



Product: <u>ATMM400</u> ☑

CAT3 Backbone, 400pr, Armor Shield, PVC Jkt, CMR

Product Description

CAT3, ATMM/ARMM, 400-Pair, F/UTP-foil shield , Riser-CMR, Premise Backbone Cable, 24 AWG solid bare copper conductors, foam polyolefin insulation with PVC skin, ripcord, corrugated aluminum shield bonded to overall PVC jacket

Technical Specifications

Product Overview

Suitable Applications:	Premise Backbone Cable

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
24	Solid	BC - Bare Copper	400
Conductor Count:			800
Total Number of Pairs:		400	

Insulation

Material	
PO - Polyolefin (Foam)	
Bonded-Pair:	N/A

Color Chart

Number	Color
1	White & Blue
2	White & Orange
3	White & Green
4	White & Brown
5	White & Slate
6	Red & Blue
7	Red & Orange
8	Red & Green
9	Red & Brown
10	Red & Slate
11	Black & Blue
12	Black & Orange
13	Black & Green
14	Black & Brown
15	Black & Slate
16	Yellow & Blue
17	Yellow & Orange
18	Yellow & Green
19	Yellow & Brown
20	Yellow & Slate
21	Violet & Blue

22 Violet & Orange 23 Violet & Green 24 Violet & Brown 25 Violet & Slate Group One Binder White/Blue Group Two Binder White/Orange Group Three Binder White/Brown Group Four Binder White/Brown Group Five Binder White/Brown Group Five Binder Red/Blue Group Six Binder Red/Blue Group Seven Binder Red/Green Group Eight Binder Red/Green Group Ten Binder Red/Brown Group Ten Binder Red/Slate Group Ten Binder Black/Blue Group Twelve Binder Black/Green Group Twelve Binder Black/Green Group Tinteen Binder Black/Brown Group Fifteen Binder Black/Brown Group Fifteen Binder Black/Slate Group Fifteen Binder Black/Slate Group Sixteen Binder Yellow/Blue		
24 Violet & Brown 25 Violet & Slate Group One Binder White/Blue Group Two Binder White/Green Group Four Binder White/Green Group Four Binder White/Brown Group Five Binder White/Brown Group Five Binder Red/Blue Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Green Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Tirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Brown	22	Violet & Orange
25 Violet & Slate Group One Binder White/Blue Group Two Binder White/Orange Group Three Binder White/Green Group Four Binder White/Brown Group Five Binder White/Slate Group Six Binder Red/Blue Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Blue Group Ten Binder Black/Blue Group Twelve Binder Black/Orange Group Twelve Binder Black/Orange Group Fourteen Binder Black/Brown Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	23	Violet & Green
Group One Binder White/Blue Group Two Binder White/Orange Group Three Binder White/Green Group Four Binder White/Brown Group Five Binder White/Slate Group Six Binder Red/Blue Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Tinteen Binder Black/Green Group Fourteen Binder Black/Brown	24	Violet & Brown
Group Two Binder White/Orange Group Three Binder White/Green Group Four Binder White/Brown Group Five Binder White/Slate Group Six Binder Red/Blue Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Brown	25	Violet & Slate
Group Three Binder White/Green Group Four Binder White/Brown Group Five Binder White/Slate Group Six Binder Red/Blue Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group One Binder	White/Blue
Group Four Binder White/Brown Group Five Binder White/Slate Group Six Binder Red/Blue Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Two Binder	White/Orange
Group Five Binder White/Slate Group Six Binder Red/Blue Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Three Binder	White/Green
Group Six Binder Red/Blue Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Four Binder	White/Brown
Group Seven Binder Red/Orange Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Five Binder	White/Slate
Group Eight Binder Red/Green Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Six Binder	Red/Blue
Group Nine Binder Red/Brown Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Seven Binder	Red/Orange
Group Ten Binder Red/Slate Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Eight Binder	Red/Green
Group Eleven Binder Black/Blue Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Nine Binder	Red/Brown
Group Twelve Binder Black/Orange Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Ten Binder	Red/Slate
Group Thirteen Binder Black/Green Group Fourteen Binder Black/Brown Group Fifteen Binder Black/Slate	Group Eleven Binder	Black/Blue
Group Fourteen Binder Group Fifteen Binder Black/Slate	Group Twelve Binder	Black/Orange
Group Fifteen Binder Black/Slate	Group Thirteen Binder	Black/Green
	Group Fourteen Binder	Black/Brown
Group Sixteen Binder Yellow/Blue	Group Fifteen Binder	Black/Slate
	Group Sixteen Binder	Yellow/Blue

Color Chart 2

Number	Color		
1	Blue/White		
2	Orange/White		
3	Green/White		
4	Brown/White		
5	Gray/White		
6	Red/Blue		
7	Red/Orange		
8	Red/Green		
9	Red/Brown		
10	Red/Gray		
11	Black/Blue		
12	Black/Orange		
13	Black/Green		
14	Black/Brown		
15	Black/Gray		
16	Yellow/Blue		

Outer Shield Material



Outer Jacket Material

Material	Nominal Diameter	Ripcord
PVC - Polyvinyl Chloride	1.500 in	Yes

Construction and Dimensions

Armor

Type of Armor	Material	Thickness of Armoring Tape		
Corrugated	Aluminum	.008 in		

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
93.8 Ohm/km	5 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
330 pF/100m	17 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew
16 MHz	543 ns/100m	45 ns/100m

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. RL (Return Loss) [dB]	Max./Min. Fitted Impedance
0.772 MHz	2.2 dB/100m	47.0 dB	43.0 dB	50.1 dB	46.1 dB		100 +/- 15
1.0 MHz	2.6 dB/100m	45.0 dB	41.0 dB	47.8 dB	43.8 dB	12.0 dB	100 +/- 15
4.0 MHz	5.6 dB/100m	36.0 dB	32.0 dB	36.0 dB	32.0 dB	12.0 dB	100 +/- 15
8.0 MHz	8.5 dB/100m	31.0 dB	27.0 dB	28.3 dB	24.3 dB	12.0 dB	100 +/- 15
10.0 MHz	9.7 dB/100m	30.0 dB	26.0 dB	26.2 dB	22.2 dB	12.0 dB	100 +/- 15
16.0 MHz	13.1 dB/100m	27.0 dB	23.0 dB	20.1 dB	16.1 dB	10.0 dB	100 +/- 15

Voltage

UL Voltage Rating 300 V RMS

Temperature Range

Installation Temp Range:	-20°C To +60°C
UL Temp Rating:	60°C
Storage Temp Range:	-30°C To +60°C
Operating Temp Range:	-30°C To +60°C

Mechanical Characteristics

Bulk Cable Weight:	1441 lbs/1000ft
Max. Pull Tension:	2400 lbs
Min Bend Radius During Installation:	30.0 in
Min Bend Radius/Minor Axis:	15.0 in

Standards

NEC/(UL) Compliance:	CMR
CEC/C(UL) Compliance:	CMR
Data Category:	Category 3
ANSI Compliance:	S-90-661-2012 Category 3, ANSI/NEMA WC-63.1 Category 3
TIA/EIA Compliance:	ANSI/TIA-568-C.2 Category 3

Applicable Environmental and Other Programs

Environmental Space:	Riser
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 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2005-08-19
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Aerial:	No
Suitability - Burial:	No
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	No

Suitability - Sunlight Resistance: No

Flammability, LS0H, Toxicity Testing

C(UL) Flammability:	FT4
UL Flammability:	UL 1666 Riser
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No

Part Number

Variants

ltem #	Color	Putup Type	Length	UPC
ATMM400 008CUT	Gray	Cut to Length		612825062035
ATMM400 008CUT	Gray	Cut to Length	1 ft	612825062035

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Print Includes Descending Footage/Meter Markings. Corrugated Aluminum Armor Bonded to the Jacket.
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History

Update and Revision:	Revision Number: 0.302 Revision Date: 06-01-2020

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