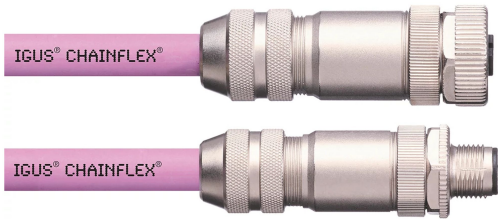


Harnessed DeviceNet cables, TPE, oil-resistant,
connector A: M12 pin A-coded, connector B: M12
socket A-coded

CAT9581001



Harnessed DeviceNet cables, TPE, oil-resistant,
connector A: M12 pin A-coded, connector B:
M12 socket A-coded

Product description

Introducing the Harnessed DeviceNet Cables by CAT9581001, designed for extremely heavy-duty applications. Featuring a durable TPE outer jacket, these cables are oil-resistant and flame-retardant, ensuring long-lasting performance even in challenging environments. With M12 pin A-coded and M12 socket A-coded connectors, they are perfect for both indoor and outdoor use (excluding direct sunlight). Ideal for storage units, machine tools, and cleanrooms, they guarantee 10 million double strokes for reliability you can trust.

General properties

Bus system	DeviceNet
Number of cores and conductor nominal cross-section	((2xAWG24)C+2xAWG22)C
Outer diameter (d) max. mm	7 mm
Weight per km	57 kg/km
Copper index kg/km	36 kg/km

Electricity attributes

Nominal voltage	50V
UL Voltage Rating	600 V
Test voltage	500V (according to DIN EN 50289-1-3)
Wave resistance approx.	120 Ω

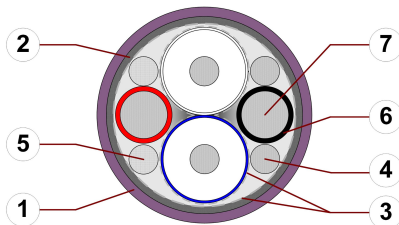


Properties and approvals

UV resistance	Medium
Oil resistance	Oil-resistant (according to DIN EN 60811-404), bio-oil-resistant (according to VDMA 24568 with Plantocut 8 S-MB tested by DEA), Class 4
Flame-retardant	According to IEC 60332-1-2, FT2/Horizontal Flame
Silicone-free	Free from silicone which can affect paint adhesion (according to PV 3.10.7 – status 1992)
UL verified	Certificate no. V293650: "igus 4-year chainflex cable guarantee and service life calculator based on 2 billion test cycles per year"
UL/CSA AWM	Style 1589 and 21371, 30 V, 80 °C
NFPA	According to NFPA 79-2018, chapter 12.9
DNV	Type approval certificate TAE00003X5
REACH	In accordance with Regulation (EC) No. 1907/2006 (REACH)
Lead-free	According to 2011/65/EU (RoHS-II/RoHS-III)
Cleanroom	According to ISO Class 1. The outer jacket material of this series complies with CF34.UL.25.04.D - tested by IPA according to standard DIN EN ISO 14644-1
DESINA	According to VDW, DESINA standardisation
CE	According to 2014/35/EU

Cable structure

Conductor	Stranded conductor in an especially bend-resistant version consisting of bare copper wires (according to DIN EN 60228).
Core insulation	According to bus specification.
 Conductor colours	white/blue red, black
Core group 1 core structure	(2xAWG24)C
Core group 1 colour code	white/blue
Core group 2 core structure	2xAWG22
Inner jacket	TPE mixture adapted to suit the requirements in e-chains®.
Overall shield	Extremely flexible braiding made of tinned copper wires. Coverage linear approx. 70%, optical approx. 90%
Outer jacket	Low-adhesion, extremely abrasion-resistant and highly flexible TPE mixture, adapted to suit the requirements in e-chains®.
Outer jacket colour	Red lilac (comparable to RAL 4001)



1. Outer jacket: pressure extruded, flame-retardant TPE mixture
2. Overall shield: extremely flexible braiding made of tinned copper wires
3. Shield film: aluminium-coated plastic foil
4. Drain wire: tinned copper wires
5. Filler: plastic yarns
6. Core insulation: mechanically high-quality TPE mixture (according to bus specification)
7. Conductor: fine stranded wire in particularly flexible version consisting of bare copper wires



Dynamic properties

	Min. bend radius, e-chain (factor)	10 x d
	Min. bend radius, e-chain	70 mm
	Min. bend radius, flexible (factor)	8 x d
	Min. bend radius, fixed (factor)	5 x d
	Temperature e-chain®	-35°C up to +70°C
	Temperature, flexible	-45°C to +70°C (according to DIN EN 60811-504)
	Temperature, fixed	-50°C to +70°C (according to DIN EN 50305)
	v max. unsupported (speed)	10 m/s
	v max. gliding (speed)	6 m/s
	a max. (acceleration)	100 m/s ²
	travel length	Class 6
	torsion	No torsion



chainflex®Lifetime

Guaranteed service life for this series according to guarantee conditions

Further information: [chainflex® guarantee](#)

Double strokes*	5 million		7.5 million		10 million	
Temperature,	CFBUS .001 -.049	CFBUS .050-.070	CFBUS .001-.049	CFBUS .050-.070	CFBUS .001-.049	CFBUS .050-.070
from/to [°C]	R min. [Factor x d]	R min. [Factor x d]	R min. [Factor x d]	R min. [Factor x d]	R min. [Factor x d]	R min. [Factor x d]
-35 / -25	12.5	15	13.5	16	14.5	17
-25/+60	10	12.5	11	13.5	12	14.5
+60 / +70	12.5	15	13.5	16	14.5	17

* Higher number of double strokes possible - use the service life calculation function on this page.

Technical note on bus cables

chainflex® bus cables have been specially developed and tested for continuously moving use in e-chains®. Depending on the outer jacket material and the design principle, the bus cables are designed for different mechanical requirements and media resistance.

The cables have been electrically designed in such a way that, on the one hand, the electrical requirements of the respective bus specification are reliably met

and, on the other, that greater value is placed on a high degree of EMC reliability. It is also ensured that the electrical values remain stable over the long term in spite of permanent movement.

The overall quality of transmission in a complete bus communication system, however, is not solely dependent on the cable used. What is also essential is that all components (electronic parts,

connecting system and cable) are precisely matched to each other and that the maximum transmission rates, which are dependent on the respective system,

are adhered to with regard to the data transmission rates needed. A cable is thus not solely responsible for the reliable transmission of signals.

igus® advises that when you are designing your bus system to take all these factors into account and, with extensive tests, helps you to ensure the process reliability of your system from the very beginning.



Certificates and standards

