



Product: [48641A](#)

TC VN/PVC, 3 C #12 Str BC, PVC-NYL Ins E1, Blk PVC Jkt, 600V TC-ER
150V NPLF 90C Dry/Wet SUN RES DIR BUR

Product Description

UL Type TC (1277) PVC-Nylon/PVC, 3 Conductor 12AWG (Class B) Bare Copper, PVC-NYL Insulation E1 Color Code, Black PVC Outer Jacket, 600V TC-ER 150V NPLF 90C Dry/Wet SUN RES DIR BUR

Technical Specifications

Product Overview

Suitable Applications:	harsh environment digital and serial two-way communication, oil and gas extraction and refining sites, petrochemical, Profibus process automation or Foundation FieldBus process automation, extreme temperature environments, exposure to humidity/moisture, dust, and oil, remote locations long distance applications, etc.
------------------------	--

Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material	No. of Conductors
Conductor(s)	12	7x20	BC - Bare Copper	3

Conductor Count:	3
------------------	---

Insulation

Material	Nominal Diameter
PVC/Nylon - Polyvinyl Chloride + Nylon	0.134 in

Color Chart

Number	Color
1	Black
2	White
3	Green

Outer Jacket

Material	Nominal Diameter	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.391 in	0.047 in

Electrical Characteristics

Conductor DCR

Nominal Conductor DCR
1.65 Ohm/1000ft

Current

Max. Recommended Current [A]
30 Amps per Conductor at 30°C

Voltage

UL Description	UL Voltage Rating	Voltage Rating [V]
TC-ER	600 V RMS (Type TC)	600 V RMS (Type TC)
NPLF	150 V RMS (NPLF)	

Temperature Range

UL Temp Rating:	90°C Dry, 90°C Wet
Operating Temperature Range:	-25°C To +90°C
Wet Temp Range:	-30°C To +90 °C

Mechanical Characteristics

UV Resistance:	Yes
Bulk Cable Weight:	103 lbs/1000ft
Max. Pull Tension:	154 lbs
Min Bend Radius (Overall):	3.91 in
Min. Bend Radius/Minor Axis:	1.56 in

Standards

NEC/(UL) Compliance:	NPLF, TC-ER, THHN, THWN
----------------------	-------------------------

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
CA Prop 65:	Yes

Suitability

Suitability - Burial:	Yes
Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LSOH, Toxicity Testing

UL Flammability:	UL 1685 UL Loading
IEEE Flammability:	1202
UL voltage rating:	600 V RMS (Type TC)

Plenum/Non-Plenum

Plenum (Y/N):	No
---------------	----

Related Part Numbers

Variants

Item #	Put-Up Type	UPC
48641A 01010000	Reel	612825364917
48641A 0105000	Reel	

History

Update and Revision:	Revision Number: 0.51 Revision Date: 02-03-2025
----------------------	---

© 2025 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.