

# Cable for axis 7 on robots | PUR | CFSPECIAL.792



- PUR outer jacket
- Shielded
- Oil-resistant and coolant-resistant
- Flame-retardant
- PVC and halogen-free
- Notch-resistant
- Hydrolysis and microbe-resistant

## Dynamic information

Bend radius	<b>e-chain® linear</b>	minimum 10 x d
	<b>flexible</b>	minimum 8 x d
	<b>fixed</b>	minimum 5 x d
Temperature	<b>e-chain® linear</b>	-25°C up to +80°C
	<b>flexible</b>	-40°C up to +80°C (following DIN EN 60811-504)
	<b>fixed</b>	-50°C up to +80°C (following DIN EN 50305)
v max.	<b>unsupported</b>	3m/s
	<b>gliding</b>	2m/s
a max.		20m/s <sup>2</sup>
Travel distance		Unsupported travels and up to 100m for gliding applications, Class 5

## Cable structure

Conductor	Finely stranded conductor consisting of bare copper wires (following DIN EN 60228).
Core insulation	Mechanically high-quality TPE mixture.
Core identification	► <a href="#">Product range table</a>
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Bending-resistant braiding made of tinned copper wires. Coverage linear approx. 50%, optical approx. 80%
Outer jacket	Low-adhesion, halogen-free, highly abrasion resistant PUR mixture, adapted to suit the requirements in e-chains® (following DIN EN 50363-10-2) Colour: jet black (similar to RAL 9005)

## Electrical information

Nominal voltage	600/1,000V (following DIN VDE 0298-3) 1,000V (following UL)
Testing voltage	4,000V (following DIN EN 50395)

## Properties and approvals

UV resistance	High
Oil resistance	Oil-resistant (following DIN EN 50363-10-2), Class 3
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
UL verified	Certificate No. B129699: "igus 36-month chainflex cable guarantee and service life calculator based on 2 billion test cycles per year" See data sheet for details ► <a href="http://www.igus.eu/CFSPECIAL792">www.igus.eu/CFSPECIAL792</a>
UL/CSA AWM	
NFPA	Following NFPA 79-2018, chapter 12.9
EAC	Certificate No. RU C-DE.ME77.B.00302/19
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
UKCA	In accordance with the valid regulations of the United Kingdom (as at 08/2021)

## Typical application areas

- Reliable e-chain® cable for the seventh robot axis
- Electrical properties in line with Kuka (.011/.013/.014), ABB (.012) and Fanuc (.015/.016)



Example image

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igus® chainflex® CFSPECIAL.792



Example image

Part No.	Number of cores and conductor nominal cross section [mm²]	Outer diameter (d) max. [mm]	Copper index [kg/km]	Weight [kg/km]
<b>ABB</b>				
CFSPECIAL.792.012	(18G2.5)C	25.5	545	882
<b>Fanuc</b>				
CFSPECIAL.792.015	(7x(6x2.0))C	36.5	999	1747
CFSPECIAL.792.016	(5x(4x0.25)+10x(3x0.75))C	26.5	422	877
<b>KUKA</b>				
CFSPECIAL.792.011	(5x(2x6.0+2x2.5)+2x(6x1.0))C	35.5	1250	2033
CFSPECIAL.792.013	((6x1.5)C+3x(3x4)+1G6)C	28.0	679	1220
CFSPECIAL.792.014	(2x(3x1.5)C+3x(3x10)+1G10)C	35.5	1340	2122

**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

Part No.	Core group	Colour code
<b>ABB</b>		
CFSPECIAL.792.012	(18G2.5)C	Black cores with white numbers 1-17, one green-yellow core
<b>Fanuc</b>		
CFSPECIAL.792.015	(7x(6x2.0))C	Black cores with white numbers 1-29 Blue cores with white numbers 1-4 Yellow cores with black numbers 1-9
CFSPECIAL.792.016	5x(4x0.25) 10x(3x0.75)	(blue/violet/brown/green), (grey/violet/yellow/brown), (grey/blue/brown/green), (grey/blue/green/yellow), (green/violet/brown/yellow) Brown cores with white numbers 1, 7, 24 & 30 Black cores with white numbers 16-21 Blue cores with white numbers 2, 8 & 25 Green cores with black numbers 3, 9 & 26 Yellow cores with black numbers 5, 22 & 28 Red cores with white numbers 11-15 Violet cores with white numbers 4, 10 & 27 Grey cores with black numbers 6, 23 & 29
<b>KUKA</b>		
CFSPECIAL.792.011	10x6.0 10x2.5 2x(6x1.0)C	Black cores with white numbers 1-9, one green-yellow core Black cores with white numbers 10-18, one green-yellow core Black cores with white numbers 19-30
CFSPECIAL.792.013	(6x1.5)C 3x(3x4) 1G6	Black cores with white numbers 10-15 Black cores with white numbers 1-9 Green-yellow core
CFSPECIAL.792.014	2x(3x1.5)C 3x(3x10) 1G10	Black cores with white numbers 10-15 Black cores with white numbers 1-9 Green-yellow core

