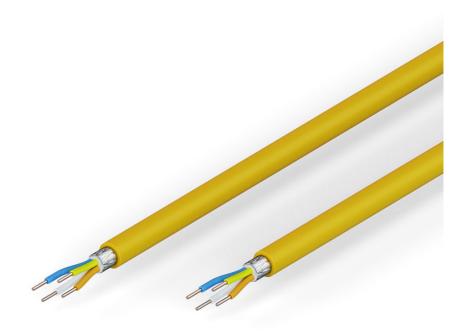
ZB9037 www.beckhoff.com/ZB9037

ZB9037 | Industrial Ethernet/EtherCAT cable, shielded, PUR, 1 x 4 x AWG26, fixed installation, Cat.5, yellow





Electrical data				
Rated voltage	30 V (according to IEC 61076-2-101)			
Attenuation of shielding	≥ 50 dB (30100 MHz)			
Insulation resistance	≥ 500 MΩ/km			
Unbalanced capacitance to ground	≤ 2000 pF/km			
Mutual capacitance	nom. 50 nF/km			
Characteristic impedance (Ethernet)	100 Ω ±15 Ω			
Loop resistance (Ethernet)	≤ 260 Ω/km			
Unbalanced resistance (Ethernet)	2 %			
Dielectric strength wire/wire (Ethernet)	1 kV AC (50 Hz, 1 min)/1 kV DC (50 Hz)			
Dielectric strength wire/shield (Ethernet)	1 kV AC (50 Hz, 1 min.)/1 kV DC (50 Hz)			
Signal running time (Ethernet)	4.8 ns/m			
Electrical parameters (Ethernet)	based on Cat.5			
Test voltage	1000 V, 50 Hz, 1 min.			
Mechanical data				
Cable structure (Ethernet)	star quad			
Conductor construction (Ethernet)	7-strand			
Cross-section (Ethernet)	1 x 4 x 0.14 mm ² (AWG26)			



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Outer cable diameter 3.65 mm ± 0.15 mm (0.1496" ± 0.0059") Min. bending radius, moved 15 x outer cable diameter Min. bending radius, fixed installation 8 x outer cable diameter, 2.5 x outher cable diameter (fixed with single bend) Weight 30 kg/km (20.2 lb/1000 ft) Conductor material copper bare Shielding braiding of tinned copper wires Optical covering factor of shielding (Ethernet) ≥ 85 % Use fixed installation Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 289037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, fixed installation Operation temperature range, fixed installation -30+70°C, -22+158°F Operation temperature range, fixed installation -40+80°C, -40+176°F UV resistance good Oil resistance depends on medium, concentration, temperature and duration Flame-retardant Hor					
Min. bending radius, fixed installation 8 x outer cable diameter, 2.5 x outher cable diameter (fixed with single bend) Weight 30 kg/km (20.2 lb/1000 ft) Conductor material copper bare Shielding braiding of tinned copper wires Optical covering factor of shielding (tethernet) Use fixed installation Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 2B9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free secording to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Outer cable diameter	3.65 mm ± 0.15 mm (0.1496" ± 0.0059")			
Weight 30 kg/km (20.2 lb/1000 ft) Conductor material copper bare Shielding braiding of tinned copper wires Optical covering factor of shielding (Ethernet) ≥ 85 % Use fixed installation Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 00000m Beckhoff Automation GmbH & Co. KG - Germany – Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Coperation temperature range, moved Operation temperature range, fixed installation -40+80°C, -22+158°F Operation temperature range, fixed installation -40+80°C, -40+176°F UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815	Min. bending radius, moved	15 x outer cable diameter			
Conductor material copper bare Shielding braiding of tinned copper wires Optical covering factor of shielding (Ethernet) Use fixed installation Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 00000m Beckhoff Automation GmbH & Co. KG - Germany − Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM 1 A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, Iye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Min. bending radius, fixed installation	8 x outer cable diameter, 2.5 x outher cable diameter (fixed with single bend)			
Shielding braiding of tinned copper wires Optical covering factor of shielding (Ethernet) Use fixed installation Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 000000m Beckhoff Automation GmbH & Co. KG - Germany − Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, moved 30+70°C, -22+158°F Operation temperature range, fixed installation UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Weight	30 kg/km (20.2 lb/1000 ft)			
Optical covering factor of shielding (Ethernet) Use fixed installation Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 00000m Beckhoff Automation GmbH & Co. KG - Germany − Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, moved 30+70°C, -22+158°F Operation temperature range, fixed installation 40+80°C, -40+176°F UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, Iye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Conductor material	copper bare			
(Ethernet) Use fixed installation Jacket color yellow Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 00000m Beckhoff Automation GmbH & Co. KG - Germany – Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxxx Printing color black Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free secording to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Shielding	braiding of tinned copper wires			
Jacket color Material jacket PUR (polyurethane) Wire color code Willow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket Double Mire color Printing on the jacket Double Mire jacket Printing on the jacket Double Mire jacket Environmental data Operation temperature range, moved Operation temperature range, fixed installation UV resistance Good Oil resistance Journal of Jour	, ,	≥ 85 %			
Material jacket PUR (polyurethane) Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 200000m Beckhoff Automation GmbH & Co. KG - Germany – Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation 40+80°C, -40+176°F UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Use	fixed installation			
Wire color code yellow, orange, white, blue Wire insulation material PO (Polyolefine) Printing on the jacket 00000m Beckhoff Automation GmbH & Co. KG - Germany – Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxxx Printing color black Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation 40+80°C, -40+176°F UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Jacket color	yellow			
Wire insulation material PO (Polyolefine) Printing on the jacket 00000m Beckhoff Automation GmbH & Co. KG - Germany – Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation -40+80°C, -40+176°F UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Material jacket	PUR (polyurethane)			
Printing on the jacket 00000m Beckhoff Automation GmbH & Co. KG - Germany – Industrial Ethernet / EtherCAT ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Wire color code	yellow, orange, white, blue			
Printing on the Jacket ZB9037 Cat5e AWG26/7 E170315 AWM 20963 AWM I A/B 80°C 30V Fa.No.xxxxx Printing color black Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Wire insulation material	PO (Polyolefine)			
Environmental data Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation -40+80°C, -40+176°F UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Printing on the jacket	•			
Operation temperature range, moved -30+70°C, -22+158°F Operation temperature range, fixed installation -40+80°C, -40+176°F UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Printing color	black			
Operation temperature range, fixed installation -40+80°C, -40+176°F UV resistance good Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Environmental data				
installation UV resistance good Oil resistance Acid, lye and solvent resistance Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Operation temperature range, moved	-30+70°C, -22+158°F			
Oil resistance according to DIN EN 60811-404 (7x24 h/90 °C) Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes		-40+80°C, -40+176°F			
Acid, lye and solvent resistance depends on medium, concentration, temperature and duration Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	UV resistance	good			
Flame-retardant Horizontal flame test according to UL 1581 part 1090 CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Oil resistance	according to DIN EN 60811-404 (7x24 h/90 °C)			
CFC-free yes Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Acid, lye and solvent resistance	depends on medium, concentration, temperature and duration			
Halogen-free according to IEC 60754 or DIN VDE 0472 part 815 Silicone-free yes	Flame-retardant	Horizontal flame test according to UL 1581 part 1090			
Silicone-free yes	CFC-free	yes			
,	Halogen-free	according to IEC 60754 or DIN VDE 0472 part 815			
UL yes, UL E-file number: E170315	Silicone-free	yes			
	UL	yes, UL E-file number: E170315			

Attenuation								
Max. insertion loss								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	3.2	6.2	10.5	13.4	14.7	18.8	27.2	35.0
[db/100 ft]	1	1.9	3.2	4.1	4.5	5.7	8.3	10.7
Min. near-end crosstalk attenuation								
Frequency [MHz]	1	4	10	16	20	31.25	62.5	100
[db/100 m]	65	56.3	50.3	47.2	45.8	42.9	38.4	35.3
[db/100 ft]	19.8	17.2	15.3	14.4	14	13.1	11.7	10.8



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Notes

- The following length tolerances apply: 2-3%
- Illustrations similar

Ordering information	Length
ZB9037	sold by the meter

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