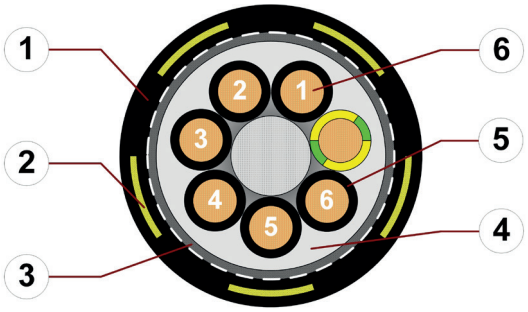
Data sheet
chainflex® CFSPECIAL.572

Motor cable for TopDrive applications ● For heavy duty applications ● PUR outer jacket ● Shielded ● Oil-resistant and coolant-resistant ● Flame-retardant ● PVC and halogen-free ● UV-resistant ● Hydrolysis and microbe-resistant

Example image



Example image
For detailed overview please see design table

1. Outer jacket: Pressure extruded PUR mixture
2. Reinforcement: Tensile strength aramid braiding (embedded in the outer jacket)
3. Overall shield: Bending-resistant braiding made of tinned copper wires
4. Inner jacket: Pressure extruded, gusset-filling TPE mixture
5. Core insulation: Mechanically high-quality XLPE or TPE mixture
6. Conductor: Especially bending-stable version consisting of bare copper wires

Cable structure

Conductor	Conductor cable consisting of pre-leads (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Overall shield	Extremely bending-resistant braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%
Outer jacket	**1. Outer jacket:** PUR mixture adapted to suit the requirements in e-chains®. **Reinforcement:** High tensile strength aramid braid embedded in the outer jacket. **2. Outer jacket:** Low-adhesion, halogen-free PUR mixture, highly abrasion and bending-resistant, adapted to suit the requirements in top drive hanging applications (following DIN EN 50363-10-2). Colour: Jet black (similar to RAL 9005)

„00000 m“* igus chainflex CFSPECIAL.572.① ----② 600/1000V E310776

cЯUus AWM Style 10835 VW-1 AWM I/II A/B 80°C 1000V FT1 DNV TAE00004G3

CE RoHS-II conform www.igus.eu +++ chainflex cable works +++

*** Length printing:** Not calibrated. Only intended as an orientation aid.
① / ② Cable identification according to Part No. (see technical table).
Example: ... chainflex **CFSPECIAL.572.2400.01 (1x240)C 600/1000V** ...

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Example image

Dynamic information

Bend radius	e-chain® linear	minimum 10 x d
	flexible	minimum 8 x d
	fixed	minimum 5 x d
Temperature	e-chain® linear	-25°C up to +80°C
	flexible	-40°C up to +80°C (following DIN EN 60811-504)
	fixed	-50°C up to +80°C (following DIN EN 50305)
v max.	unsupported	10m/s
	gliding	2m/s
a max.		50m/s²
Travel distance		For top drive hanging applications up to 50m

These values are based on specific applications or tests. They do not represent the limit of what is technically feasible.

Electrical information

Nominal voltage	600/1000V (following DIN VDE 0298-3)
Testing voltage	4000V (following DIN EN 50395)

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Example image

Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2)
Offshore	MUD-resistant following NEK 606 - status 2016
Flame-retardant	According to IEC 60332-1-2, Cable Flame, VW-1, FT1, FT2 / Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (following PV 3.10.7 – status 1992)
Halogen-free	Following DIN EN 60754
PTFE-free	The design of these products does not contain PTFE
UL/CSA AWM	Details see table UL/CSA AWM
NFPA	Following NFPA 79-2018, chapter 12.9
DNV	Type Approval Certificate TAE00004G3
REACH	In accordance with regulation (EC) No. 1907/2006 (REACH)
Lead-free	Following 2011/65/EC (RoHS-II/RoHS-III)
CE	Following 2014/35/EU

Properties and approvals

UL/CSA AWM Details

Conductor nominal cross section [mm²]	Number of cores	UL style core insulation	UL style outer jacket	UL Temperature Rating [°C]	UL Voltage Rating [V]
2.5	37	30054	21233	80	1000
4.0	7	30054	21233	80	1000
240	1	10492	10835	80	1000
300	1	10492	10835	80	1000
400	1	10492	10835	80	1000

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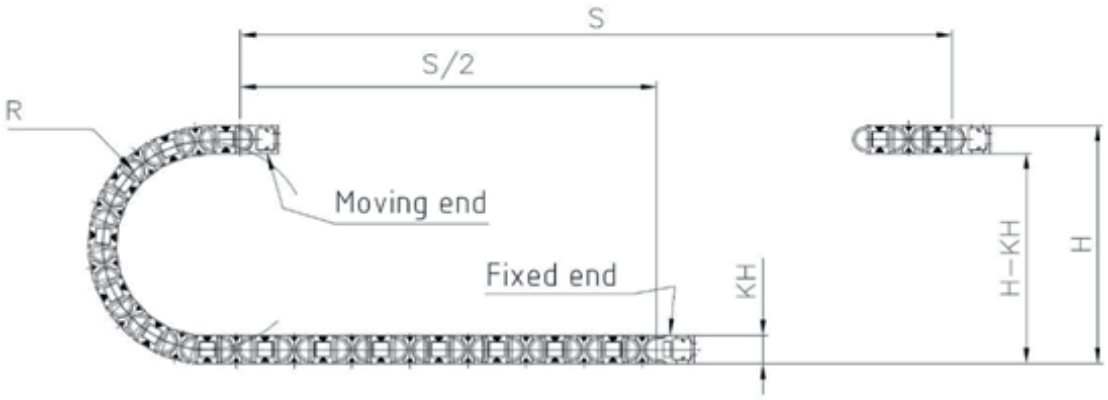
Example image

Typical lab test setup for this cable series

Test bend radius R	approx. 250 - 300 mm
Test travel S	approx. 1 - 15 m
Test duration	minimum 2 - 4 million double strokes
Test speed	approx. 0.5 - 2 m/s
Test acceleration	approx. 0.5 - 1.5 m/s²



Typical mechanical application areas

- For high tensile strain
- Almost unlimited resistance to oil
- For top drive hanging applications up to 50m

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Example image

Technical tables:

Mechanical information

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter maximum [mm]	Copper index [kg/km]	Weight [kg/km]
Multi core Motor cables				
CFSPECIAL.572.25.37	(37x2.5)C	39.5	1086	1901
CFSPECIAL.572.40.07	(7G4.0)C	19.5	350	540
Spindle cables/Single cores				
CFSPECIAL.572.2400.01	(1x240)C	34.5	2581	3081
CFSPECIAL.572.3000.01	(1x300)C	37.5	3189	3799
CFSPECIAL.572.4000.01	(1x400)C	42.0	4269	5007

Note: The given outer diameters are maximum values and may tend toward lower tolerance limits.
G = with green-yellow earth core **x =** without earth core

Electrical information

Conductor nominal cross section [mm²]	Maximum conductor resistance at 20 °C (following DIN EN 50289-1-2) [Ω/km]	Max. current rating at 30 °C [A]
2.5	7,98	30
4.0	4,95	41
240	0,09	724
300	0,06	880
400	0,05	1022

The final maximum current rating depends among other things on the ambient conditions, the type of the installation and the number of loaded cores.

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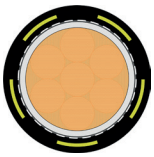
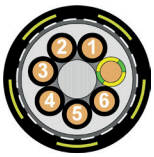
Example image

Design table

Part No.	Number of cores	Core design drawing
CFSPECIAL.572.xxx.01	1	
CFSPECIAL.572.xx.07	7	
CFSPECIAL.572.xx.37	37