

Industrial Ethernet Quick Guide

Turck offers a complete line of molded Industrial Ethernet cordsets to facilitate network installation, resulting in faster start-up and fewer wiring errors. These robust cables are available with stranded or solid conductors, and with or without shielding. Most Industrial Ethernet equipment uses a 4-pin D-code M12 or an 8-pin M12. These connectors provide a tough, rugged seal and are IP67-rated. Turck provides RJ45 cordsets, as well as a variety of devices made to convert between RJ45 and M12 connectors. Turck cordsets for Industrial Ethernet networks are available in standard lengths, in addition to custom lengths via our worldwide sales rep channel.

Attributes

- Our stranded cables meet full CAT 5e performance, direct connected, up to 85 meters in length (see types 440, 441, 840, 841).
- Our cables are suitable for use in PoE and PoE+ applications (power over Ethernet, see IEEE 802.3af,at), up to 80 meters, when installed per recommendations in TIA TSB-184.
- We have three cables approved for use in C1D2 hazardous locations ([see types 444, 844, 445](#)), which includes ITC approval rating, amongst others.
- For higher category performance, up to 10 GB, the M12 X-code product line is also available.

Industrial TPE Cable Jacket Material

- Excellent oil resistance (including lubricant used in most robot dress packs)
- Excellent moisture resistance
- Good ozone resistance
- Excellent UV and weathering resistance
- Excellent weld spatter resistance
- Very good flame retardance
- High flexing up to 10 million cycles for stranded cable
- Low temperature brittle point

600 V Rated Cable

- UL AWM 600V rated, cables can be installed in cable trays near other 600V cables, as long as all other requirements are met and best installation practices are observed. For more details, download [Turck Industrial Ethernet Cables: Guide for use in Cable Trays](#).

Standards Information

- UL Listed Communications Cable (CM), style #2463
- Cordset assemblies are UL Listed (DUXR) Communications, Audio-Video, Data and Signaling-circuit Accessories, #E464271
- Most all carry CE marking
- Compliant with, EIA/TIA 568-C.2 and ISO/IEC standards



Supported Ethernet Protocols

EtherNet/IP™

PROFI[®]
INDUSTRIAL ETHERNET
NET

Modbus

EtherCAT[®]

B2403

Turck Inc. | 3000 Campus Drive, Minneapolis, MN 55441 | T +1 800 544 7769 | F +1 763 553 0708 | www.turck.com

Bulk CAT 5e Industrial Ethernet Cable

Type	Approvals	Data Pair		Outer Jacket	Shields	Bulk Cable Part Number/ Weight/300 M	Flexlife Ratings
		AWG Color Code	DCR (/1000 ft) Insulation	Material Color Nominal O.D.	Type		
440 80 °C 600 Volts	c(UL)us Type CM AWM	2UTPx24 AWG Stranded	26.5 Ohms PE	TPE Teal 6.1 mm (.240 in)	-	RF51210 26 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
441 80 °C 600 Volts	c(UL)us Type CM AWM	2UTPx24 AWG Stranded	26.5 Ohms PE	TPE Teal 6.7 mm (.240 in)	Foil/Braid	RF51211 35 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
442 80 °C 600 Volts	c(UL)us Type CM	2UTPx24 AWG Solid	31.5 Ohms PE	TPE Teal 6.1 mm (.220 in)	-	RF51212 18 lbs.	-
443 80 °C 600 Volts	c(UL)us Type CM AWM	2UTPx24 AWG Solid	31.5 Ohms PE	TPE Teal 6.9 mm (.270 in)	Foil/Braid	RF51213 38 lbs.	-
444 80 °C 600 Volts	UL ITC, PLTC AWM	2UTPx22 AWG Stranded	17.5 Ohms PE	TPE Teal 7.9 mm (.317 in)	Foil/Braid	RF52557 49 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
440RD 80 °C 600 Volts	c(UL)us Type CM AWM	2UTPx24 AWG Stranded	26.5 Ohms PE	TPE Red 6.1 mm (.240 in)	-	RF52115 26 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
441RD 80 °C 600 Volts	c(UL)us Type CM AWM	2UTPx24 AWG Stranded	26.5 Ohms PE	TPE Red 6.7 mm (.240 in)	Foil/Braid	RF52075 35 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
440BU 80 °C 600 Volts	c(UL)us Type CM AWM	2UTPx24 AWG Stranded	26.5 Ohms PE	TPE Blue 6.1 mm (.240 in)	-	RF52110 26 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
440G 80 °C 600 Volts	c(UL)us Type CM AWM	2UTPx24 AWG Stranded	26.5 Ohms PE	TPE Gray 6.1 mm (.240 in)	-	RF52300 26 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
421 80 °C 600 Volts	UL ITC, PLTC AWM	2UTPx22 AWG Solid	17.2 Ohms PE	TPE Green 7.8 mm (.305 in)	Foil/Braid	RF51604 49 lbs.	-
423 80 °C 600 Volts	UL ITC, PLTC AWM	2UTPx22 AWG Stranded	17.5 Ohms PE	TPE Green 7.9 mm (.317 in)	Foil/Braid	RF52558 49 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
4413 75 °C 300 Volts	c(ETL)us CMX	2UTPx24 AWG Stranded	44 Ohms PE	TPU Teal 5.7 mm (.225 in)	Overall Foil/Braid	RF51306 35 lbs.	10xO.D. 1 million cycles 20xO.D. 10 million cycles

Type	Approvals	Data Pair		Outer Jacket	Shields	Bulk Cable Part Number/ Weight/300 M	Flexlife Ratings
		AWG Color Code	DCR (/1000 ft) Insulation	Material Color Nominal O.D.	Type		
840 80 °C 600 Volts	c(UL)us Type CM AWM	4UTPx24 AWG Stranded	26.5 Ohms PE	TPE Teal 6.3 mm (.118 in)	-	RF51460 29 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
841 80 °C 600 Volts	c(UL)us Type CM AWM	4UTPx24 AWG Stranded	26.5 Ohms PE	TPE Teal 7.7 mm (.303 in)	Foil/Braid	RF50893 43 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
842 75 °C 300 Volts	c(UL)us Type CM	4UTPx24 AWG Solid	31.5 Ohms PE	TPE Teal 6.1 mm (.240 in)	-	RF51462 26 lbs.	-
843 80 °C 600 Volts	c(UL)us Type CM AWM	4UTPx24 AWG Solid	28.6 Ohms PE	TPE Teal 7.3 mm (.287 in)	Foil/Braid	RF51463 41 lbs.	-
841BK 80 °C 600 Volts	c(UL)us Type CM AWM	4UTPx24 AWG Stranded	26.5 Ohms PE	TPE Black 7.7 mm (.301 in)	Foil/Braid	RF51624 46 lbs.	10xO.D. 1 million cycles 20xO.D. 10 million cycles
841G 80 °C 600 Volts	c(UL)us Type CM AWM	4UTPx24 AWG Stranded	26.5 Ohms PE	TPE Gray 7.7 mm (.301 in)	Foil/Braid	RF51348 46 lbs.	10xO.D. 1 million cycles 20xO.D. 10 million cycles
840RD 80 °C 600 Volts	c(UL)us Type CM AWM	4UTPx24 AWG Stranded	26.5 Ohms PE	TPE Red 6.3 mm (.118 in)	-	RF52151 29 lbs. <i>flexlife</i>	10xO.D. 1 million cycles 20xO.D. 10 million cycles
844 80 °C 600 Volts	UL ITC, PLTC AWM	4UTPx24 AWG Stranded	17.5 Ohms PE	TPE Teal 8.8 mm (.345 in)	Foil/Braid	RF52113 56 lbs.	10xO.D. 1 million cycles 20xO.D. 10 million cycles

All cables listed are part of Turck's Reelfast Program, and can be ordered in any quantity.

In-Stock Ethernet Options

Ethernet Patch Cords		
Cable Type	Termination Type	Product Description
440 - Stranded Unshielded/2 Pair	RJ45/RJ45	RJ45 RJ45 440-1M
		RJ45 RJ45 440-2M
	M12/M12	RSCD RSCD 440-1M
		RSCD RSCD 440-2M
		RSCD RSCD 440-5M
		RSCD RSCD 440-10M
		RSCD RSCD 440-20M
	M12/RJ45	RSCD RJ45 440-2M
		RSCD RJ45 440-5M
RSCD RJ45 440-10M		
441 - Stranded Shielded/2 Pair	RJ45/RJ45	RJ45S RJ45S 441-1M
		RJ45S RJ45S 441-2M
		RJ45S RJ45S 441-5M
		RJ45S RJ45S 441-10M
	M12/M12	RSSD RSSD 441-1M
		RSSD RSSD 441-2M
		RSSD RSSD 441-5M
		RSSD RSSD 441-10M
	M12/RJ45	RSSD RJ45S 441-1M
		RSSD RJ45S 441-2M
		RSSD RJ45S 441-5M
		RSSD RJ45S 441-10M
		RSSD RJ45S 441-20M
	444 - Stranded Shielded/2 Pair, ITC/PLTC	M12/M12
RSSD RSSD 444-5M		
RSSD RSSD 444-10M		
RSSD RSSD 444-15M		
RSSD RSSD 444-20M		
RSSD RSSD 444-25M		
RSSD RSSD 444-30M		
4413 - Stranded Shielded/2 Pair	M8/M8	PSGS 4M PSGS 4M 4413-0.2M
		PSGS 4M PSGS 4M 4413-0.3M
		PSGS 4M PSGS 4M 4413-0.5M
		PSGS 4M PSGS 4M 4413-0.6M
		PSGS 4M PSGS 4M 4413-1M
		PSGS 4M PSGS 4M 4413-2M
		PSGS 4M PSGS 4M 4413-5M
	M12/M8	RSSD PSGS 4M 4413-0.5M
	M8/RJ45	PSGS 4M RJ45S 4413-0.5M
		PSGS 4M RJ45S 4413-1M
		PSGS 4M RJ45 4413-2M

Turck's Connectivity In-Stock Program ensures elevated levels of Turck stock on all of our standard connectivity products, resulting in quicker shipping times and fewer headaches for you. Turck is better suited than ever to work with you to develop the perfect solution for your application challenges, whether it comes from our In-Stock Program or a customized solution created specifically for the unique challenges of your application.

Order from Turck's Connectivity In-Stock Program, and rest assured your order is on its way, because Turck works!

In-Stock Ethernet Options

Ethernet Patch Cords (Continued)		
Cable Type	Termination Type	Product Description
840- Stranded Unshielded/4 Pair	RJ45/RJ45	RJ45 RJ45 840-1M
		RJ45 RJ45 840-2M
		RJ45 RJ45 840-5M
	M12/RJ45	RSC RJ45 840-1M
		RSC RJ45 840-2M
		RSC RJ45 840-5M
		RSC RJ45 840-10M
841 - Stranded Shielded/4 Pair	RJ45/RJ45	RJ45S RJ45S 841-1M
		RJ45S RJ45S 841-2M
		RJ45S RJ45S 841-5M
		RJ45S RJ45S 841-10M
	M12/M12	RSS RSS 841-2M
		RSS RSS 841-5M
		RSS RSS 841-10M
	M12/RJ45	RSS RJ45S 841-1M
		RSS RJ45S 841-2M
		RSS RJ45S 841-5M
		RSS RJ45S 841-10M

Panel & Field Wireable Accessories			
Pin Count	Connector	Type	Product Description
4 Pin	M12 to RJ45	Feed-Thru	FKSDD RJ45SF 44
	M12	PCB Mount Receptacle	FKFDD 44-PCB
	RJ45	Field Wireable	CONNECTOR, RJ45S IDC
	M12	Field Wireable	CMBSD 8141-0/PG9
8 Pin	M12	PCB Mount Receptacle	FKFD 84-PCB
	M12	Short PCB Mount Receptacle	FKFD 84-PCB/S
	RJ45	Field Wireable	CONNECTOR, FW,RJ45S 84 IDC