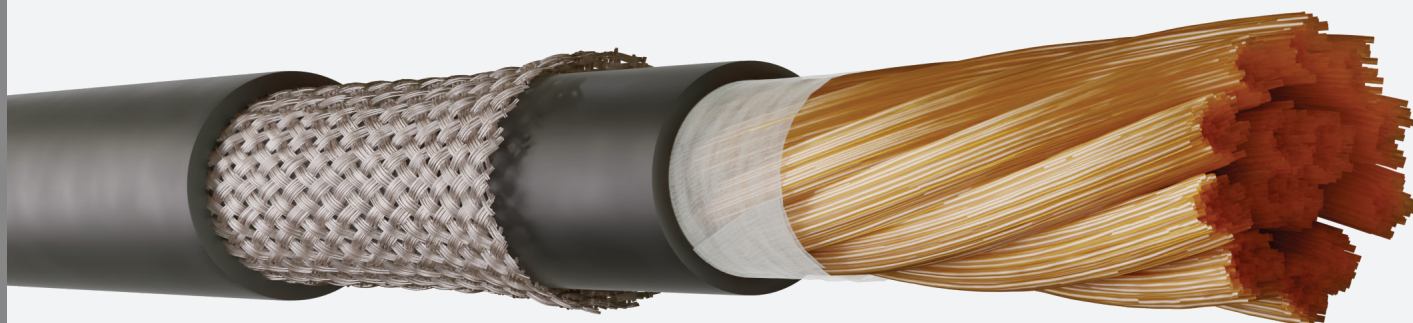
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SPAC CAVI

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UL 11773
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +90	-40 / +90	-40 / +90	-40 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

250 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

Extra-Flexible Copper Conductors Class 6

Signal stability even under conditions of extreme stress.

XLPE Insulation

Excellent thermal performance and insulation over long distances.

RAL 9005 Black PUR FRHF Jacket

Superior resistance to oils, coolants, mechanical stress, and aggressive chemical agents.

Copper Braid Shielding (≥ 85% Coverage)

Maximum EMC protection for motors, inverters, and sensitive equipment.

Construction Optimized for Dynamic Flexing

Ideal for high-cycle applications in disturbed environments.

Operating Voltage 1000 V (UL) / 0.6/1.0 kV (IEC)

Safety and stability even in environments with high electrical stress.

CE / UL / CSA Compliance

Perfect for systems subject to global approvals.

Robust and Flexible Construction

Long service life and reduced machine downtime.

MotionCables code		EPlan Code	Formation	AWG Kcmil	Ø	Cu
			mm ²		mm	kg / km
CDS09X01UP-N	●	MC.37010935	(1 x 6)	10	7.3	79
CDS07X01UP-N	●	MC.37010735	(1 x 10)	8	8.3	122
CDS05X01UP-N	●	MC.37010535	(1 x 16)	6	9.9	183
CDS03X01UP-N	●	MC.37010335	(1 x 25)	4	11.7	269
CDS02X01UP-N	●	MC.37010235	(1 x 35)	2	13.5	399
CDSA1X01UP-N	●	MC.3701A135	(1 x 50)	1	15.9	581
CDSA2X01UP-N	●	MC.3701A235	(1 x 70)	2/0	18.1	766
CDSA3X01UP-N	●	MC.3701A335	(1 x 95)	3/0	20.0	1011
CDSA4X01UP-N	●	MC.3701A435	(1 x 120)	4/0	22.0	1271
CDSA5X01UP-N	●	MC.3701A535	(1 x 150)	250	24.5	1711
CDSB1X01UP-N	●	MC.3701B135	(1 x 185)	350	27.1	2101
CDSB2X01UP-N	●	MC.3701B235	(1 x 240)	450	28.2	2640
CDSB3X01UP-N	●	MC.3701B335	(1 x 300)	550	35.0	2970

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MOTIONPOWER

FOR STATIC AND DYNAMIC APPLICATIONS – SHIELDED AND UNSHIELDED VERSIONS.

Multi core power cables for fixed (with limited movements) or mobile installation in cable chains and moving machine parts with axial displacement. Suitable for dry and / or humid environments. The resistance to industrial oils and fluids is optimized depending on the performance level. The choice of specific conductors and insulation guarantees great flexibility allowing you to choose the most suitable product for the final application. The cables are UL / CSA approved.

**INCREASED MAX
CONDUCTOR
TEMPERATURE**

90°C

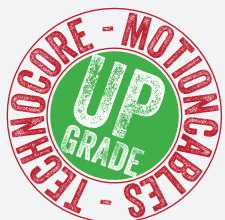
PERFORMANCE LEVEL	Suggested Usage Conditions	Insulation	Outer Sheath	Key Features
BASIC PERFORMANCE	Static or Demi-Static installation	Polypropylene (PP)	PVC	Flexibility, Oil/Fluid Resistance, Flame Retardant
DYNAMIC PERFORMANCE	Dynamic installation (cable carriers)	Polypropylene (PP)	PVC TM5	Designed for Repeated Bending, High performance in Dynamic Environments
HIGH DYNAMIC PERFORMANCE	Severe dynamic, robotics	Polypropylene (PP)	Polyurethane (PUR FRHF)	High flexibility even at low temperatures, Chemical Resistance, Halogen-Free

CONSTRUCTION

- ▶ Bare Copper wire, finely stranded acc. to DIN VDE 0295 cl.5 / IEC 60228 cl. 5 extra finely stranded acc. to DIN VDE 0295 cl. 6 / IEC 60228 cl. 6.
- ▶ Core insulation: Special-PP.
- ▶ Core identification: generally black conductors with white progressive numbers + Green/Yellow.
- ▶ Tape: Fleece Tape.
- ▶ Shield: tinned copper wire braid, approx. optical coverage 85%.
- ▶ Separator: Fleece Tape.
- ▶ Outer sheath: PVC (BP), PVC TM5 (DP), PUR FRHF (level HP). Outer sheath colour: Grey RAL 7001 (level BP & DP), Black RAL 9005 (level HP).

MAIN PROPERTIES

- ▶ Resistant to: UV radiation, Oil, Grease, Coolants, Hydraulic Fluids, Microbes, Numerous Alkalis and Solvents.
- ▶ Optimum compliance with requirements for electromagnetic compatibility (EMC) by approx. 85% coverage from the braided screen.
- ▶ Designed for min. 100.000 bending cycles these cables are produced to high quality specifications.
- ▶ The materials used during manufacturing are cadmium-free, contain no silicone and are free from substances harmful to the wetting properties of lacquers.



All **MOTIONPOWER** cables have been designed to meet the industry's evolution towards greater miniaturization and installation density, offering:

Enhanced Feature	MOTIONPOWER Value	Standard Market Value
Max. Operating temperature	90 °C	70 – 80 °C

This upgrade ensures greater thermal safety and reliability, particularly near compact motors or high heat-dissipating equipment.

CABLES TYPES

	BASIC PERFORMANCE UNSHIELDED	PVC	600 V 1000 V	-25 °C +90 °C	136
	DYNAMIC PERFORMANCE UNSHIELDED	PVC TM5	600 V 1000 V	-30 °C +90 °C	138
	HIGH DYNAMIC PERFORMANCE UNSHIELDED	PUR FRHF	600 V 1000 V	-50 °C +90 °C	140
	BASIC PERFORMANCE SHIELDED	PVC	600 V 1000 V	-25 °C +90 °C	142
	DYNAMIC PERFORMANCE SHIELDED	PVC TM5	600 V 1000 V	-30 °C +90 °C	144
	HIGH DYNAMIC PERFORMANCE SHIELDED	PUR FRHF	600 V 1000 V	-50 °C +90 °C	146

UL 21179
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

200.000

DEMI-STATIC



12 x O.D.

MIN. BENDING RADIUS



180 m/min

MAX. SPEED

2.0 m/sec²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



-

TORSION



-

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

CYCLES

m.u.



MIL

0,2

MIN. BENDING RADIUS

x O.D.

12

MAXIMUM SPEED

m/min

180

MAXIMUM ACCELERATION

m/s²

2,0

PULLING FORCE

N/mm²

≤ 50

TORSION

°/m

-

MAX. HORIZONTAL TRAVEL

m

-

TEMPERATURE

°C

+5 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR

MAIN ADVANTAGES

Flexible Copper Class 5

Reliable for power distribution to motors, pumps, and devices in systems up to 1000 V.

Polypropylene (PP) Insulation

Improves electrical stability, reduces dielectric losses, and resists thermal aging.

RAL 7001 Gray PVC Jacket

Resistant to light industrial oils, abrasion, and moderate environmental conditions (dry or semi-damp indoor).

Compact Multi-Conductor Construction

Easy to install in conduits and cable trays in standard electrical and automation systems.

Maximum Conductor Temperature 90°C

Safe near hot electrical components, such as transformers, inverters, or loaded control cabinets.

Compliant with UL / CSA / CE

Suitable for internationally certified industrial installations (Europe and North America).

High Resistance to Occasional Flexing

Although designed for fixed installation, it withstands minimal vibrations or movements without

Progressive Metric Marking

Quick identification of remaining lengths: facilitates correct cutting and management of cable sections.

MotionCables code		EPlan Code	Formation	AWG	Ø	Cu
			mm ²		mm	kg / km
PFN11G03UR-G	●	MC.18031117	3 G 4	12	11.0	58
PFN11G04UR-G	●	MC.18041117	4 G 4	12	11.7	96
PFN11G05UR-G	●	MC.18051117	5 G 4	12	14.8	154
PFN11G07UR-G	●	MC.18071117	7 G 4	12	16.5	240
PFN09G04UR-G	●	MC.18040917	4 G 6	10	14.4	336
PFN07G04UR-G	●	MC.18040717	4 G 10	8	18.6	480
PFN05G04UR-G	●	MC.18040517	4 G 16	6	22.8	672
PFN03G04UR-G	●	MC.18040317	4 G 25	4	26.3	912
PFN02G04UR-G	●	MC.18040217	4 G 35	2	30.0	1152
PFNA1G04UR-G	●	MC.1804A117	4 G 50	1	35.0	1440
PFNA2G04UR-G	●	MC.1804A217	4 G 70	2/0	41.0	1776
PFNA3G04UR-G	●	MC.1804A317	4 G 95	3/0	46.0	2304
PFNA4G04UR-G	●	MC.1804A417	4 G 120	4/0	53.0	2880

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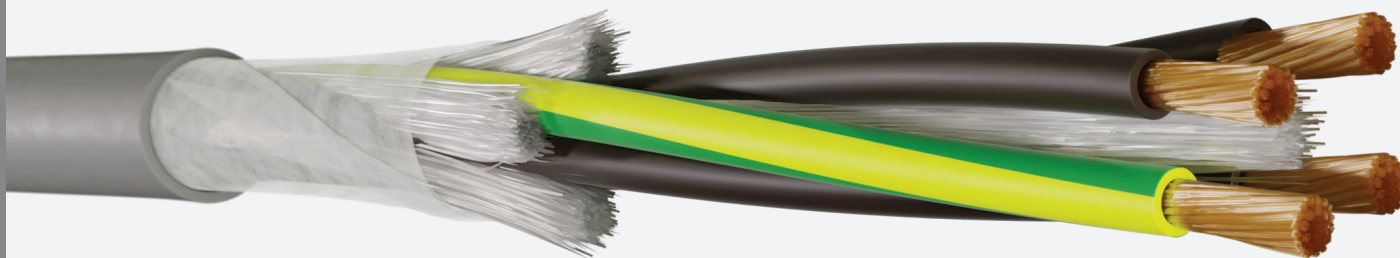
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UL 21179
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED

20 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +90	-5 / +90	-5 / +90

ELECTRICAL PROPERTIES

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR



MECHANICAL CRUSH

MAIN ADVANTAGES

Extra-Flexible Copper Class 6

Designed to handle repeated movement or light vibrations without deterioration.

Special PP Insulation

Low capacitance and reliable insulation under dynamic conditions.

RAL 7001 Gray PVC TM5 Jacket

Higher resistance to abrasion and industrial oils compared to standard PVC.

Good Installation Flexibility

Ideal for narrow passages or short-travel mobile connections.

Compatible with Damp Indoor Environments

Functional even in control cabinets, machine tools, or conduits subject to condensation.

Maximum Conductor Temperature 90 °C

Safe even in enclosed spaces or near heat sources.

Compliant with UL / CSA / CE

Suitable for international markets and integration into exported machinery.

Continuous Metric Marking

Precise cutting and simplified length control during installation.

MotionCables code		EPlan Code	Formation	AWG	Ø	Cu
			mm²		mm	kg / km
PDN11G03UR-G	●	MC.28031127	3 G 4	12	11.0	58
PDN11G04UR-G	●	MC.28041127	4 G 4	12	11.7	96
PDN11G05UR-G	●	MC.28051127	5 G 4	12	14.8	154
PDN11G07UR-G	●	MC.28071127	7 G 4	12	16.5	240
PDN09G04UR-G	●	MC.28040927	4 G 6	10	14.4	336
PDN07G04UR-G	●	MC.28040727	4 G 10	8	18.6	480
PDN05G04UR-G	●	MC.28040527	4 G 16	6	22.8	672
PDN03G04UR-G	●	MC.28040327	4 G 25	4	26.3	912
PDN02G04UR-G	●	MC.28040227	4 G 35	2	30.0	1152
PDNA1G04UR-G	●	MC.2804A127	4 G 50	1	35.0	1440
PDNA2G04UR-G	●	MC.2804A227	4 G 70	2/0	41.0	1776
PDNA3G04UR-G	●	MC.2804A327	4 G 95	3/0	46.0	2304
PDNA4G04UR-G	●	MC.2804A427	4 G 120	4/0	53.0	2880

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UL 21209
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +90	-40 / +90	-40 / +90	-40 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

Extra-Flexible Conductors Class 6

Excellent mechanical performance in cable carriers and systems with continuous motion.

RAL 9005 Black PUR FRHF Jacket

Extreme resistance to oils, cutting, abrasion, chemical substances, and coolants.

Technical PP Insulation

High dielectric stability and thermal resistance for high-stress environments.

Suitable for Damp and Wet Environments

Perfect for use in factories subject to wash-downs, condensation, or spray exposure.

High Durability in Flex Cycles

Designed to exceed 10 million cycles in dynamic or robotic systems.

Maximum Conductor Temperature 90°C

Safety even in installations on or near the motor or heat sources.

UL / CSA / CE Certified

Compliant with the technical requirements of systems intended for global markets.

Progressive Metric Marking

Supports correct wiring, reducing errors in cutting or installation length.

MotionCables code		EPlan Code	Formation	AWG	Ø	Cu
			mm ²		mm	kg / km
PDN11G03UP-N	●	MC.38031135	3 G 4	12	11.0	58
PDN11G04UP-N	●	MC.38041135	4 G 4	12	11.7	96
PDN11G05UP-N	●	MC.38051135	5 G 4	12	14.8	154
PDN11G07UP-N	●	MC.38071135	7 G 4	12	16.5	240
PDN09G04UP-N	●	MC.38040935	4 G 6	10	14.4	336
PDN07G04UP-N	●	MC.38040735	4 G 10	8	18.6	480
PDN05G04UP-N	●	MC.38040535	4 G 16	6	22.8	672
PDN03G04UP-N	●	MC.38040335	4 G 25	4	26.3	912
PDN02G04UP-N	●	MC.38040235	4 G 35	2	30.0	1152
PDNA1G04UP-N	●	MC.3804A135	4 G 50	1	35.0	1440
PDNA2G04UP-N	●	MC.3804A235	4 G 70	2/0	41.0	1776
PDNA3G04UP-N	●	MC.3804A335	4 G 95	3/0	46.0	2304
PDNA4G04UP-N	●	MC.3804A435	4 G 120	4/0	53.0	2880

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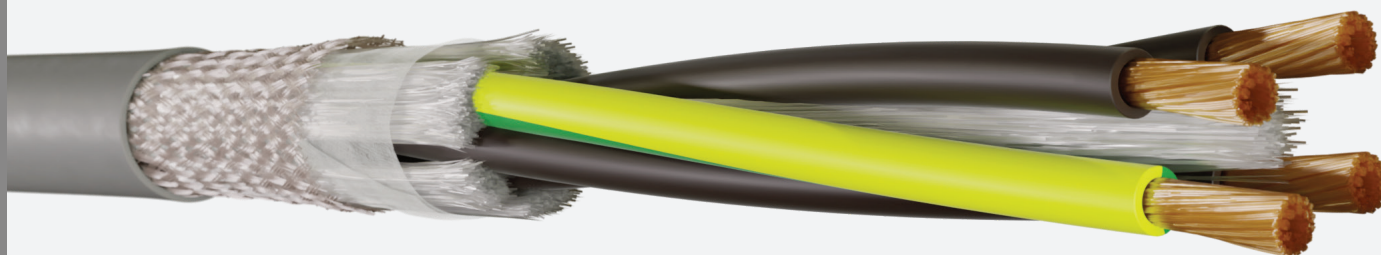
All the codes are available in the EPLAN PLAN8 System (use the EPLAN code in the relevant column).



SPAC CAVI

All the codes are available in the SPAC CAVI system (use MotionCables item code).

The names of trademarks and standards are provided for reference or information purposes only. These trademarks and standards are the exclusive property of their respective owners (see the complete list on the back cover).

UL 21179
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

200.000

DEMI-STATIC



12 x O.D.

MIN. BENDING RADIUS



180 m/min

MAX. SPEED

2.0 m/sec²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



-

TORSION



-

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

CYCLES

m.u.



MIL

0,2

MIN. BENDING RADIUS

x O.D.

12

MAXIMUM SPEED

m/min

180

MAXIMUM ACCELERATION

m/s²

2,0

PULLING FORCE

N/mm²

≤ 50

TORSION

°/m

-

MAX. HORIZONTAL TRAVEL

m

-

TEMPERATURE

°C

+5 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR

MAIN ADVANTAGES

Flexible Copper Class 5

Reliable performance in power distribution in systems up to 1000 V, even in mixed environments.

High-Coverage Copper Braid Shielding

Effective EMC protection against external interference and unwanted coupling.

Low Dielectric Constant PP Insulation

Maintenance of signal integrity even over long runs and in disturbed environments.

RAL 7001 Gray PVC Jacket

Good mechanical and chemical resistance for standard and semi-damp industrial environments.

Indoor Industrial Installation

Economical and safe solution for automation, HVAC, power train, and control cabinets.

Maximum Conductor Temperature 90°C

Safe management of internal temperatures in dense cabinets and conduits.

UL / CSA / CE Certified

Meets regulatory requirements for international systems (Europe / North America).

Progressive Metric Marking

Facilitates measurement and correct cable positioning during installation.

MotionCables code		EPlan Code	Formation	AWG	∅	Cu
			mm ²		mm	kg / km
PFS11G03UR-G	●	MC.19031117	(3 G 4)	12	11.5	79
PFS11G04UR-G	●	MC.19041117	(4 G 4)	12	12.3	122
PFS11G05UR-G	●	MC.19051117	(5 G 4)	12	15.3	183
PFS11G07UR-G	●	MC.19071117	(7 G 4)	12	17.0	269
PFS09G04UR-G	●	MC.19040917	(4 G 6)	10	14.9	399
PFS07G04UR-G	●	MC.19040717	(4 G 10)	8	19.2	581
PFS05G04UR-G	●	MC.19040517	(4 G 16)	6	23.3	766
PFS03G04UR-G	●	MC.19040317	(4 G 25)	4	26.9	1011
PFS02G04UR-G	●	MC.19040217	(4 G 35)	2	30.6	1271
PFSA1G04UR-G	●	MC.1904A117	(4 G 50)	1	35.6	1711
PFSA2G04UR-G	●	MC.1904A217	(4 G 70)	2/0	41.6	2101
PFSA3G04UR-G	●	MC.1904A317	(4 G 95)	3/0	46.6	2640
PFSA4G04UR-G	●	MC.1904A417	(4 G 120)	4/0	53.6	2970

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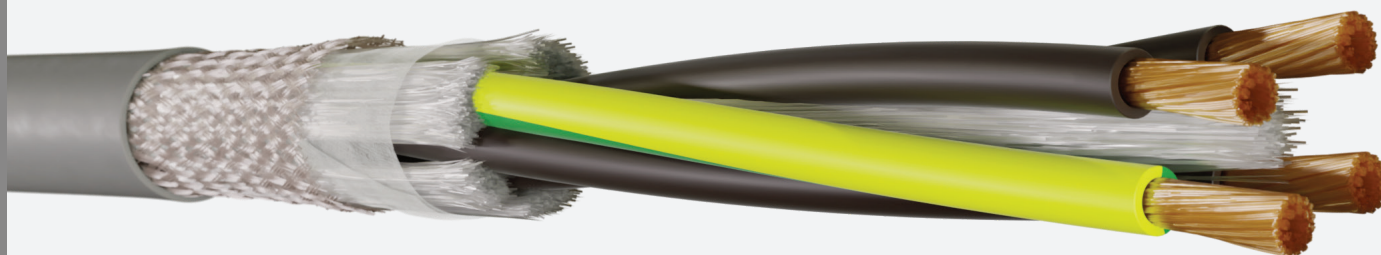
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SPAC CAVI

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UL 21179
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

5 million

CYCLES



7,5 x O.D.

MIN. BENDING RADIUS



300 m / min

MAX. SPEED

20 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



30 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

	m.u.			
CYCLES	MIL	0,2	5	1
MIN. BENDING RADIUS	x O.D.	12	7,5	10
MAXIMUM SPEED	m/min	180	300	180
MAXIMUM ACCELERATION	m/s ²	2,0	20	5
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	15	30
TEMPERATURE	°C	-30 / +90	-5 / +90	-5 / +90

ELECTRICAL PROPERTIES

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



WATER RESISTANT



EMC PROTECTED



TEMPOR. OUTDOOR



MECHANICAL CRUSH

MAIN ADVANTAGES

Extra-Flexible Conductors Class 6	Ideal for light or cyclical movements in conduits or moving machinery.
Copper Braid Shielding (High Coverage)	Reliable EMC performance in environments disturbed by motors, inverters, and transformers.
High-Performance PVC TM5 Jacket	Resistance to oils, lubricants, and more severe industrial environmental conditions.
PP Insulation for Low Capacitance	Maintains electrical efficiency even at high frequencies.
Improved Flexibility compared to Standard Cables	Reduces installation stress on complex or moving paths.
UL / CSA / CE Certifications	Compliant with major standards for automation, power distribution, and machinery export.
Compatible with Motor Power Systems	Optimal for connections from control cabinet to servo motors or actuators.
Continuous Metric Marking	Facilitates assembly, identification, and management of cable sections on site.

MotionCables code		EPlan Code	Formation	AWG	Ø	Cu
			mm ²		mm	kg / km
PDS11G03UR-G	●	MC.29031127	(3 G 4)	12	11.5	79
PDS11G04UR-G	●	MC.29041127	(4 G 4)	12	12.3	122
PDS11G05UR-G	●	MC.29051127	(5 G 4)	12	15.3	183
PDS11G07UR-G	●	MC.29071127	(7 G 4)	12	17.0	269
PDS09G04UR-G	●	MC.29040927	(4 G 6)	10	14.9	399
PDS07G04UR-G	●	MC.29040727	(4 G 10)	8	19.2	581
PDS05G04UR-G	●	MC.29040527	(4 G 16)	6	23.3	766
PDS03G04UR-G	●	MC.29040327	(4 G 25)	4	26.9	1011
PDS02G04UR-G	●	MC.29040227	(4 G 35)	2	30.6	1271
PDSA1G04UR-G	●	MC.2904A127	(4 G 50)	1	35.6	1711
PDSA2G04UR-G	●	MC.2904A227	(4 G 70)	2/0	41.6	2101
PDSA3G04UR-G	●	MC.2904A327	(4 G 95)	3/0	46.6	2640
PDSA4G04UR-G	●	MC.2904A427	(4 G 120)	4/0	53.6	2970

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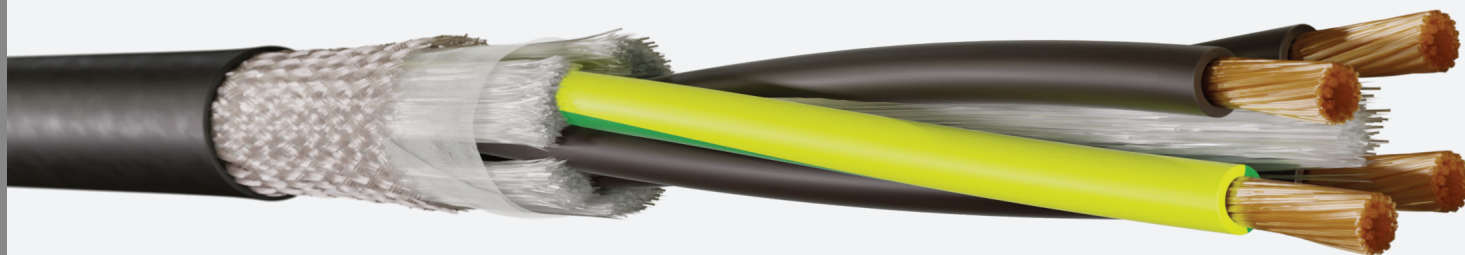
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SPAC CAVI

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UL 21209
90 °C - 1000VAWM I/II A/B
90 °C - 1000VLABS
Free

UPON REQUEST



10 million

CYCLES



6,5 x O.D.

MIN. BENDING RADIUS



600 m / min

MAX. SPEED

60 m / s²

ACCELERATION

≤ 50 N / mm²

PULLING FORCE



± 30 ° / m

TORSION



50 m

MAX. HORIZ. TRAVEL

DURABILITY IN MECHANICAL & THERMAL CONDITIONS

ELECTRICAL PROPERTIES

	m.u.				
CYCLES	MIL	0,2	1	5	10
MIN. BENDING RADIUS	x O.D.	12	6,5	7,5	10
MAXIMUM SPEED	m/min	180	600	300	240
MAXIMUM ACCELERATION	m/s ²	2,0	50	30	15
PULLING FORCE	N/mm ²	≤ 50	≤ 20	≤ 20	≤ 20
TORSION	°/m	-	± 30	± 30	± 30
MAX. HORIZONTAL TRAVEL	m	-	3	15	50
TEMPERATURE	°C	-50 / +90	-40 / +90	-40 / +90	-40 / +90

Test
Voltage4,0 kV x 5 min
acc.to EN 50395 Cl. 10.3Insulation
Resistance≥ 1.0 GΩ x km @ 20 °C
acc.to EN 50395 Cl. 8.1Max. Short
Circuit
Temperature

160 °C (≤ 1s)

Operating
Voltage1000 V (UL/CSA)
U₀/U 0.6/1.0 kV (IEC)

RESISTANCE TO ENVIRONMENTAL AND AGGRESSIVE CHEMICAL THREATS



OIL RESISTANT



FLAME RETARDANT



COLD RESISTANT



ABRASION RESISTANT



EMC PROTECTED



WATER RESISTANT



UV RESISTANT



MICROBE RESISTANT



OZONE RESISTANT



MUD RESISTANT



HALOGEN FREE

MAIN ADVANTAGES

Extra-Flexible Copper Class 6

High mechanical performance even in cyclical movements and complex torsion.

Copper Braid Shielding (High Coverage)

High-level EMC protection for installations with inverters, motors, and high-current lines.

Black PUR FRHF Outer Jacket

Resists aggressive oils, greases, solvents, and intense mechanical stress.

Low-Capacitance PP Insulation

Stable electrical performance even in systems with long distances or high power.

High Dynamic Flexibility

Works perfectly in cable carriers and machinery with repeated movements.

Conductor Temperature up to 90°C

Ideal for environments with thermal dissipation or continuous operation under load.

UL / CSA / CE Compliant

Suitable for international applications in sectors such as automotive, packaging, and machine tools.

Continuous Metric Marking

Supports correct installation, simplifies length control, and reduces wiring errors

MotionCables code		EPlan Code	Formation	AWG	Ø	Cu
			mm ²		mm	kg / km
PDS11G03UP-N	●	MC.39031135	(3 G 4)	12	11.5	162
PDS11G04UP-N	●	MC.39041135	(4 G 4)	12	12.3	224
PDS11G05UP-N	●	MC.39051135	(5 G 4)	12	15.3	302
PDS11G07UP-N	●	MC.39071135	(7 G 4)	12	17.0	357
PDS09G04UP-N	●	MC.39040935	(4 G 6)	10	14.9	286
PDS07G04UP-N	●	MC.39040735	(4 G 10)	8	19.2	485
PDS05G04UP-N	●	MC.39040535	(4 G 16)	6	23.3	723
PDS03G04UP-N	●	MC.39040335	(4 G 25)	4	26.9	1089
PDS02G04UP-N	●	MC.39040235	(4 G 35)	2	30.6	1540
PDSA1G04UP-N	●	MC.3904A135	(4 G 50)	1	35.6	2069
PDSA2G04UP-N	●	MC.3904A235	(4 G 70)	2/0	41.6	2928
PDSA3G04UP-N	●	MC.3904A335	(4 G 95)	3/0	46.6	4055
PDSA4G04UP-N	●	MC.3904A435	(4 G 120)	4/0	53.6	5225

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