



Product: [9891](#)

Transceiver 10BASE5, #22-3pr, #20-1pr, FHDPO, Isolated Shields, PVC Jkt, CM

Product Description

IEEE 802.3 Ethernet Transceiver 10BASE5, 20 and 22 AWG stranded tinned copper conductors, foam high-density polyethylene (22 AWG) and PVC (20 AWG) insulation, twisted pairs, tinned copper braid shield (95% coverage) drain wire, PVC jacket.

Technical Specifications

Product Overview

Suitable Applications:	IEEE 802.3 Transceiver Cable
------------------------	------------------------------

Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material	Nominal Diameter	No. of Pairs
Pair(s)	22	7x30	TC - Tinned Copper	0.03 in	3
Pair(s)	20	7x28	TC - Tinned Copper	0.038 in	1

Conductor Count:	8
------------------	---

Insulation

Element	Material	Material Trade Name	Nominal Wall Thickness
Pair(s)	PE - Polyethylene (Foam)	Datalene®	0.017 in
Pair(s)	PVC - Polyvinyl Chloride		0.012 in

Color Chart

Number	Color
78 Ohm	Black & White
78 Ohm	Yellow & Orange
78 Ohm	Blue & Green
Power	Gray & Purple

Inner Shield Material

Element	Type	Layer	Material	Material Trade Name	Coverage [%]	Drainwire AWG
Pair(s)	Tape	1	Alum / Poly	Beldfoil® (Z-Fold®)	100 %	20
Pair(s)	Tape		Alum / Poly		100 %	

Outer Shield Material

Type	Material	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Braid	TC - Tinned Copper	95 %	TC - Tinned Copper	22	7x30

Outer Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.336 in	0.032 in

Electrical Characteristics

Conductor DCR

Element	Nominal Conductor DCR	Nominal Outer Shield DCR
22 AWG	14.7 Ohm/1000ft	1.8 Ohm/1000ft

20 AWG	9.5 Ohm/1000ft	
--------	----------------	--

Capacitance

Element	Nom. Capacitance Conductor to Conductor	Nom. Capacitance Conductor to Other Conductor to Shield
22AWG pairs	16.7 pF/ft	29.5 pF/ft
22AWG pairs		

Impedance

Nominal Characteristic Impedance	Nominal Characteristic Tolerance	Nominal Characteristic Impedance Description
78 Ohm	± 5 Ohm	22AWG pairs

High Frequency (Nominal/Typical)

Nom. Insertion Loss
20 dB/100m

Delay

Max. Delay Skew	Nominal Delay	Nominal Velocity of Propagation (VP) [%]
78 ns/100m	1.3 ns/ft	78 %

Current

Element	Max. Recommended Current [A]
22 awg (10C Temperature Rise)	22 awg: 2 Amps per conductor @ 25°C & 20 awg: 2.5 Amps per conductor @ 25°C A
20 awg (10C Temperature Rise)	2.5 amps per conductor @ 25C ambient

Voltage

UL Description	UL Voltage Rating
UL type CM	300 V RMS (UL type CM)
UL AWM Style 2919	30 V RMS (UL AWM 2919)

Temperature Range

UL Temp Rating:	80°C (UL AWM Style 2919)
Operating Temp Range:	-20°C To +80°C

Mechanical Characteristics

Bulk Cable Weight:	65 lbs/1000ft
Max Recommended Pulling Tension:	160 lbs
Min Bend Radius/Minor Axis:	3.25 in

Standards

NEC Articles:	800
NEC/(UL) Specification:	CM
CEC/C(UL) Specification:	CM
UL AWM Style:	2919 (30 V 80°C)
CPR Euroclass:	Eca
IEEE Specification:	802.3 10Base5

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2005-04-01
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes
-----------------------	-----

Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1685 UL Loading
------------------	-------------------

CSA Flammability:	FT1
ISO/IEC Flammability:	IEC 60332-1-2
UL voltage rating:	300 V RMS (CM)

Plenum/Non-Plenum

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

Part Number

Variants

Item #	Color	UPC
9891 006100	Blue	612825260066
9891 0061000	Blue	612825260073
9891 006500	Blue	612825260080
9891 0065000	Blue	612825260097

Footnote:	C - CRATE REEL PUT-UP.
Footnote:	Z - FINAL PUT-UP MAY VARY (= OR -) 10% FOR SPOOLS OR REELS AND (+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

History

Update and Revision:	Revision Number: 0.326 Revision Date: 05-11-2020
----------------------	--

© 2020 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.