

Industrial Ethernet Cable for Hazardous Locations

When choosing a solution for industrial Ethernet, within a hazardous area, the first step is finding a suitable cable. Turck provides industrial Ethernet cables that are 22awg stranded with an ITC rating -- when used with M12 connectors, these cordsets are covered by Turck's FM approval (reference NI-2.401, attached), and are ideal for C1D2 environments. The table below highlights a few of these cables.

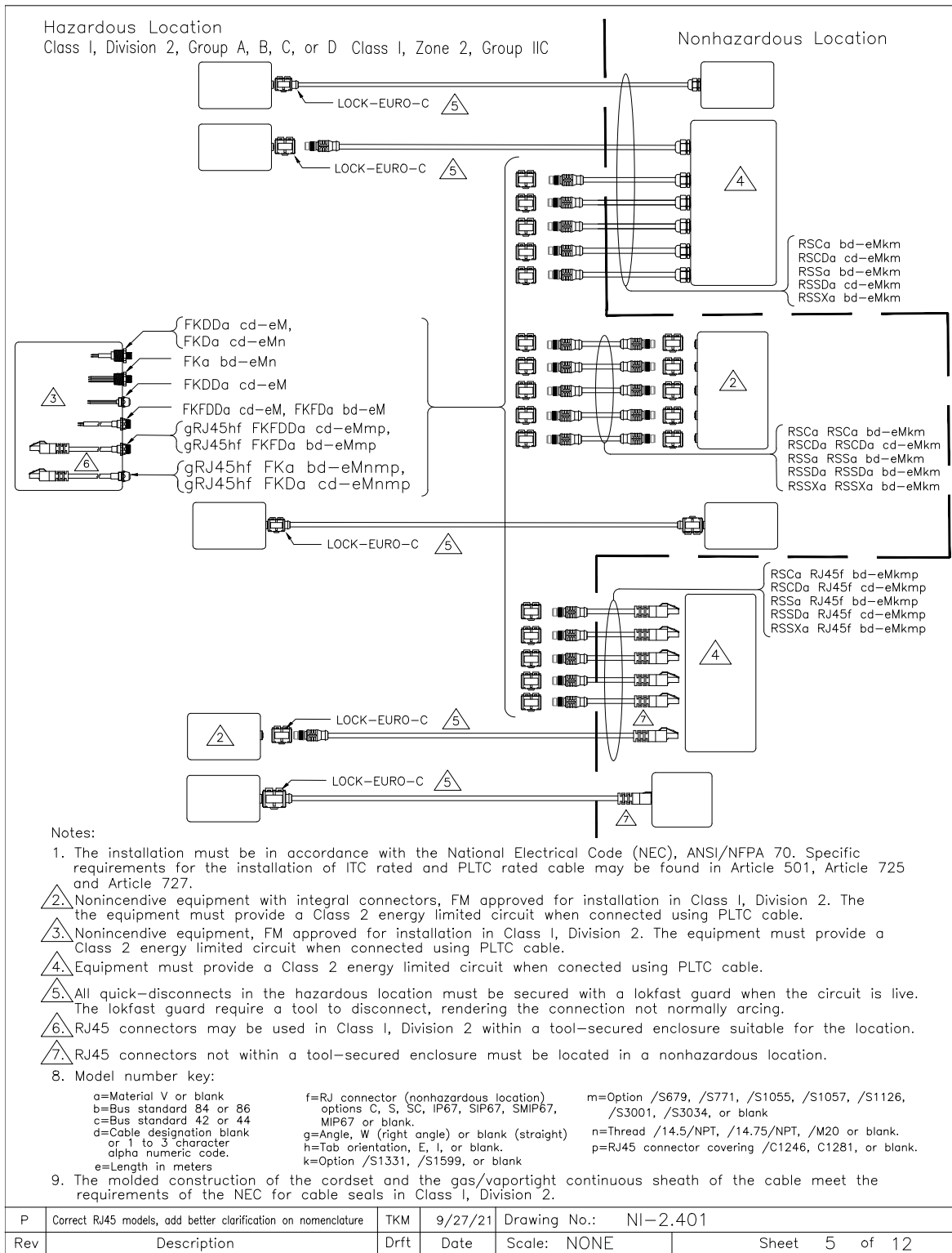
Turck Type	Category	Conductors	Cable OD (mm) Jacket Material	Shield Type	Reelfast #	Trailing Chain Flex Cycles	Approvals
445	CAT 5	4x22AWG Stranded	8.0 TPE/Teal	Foil/Braid	RF52425	--	See list below the table
444	CAT 5e	2UTPx22AWG Stranded	7.9 TPE/Teal	Foil/Braid	RF52557	35 million	UL ITC, PLTC c(UL)us CMX OUTDOOR-CM AWM 600V, 80C, OIL RES I & II
444BK	CAT 5e	2UTPx22AWG Stranded	7.9 TPE/Black	Foil/Braid	--	35 million	UL ITC, PLTC c(UL)us CMX OUTDOOR-CM AWM 600V, 80C, OIL RES I & II
844	CAT 5e	4UTPx22AWG Stranded	8.8 TPE/Teal	Foil/Braid	RF52113	10 million	UL ITC, PLTC c(UL)us CMX OUTDOOR-CM AWM 600V, 80C, OIL RES II

Turck cable type 445 stands out as a CAT 5 cable, constructed from Turck's specially engineered proprietary jacket material, EX60. This allows us to offer an industrial Ethernet cable with unparalleled approvals. As with types 444 and 844, type 445 is also suitable for use in CID2 environments. Cable type 445 boasts the following approvals:

- UL 1309 Marine Shipboard
- IEEE 1202/FT4
- IEEE 1580-2010 Marine Shipboard
- American Bureau of Shipping (ABS) Certified
- UL AWM 105 °C, 600 V
- UL ITC-ER Direct Burial; 105 °C, 150 V
- UL PLTC-ER Direct Burial; 105 °C, 300 V
- CSA CIC 90 °C Dry/90 °C Wet, 300 V Shielded
- FT1 & FT4 flame ratings
- Compliant with IEC 60332-3-22 Flame Test
- RoHS Compliant, CE
- Sunlight Resistant
- Oil Resistance (Oil Res I & II)
- -60 °C Cold Bend

NI-2.401 for Industrial Ethernet Connectivity in C1D2

This page highlights the section of NI-2.401 that addresses the use of industrial Ethernet connectivity in C1D2 environments. It offers potential use cases for industrial Ethernet, in particular where an RJ45 connection would be located in these scenarios (within the non-hazardous space). Click [here](#) to download the full version of NI-2.401.





C1D2 Ethernet - Quick Picks

There are a lot of variations to consider when planning for industrial ethernet in a hazardous location. To simplify the process, options are listed below that frequently work in many different applications. This does include both 2-pair and 4-pair variants, all in stainless steel. The receptacles are listed both as a standalone receptacle, or with the option of an RJ45 on the other end (used in the non-hazardous area). If there isn't a version listed that works for you, contact your local rep or distributor, or contact Turck Application Support directly.

2-Pair

Part ID	Description
RSSDV RSSDV 444-*M	Male Extension Cable
RSSDV RSSDV 445-*M	Male Extension Cable ER/DB
RJ45S FKDV 444-*M/14.5/NPT	½-14 NPT Panel Receptacle to RJ45
RJ45S FKSDV 444-*M	PG9 Panel Receptacle to M12
FKFDD 444-*M	PG9 Panel Receptacle with Leads

4-Pair

Part ID	Description
RSSV RSSV 844-*M	Male Extension Cable
RJ45S FKFDV 844-*M	PG9 Panel Receptacle to RJ45
FKFDV 844-*M	PG9 Panel Receptacle with Leads