

LUTZE MOTIONFLEX™ ETHERNET TPE, Shielded

Flexible ETHERNET Cable for flexing and twisting applications



Application

- For the cabling of industrial Ethernet systems
- Cable design for harsh industrial environments and operating conditions with high noise levels.
- Automation technology, material handling, conveyor technology, and industrial machinery
- Suitable for motion applications with repetitive movement, flexing, and torsional stress

Characteristics

- High protection against electromagnetic interference (EMI)
- Oil, abrasion, and sunlight resistant
- Design and approvals for machine and field level
- Talc and Silicone free

Technical data

Impedance	100Ω ± 10Ω
DC resistance	Max 14Ω/100m
Operating capacitance	< 56pF/m
Rated voltage	cULus 300V AWM 2463 600V
Test voltage	2000V
Temperature range	Moving -25°C to +70°C Fixed -40°C to +80°C
Minimum bending radius	Moving min. 10 x cable OD Moving optimal 20 x cable OD Fixed min. 7.5 x cable OD
Max. Torsion	+/- 270° / 1m cable length
Cold bend	UL444 -40°C
Oil resistance	Oil Res I & II per UL 1277
Burning behavior	Flame retardant per UL 1666 (CMR types) UL 1685 (CM types)
Approvals	cULus CMX Outdoor cURus AWM 2463 600V SUN RES RoHS, REACH
Item specific approvals	PLTC CMR CM

Construction

- AWG conductor
- Bare copper wire
- Conductor insulation HDPE
- SF/UTP, foil shield 100 %, tinned copper braid shield 75% optical coverage
- Jacket TPE, matte, low adhesion surface
- Teal jacket, similar to RAL 5021

For further information, see ETHERNET pages in the Technical Overview

Specifications are subject to change without prior notice

Part No.	Description No. of conductors	OD / Ø ca. mm	OD / Ø inches	Weight Lbs/Mft	Copper Lbs/Mft
Industrial Ethernet/Ethernet IP					
A1040017	(2x2xAWG22/19) PLTC, ITC, CMX Outdoor, CM, AWM2463 600V CAT5e, SF/UTP WHOG/OG, WHGN/GN	7.9	0.310	46	22
A1040019	(2x2xAWG24/7) CMX Outdoor, CM, AWM2463 600V CAT5e, SF/UTP WHOG/OG, WHGN/GN	6.6	0.260	34	18
A1040020	(4x2xAWG24/7) CMX Outdoor, CMR, AWM 2463 600V Cat5e, SF/UTP WHBU/BU, WHOG/OG, WH GN/GN, WHBN/BN	7.6	0.299	46	27
A1040030	(4x2xAWG24/7) CMX Outdoor, CMR, AWM 2463 600V Cat6A, SF/UTP WHBU/BU, WHOG/OG, WH GN/GN, WHBN/BN	8.2	0.322	48	29

ETHERNET – Overview

LUTZE Ethernet Cable and Connector Selection Guides

Ethernet Cable Selection Guide

Category	Application Type	2-Pair or 4-Pair	Part Number	Shielding	AWG Size	OD (mm)	AWM 600V Approval	UL Listed Type PLTC	Jacket Color
Cat5e	Static	2-Pair	104301*	SF/UTQ	22	6.5	●	●	Green
			104307*	SF/UTQ	22	6.5	●	●	Green
			104197	SF/UTP	22	7.5	●	●	Teal
		4-Pair	104349	SF/UTP	22	8.6	●	●	Teal
			104335	SF/UTP	26	6.3			Green
			104336	SF/UTP	24	7.3			Green
	Flexing	2-Pair	104303*	SF/UTQ	22	6.5			Green
			A1040017	SF/UTP	22	7.9	●	●	Teal
			A1040019	SF/UTP	24	6.6	●		Teal
		4-Pair	104337	S/UTP	24	7.8			Green
			104396	SF/UTP	26	6.7			Green
			A1040020	SF/UTP	24	7.6	●		Teal
Cat6	Static	4-Pair	A1040001	U/UTP	23	6.7	●		Teal
	Flexing		104347	SF/UTP	26	7.9			Green
Cat6 _A	Static	4-Pair	A1040005	F/UTP	23	8.0	●		Teal
			104338	S/FTP	26	6.4			Green
			104397	S/FTP	22	9.6	●	●	Green
	Flexing	104401**	SF/UTP	24	8.9			Green	
		A1040030	SF/UTP	24	8.2	●		Teal	
Cat7	Static	4-Pair	104331	S/FTP	26	7.0			Green

*Cable designed to PROFINET 2-Pair specifications

**Cable designed to PROFINET 4-Pair specifications

Ethernet Connector Selection Guide

Ethernet Cable		Straight RJ 45 Connectors				90° Angled RJ 45 Connectors			
Part number	AWG	T568B 490174	T568A 490175	T568B 490176	Profinet 490177	T568B 490151	T568A 490152	T568B 490153	Profinet 490178
A1040001	23	•	•			•	•		
A1040005	23	•	•			•	•		
A1040017	22	•	•			•	•		
A1040019	24	•	•			•	•		
A1040020	24	•	•			•	•		
A1040030	24	•	•			•	•		
104197	22	•	•			•	•		
104301	22				•				•
104303	22				•				•
104307	22				•				•
104331	26			•				•	
104335	26			•				•	
104336	24	•	•			•	•		
104337	24	•	•			•	•		
104338	26			•				•	
104347	26			•				•	
104349	22	•	•			•	•		
104396	26			•				•	
104397	22	•	•			•	•		
104401	24	•	•			•	•		

LUTZE Fittings Selection Chart

Part#	Plastic NPT	Plastic PG	Plastic Metric	Metal NPT	Metal PG	Metal Metric	Part#	Plastic NPT	Plastic PG	Plastic Metric	Metal NPT	Metal PG	Metal Metric
117095	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16 FMM16-CV	117253	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12
117096	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16 FMM16-CV	117254	FPNPT38-R	FPPG7	FPM12	FMNPT38 FMNPT38-CV	FMPG7	FMM12 FMM16-CV
117097	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG13	FMM20 FMM16-CV	117255	FPNPT38-R	FPPG7	FPM12	FMNPT38 FMNPT38-CV	FMPG7	FMM12 FMM16-CV
117098	FPNPT38	FPPG13	FPM16	FMNPT12	FMPG13	FMM20 FMM20-CV	117303	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV
117099	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	108349A	FPNPT38	FPPG7	FPM12	FMNPT38	FMPG9	FMM16
117100	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	108350A	FPNPT38	FPPG9	FPM12	FMNPT38	FMPG9	FMM16
117101	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	108351A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
117102	FPNPT38-R	FPPG7	FPM12	FMNPT38 FMNPT38-CV	FMPG7	FMM12 FMM16-CV	108352A	FPNPT38	FPPG9	FPM16	FMNPT12	FMPG11	FMM20
117103	FPNPT38	FPPG7	FPM12	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108353A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
117104	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108354A	FPNPT12	FPPG13	FPM20-R	FMNPT12	FMPG13	FMM20
117105	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108355A	FPNPT12	FPPG16	FPM20	FMNPT34-CV	FMPG16	FMM25
117106	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM20-CV	108356A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
117107	FPNPT38	FPPG13	FPM20-R	FMNPT12 FMNPT12-CV	FMPG13	FMM20 FMM20-CV	108357A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
117108	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	108358A	FPNPT38	FPPG9	FPM16	FMNPT12	FMPG11	FMM20
117109	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	108359A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
117110	FPNPT38-R	FPPG7	FPM12	FMNPT38 FMNPT38-CV	FMPG7	FMM12 FMM16-CV	108360A	FPNPT38	FPPG13	FPM20-R	FMNPT12	FMPG13	FMM20
117111	FPNPT38-R	FPPG7	FPM12	FMNPT38 FMNPT38-CV	FMPG7	FMM12 FMM16-CV	108361A	FPNPT12	FPPG16	FPM20	FMNPT12	FMPG16	FMM25
117112	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108362A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
117113	FPNPT38	FPPG9	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	108363A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
117115	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	108372A	FPNPT38	FPPG9	FPM16	FMNPT12	FMPG11	FMM20
117116	FPNPT12-R	FPPG13	FPM20-R	FMNPT12 FMNPT12-CV	FMPG13	FMM20 FMM20-CV	108373A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
117124	FPNPT38	FPPG9	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	108374A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
117151	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	108375A	FPNPT12-R	FPPG13	FPM20-R	FMNPT12	FMPG13	FMM20
117170	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108376A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
117171	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108377A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
117172	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108378A	FPNPT10-R	FPPG29	FPM32-R	FMNPT10	FMPG21	FMM32
117173	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	108380A	FPNPT38	FPPG11	FPM16	FMNPT12	FMPG11	FMM20
117174	FPNPT38	FPPG13	FPM20-R	FMNPT12 FMNPT12-CV	FMPG13	FMM20 FMM20-CV	108381A	FPNPT12-R	FPPG13	FPM20-R	FMNPT12	FMPG13	FMM20
117175	FPNPT12-R	FPPG13	FPM20-R	FMNPT12 FMNPT12-CV	FMPG13	FMM20 FMM20-CV	108382A	FPNPT12	FPPG13	FPM20-R	FMNPT12	FMPG13	FMM20
117176	FPNPT12	FPPG13	FPM20-R	FMNPT12 FMNPT12-CV	FMPG13	FMM20 FMM20-CV	108383A	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
117177	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	108384A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
117180	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108385A	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
117181	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV	108386A	FPNPT10	FPPG29	FPM32	FMNPT10	FMPG29	FMM40
117182	FPNPT38	FPPG9	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	108389A	FPNPT34	FPPG21	FPM25	FMNPT34	FMPG21	FMM32
117184	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT12-CV	FMPG11	FMM20 FMM20-CV	108391A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
117185	FPNPT12-R	FPPG13	FPM20-R	FMNPT12 FMNPT12-CV	FMPG13	FMM20 FMM20-CV	108392A	FPNPT12	FPPG16	FPM20	FMNPT12	FMPG16	FMM25
117190	FPNPT38	FPPG9	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	108393A	FPNPT12	FPPG16	FPM20	FMNPT34	FMPG16	FMM25
117191	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	108401A	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
117193	FPNPT12-R	FPPG13	FPM20-R	FMNPT12 FMNPT12-CV	FMPG13	FMM20 FMM20-CV	A1040001	FPNPT38	FPPG9	FPM16	FMNPT38	FMPG9	FMM16
117199	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG11	FMM20 FMM16-CV	A1040005	FPNPT38	FPPG13	FPM16	FMNPT12 FMNPT38-CV	FMPG13	FMM20 FMM16-CV
117201	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT12-CV	FMPG11	FMM20 FMM20-CV	A1040017	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG13	FMM20 FMM16-CV
117202	FPNPT12-R	FPPG13	FPM20-R	FMNPT12 FMNPT12-CV	FMPG13	FMM20 FMM20-CV	A1040019	FPNPT38	FPPG9	FPM16	FMNPT38 FMNPT38-CV	FMPG9	FMM16 FMM16-CV
117243	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1040020	FPNPT38	FPPG11	FPM16	FMNPT12 FMNPT38-CV	FMPG13	FMM20 FMM16-CV
117244	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1040030	FPNPT38	FPPG13	FPM16	FMNPT12 FMNPT38-CV	FMPG13	FMM20 FMM16-CV
117245	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1060804	FPNPT10	FPPG29	FPM32	FMNPT10 FMNPT10-CV	FMPG29	FMM40 FMM32-CV
117246	FPNPT38-R	FPPG7	FPM12	FMNPT38	FMPG7	FMM12	A1061004	FPNPT34	FPPG21	FPM25	FMNPT34 FMNPT34-CV	FMPG21	FMM32 FMM25-CV