



M12 INDUSTRIAL I/O CABLES

PART NUMBER REFERENCE: **MI - XXX - XX - XX - XX**

Select Connector Type: End "1" (See Next Pg.)

RJ45 Straight = 1	M12, 5P Male A Coded = A
RJ45 VRT. w/Thumbscrews = 2	M12, 5P Female A Coded = B
RJ45 HOR. w/Thumbscrews = 3	M12, 8P Male A Coded = C
RJ45 Straight Industrial IP67 = 4	M12, 8P Female A Coded = D
RJ45 R/A DOWN w/Clip = 5	M12, 12P Male A Coded = E
RJ45 VRT. R/A DOWN w/Recessed Screws = 6	M12, 12P Female A Coded = F
RJ45 HOR. R/A Up w/Thumbscrews = 7	M12, 17P Male A Coded = G
RJ45 HOR. R/A Down w/Thumbscrews = 8	M12, 17P Female A Coded = H
RJ45 VRT. RIGHT Exit w/Thumbscrews = 9	M12, 4P Male D Coded = J
RJ45 VRT. LEFT Exit w/Thumbscrews = 10	M12, 4P Female D Coded = K
RJ45 HOR. RIGHT EXIIT w/Recessed Screws = 11	M12, 8P Male X Coded = L
RJ45 HOR. LEFT Exit w/Recessed Screws = 12	M12, 8P Female X Coded = M
RJ45 Jack = 17	M12, 4P Male A Coded = P
RJ45 Slim Line = 18	M12, 4P Female A Coded = Q
IX-10A Industrial Ethernet = 19	

Select Connector Orientation: End "1" (Connectors A – Q)

Straight Exit = 0 Right Angle: 1 = 360°, 2 = 145°, 3 = 90°, 4 = 135°, 5 = 180°, 6 = 225°, 7 = 270°, 8 = 315°

Cable Type Options:	28 AWG, 5C = 1	26 AWG, 4P (CAT 5E) INDUSTRIAL = 9
	28 AWG, 8C = 2	18 AWG, 5C, HIFLEX = A
	24 AWG, 12C = 3	18 AWG, 5C (Yellow Jacket) HIFLEX = B
	26 AWG, 17C = 4	22 AWG, 5C, HIFLEX = C
	26 AWG, 4P (CAT 6) SSTP = 5	26 AWG, 5C, HIFLEX = D
	26 AWG, 4P (CAT 6A) 10 GIG ROBOTIC = 6	24 AWG, 4P (CAT 5E) IND HIFLEX = E
	26 AWG, 4P (CAT 5E) ROBOTIC = 7	22 AWG, 4P (CAT 5E) IND HIFLEX = F
	26 AWG, 4P (CAT 5E) C-TRACK = 8	

Select Connector Type: End "2" (See Next Pg.)

M12, 5P Male A Coded = A	M12, 17P Female A Coded = H
M12, 5P Female A Coded = B	M12, 4P Male D Coded = J
M12, 8P Male A Coded = C	M12, 4P Female D Coded = K
M12, 8P Female A Coded = D	M12, 8P Male X Coded = L
M12, 12P Male A Coded = E	M12, 8P Female X Coded = M
M12, 12P Female A Coded = F	M12, 4P Male A Coded = P
M12, 17P Male A Coded = G	M12, 4P Female A Coded = Q

X on end "2" denotes Flying Leads = X

Select Connector Orientation: End "2" (Connectors A – Q)

Straight Exit = 0 Right Angle: 1 = 360°, 2 = 145°, 3 = 90°, 4 = 135°, 5 = 180°, 6 = 225°, 7 = 270°, 8 = 315°

Temp: 02-28-22

Length in Meters: 1 – 60

CONNECTOR TYPES: Ethernet RJ45 (See Next Pg. for M12 Connectors)



RJ45 Straight



RJ45 Vertical
W. Thumbscrews



RJ45 Horizontal
W. Thumbscrews



RJ45 Straight
IP67 Industrial



RJ45 Vertical
W. Thumbscrews



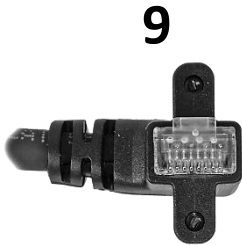
RJ45 Vertical R/A
Down W. Screws



RJ45 Horizontal Right
Exit W. Thumbscrews



RJ45 Horizontal Right
Exit W. Thumbscrews



RJ45 Vertical Right
Exit W. Thumbscrews



RJ45 Vertical Left
Exit W. Thumbscrews



RJ45 Horizontal
Right Exit W. Screws



RJ45 Horizontal
Left Exit W. Screws



M12 90° R/A
X-Coded Female



RJ45 Slim Line



IX-10A
Industrial Ethernet

Additional Dimensional Information:

For additional information regarding the physical dimensions of our connector profiles, please visit our Web-Site: www.ComponentsExpress.com or ask one our sales associates and we will be happy to assist.

CONNECTOR TYPES: M12

A

M12, 5P Male
A Coded

B

M12, 5P Female
A Coded

C

M12, 8P Male
A Coded

D

M12, 8P Female
A Coded

E

M12, 12P Male
A Coded

F

M12, 12P Female
A Coded

G

M12, 17P Male
A Coded

H

M12, 17P Female
A Coded

J

M12, 4P Male
D Coded

K

M12, 4P Female
D Coded

L

M12, 8P Male
X Coded

M

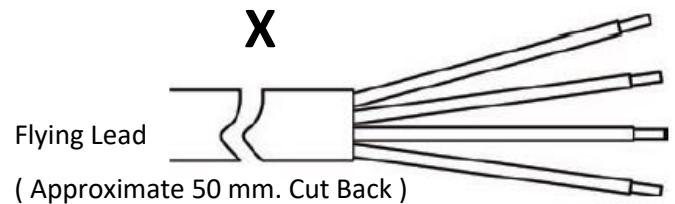
M12, 8P Female
X Coded

P

M12, 4P Male
A Coded

Q

M12, 4P Female
A Coded

X

Additional Dimensional Information:

For additional information regarding the physical dimensions of our connector profiles, please visit our Web-Site: www.ComponentsExpress.com or ask one our sales associates and we will be happy to assist.

MI & M8, Type #: 1

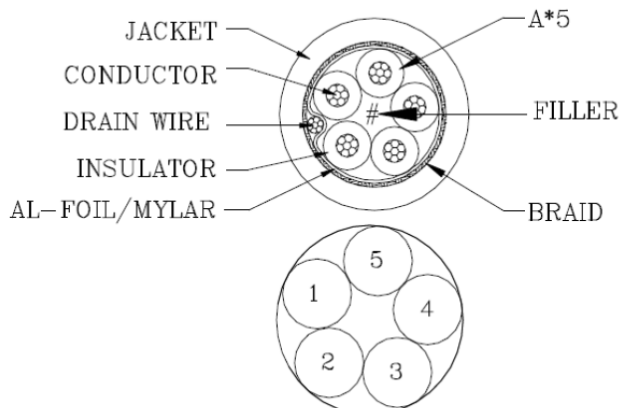
SPEC No.:	7/0.127TA*5C+AEB 85%						
Customer		Customer NO.		8 Code:	34120130	Sample NO:	W99011904
UL File NO.	E101344	UL Style:	UL 2464	Date:	1/19/10	Spec NO:	1275588P005017
CSA File NO.	0	CSA Style:	0	Edition:.	Original edition	Operation NO:	0
Structure			Structure A				
Conductors	Structure AWG	AWG	28# (7/36)				
	Material	--	Tinned Copper				
	O.D.	mm	0.381 Ref				
Insulation	Material	--	SR-PVC				
	Diameter	mm	0.82±0.06				
	Average Thickness	mm	0.220 Ref				
	Color	--	AS Color Code				
Layer	Direction	--	Right (S)				
	Pitch	mm	45 Ref				
	Diameter	mm	2.21 Ref				
Shielding 1	Material	--	--	AL-foil/mylar			--
	Conductive Side	--	--	Outside			--
	Overlap Rate	%	--	25 MIN			--
Drain wire	Structure AWG	AWG	26# (7/34)				
	Material	--	Tinned Copper				
Shielding 2	Shield	--	Braid				
	Material	--	Tinned Copper				
	Coverage Rate	%	85MIN				
Jacket	Material	--	PVC				
	Diameter	mm	5 ± 0.15				
	Min Thickness	mm	0.76				
	Extrusion	--	Solid				
	Externals	--	Plane				
	Color	--	P001 (BLACK)				



COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

W99011904 (E0898)

Rev. A, 1/19/2010, Updated 2/17/22



COLOR CODE
1.BLACK (P570)
2.BROWN (P571)
3.YELLOW (P574)
4.BLUE (P576)
5.WHITE (P579)

MINIMUM BEND RADIUS: 10X O.D.

MI & M8, Type #: 1

CABLE CHARACTERS

SPEC No.:	7/0.127TA*5C+AEB 85%							
Customer		Customer NO.		8 Code:	34120130	Sample NO:	W99011904	
UL File NO.	E101344	UL Style:		UL 2464	Date:	1/19/10	Spec NO:	1275588P005017
CSA File NO.	0	CSA Style:		0	Edition:.	Original edition	Operation NO:	0

Electric Characters

- 1.Voltage rating: 300V
- 2.Temperature rating: 80°C
- 3.Spark test: AC- 2500V/0.15 sec MIN.
- 4.Dielectric strength : AC-1500V/3 sec MIN.
- 5.Insulation resistance :SR-PVC: DC- 500V 10 MΩ/KM MIN. at 20°C
- 6.Conductor resistance : 28AWG- 237 Ω/KM MAX. at 20°C

Physical Characters

- 1.Flame test of cable:
 - 1.1 VW-1
- 2.Tensile strength test (before aging) :
 - 2.1 Sheath : > 1.05kg/mm²
 - 2.2 Insulation : > 2.11kg/mm²
- 3.Tensile strength test (after aging) :
 - 3.1 Sheath : > 70%
 - 3.2 Insulation : > 70%
- 4.Elongation (before aging) :
 - 4.1 Sheath : > 100%
 - 4.2 Insulation : > 100%
- 5.Elongation (after aging) :
 - 5.1 Sheath : > 65%
 - 5.2 Insulation : > 70%
- 6.Requirements for green environment protection : Accord with RoHS



COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

W99011904 (E0898)

Rev. A, 1/19/2010, Updated 2/17/22

MI Cable Type #: 2 / M8 Cable Type #: 4

SPECIFICATION: 8C*28AWG +AL.MYLAR+DRAIN+BRAID /UL2464		CONSTRUCTION DWG
ITEM	SPECIFICATION	<p>COLOR CODE: 1. WHITE 2.BROWN 3.GREEN 4.YELLOW 5.GRAY 6.PINK 7.BLUE 8.RED</p>
CONDUCTOR	AWG 28AWG	
MATERIAL	TINNED COPPER	
COND.SIZE	7/0.127±0.008 mm	
MIN.AVG.THICK	0.23 mm	
MATERIAL	SR-PVC	
O . D	0.90 ± 0.05 mm	
N.O.	8C	
COVERGE	100%	
OVERLAP	25% MIN	
AWG	28AWG	
MATERIAL	TINNED COPPER	
SIZE	7/0.127±0.008 mm	
MATERIAL	TINNED COPPER	
SIZE	16*8/0.10±0.008 mm 85%MIN	
MIN.AVG.THICK	0.76 mm	
MATERIAL	HALF MATT PVC	
COLOR		
O . D	5.50 ± 0.15 mm	
		MINIMUM BEND RADIUS: 10X O.D.
		<p>COMPONENTS EXPRESS, INC. 10330 Argonne Woods Drive, Ste 100 Woodridge, IL 60517</p> <p>93190828*** (E0897), 2/17/22</p>
ELECTRICAL CHARACTERISTICS		APPROVED
1. Rating : TEMP 80°C ; VOLTAGE 300V		CHECKED
2. Conductor Resistance: at 20°C MAX 28AWG: 237.25Ω/km;		DRAWING
3. Insulation Resistance: 10MO-km min at 20°C dc 500V (EIA-364-21)		CUSTOMER
4. Dielectric Strength: AC 1500V/1 minute no breakdown. (EIA-364-20)		REV
		DATE
		16/11/08
		CC-EW-206A

MVA Type #: 1 & MI Type #: 3

SPEC No.:	7/0.2TA*12C+EA						
Customer		Customer NO.		8 Code:	341201--	Sample NO:	W97012404
UL File NO.	E101344	UL Style:	UL 2464	Date:	1/24/08	Spec NO:	12E7BB1P006517-----
CSA File NO.	0	CSA Style:	0	Edition:.	Original Edition	Operation NO:	0
Structure			Structure A				
Conductors	Structure AWG	AWG	24# (7/32)				
	Material	--	Tinned Copper				
	O.D.	mm	0.6 Ref				
Insulation	Material	--	SR-PVC				
	Diameter	mm	1.07±0.07				
	Average Thickness	mm	0.235 Ref				
	Color	--	AS Color Code				
Layer	Direction	--	Right (S)				
	Pitch	mm	85 Ref				
	Diameter	mm	4.87 Ref				
Shielding	Material	--	--	AL-foil/mylar			--
	Conductive Side	--	--	Inside			--
	Overlap Rate	%	--	25			--
Drain wire	Structure AWG	AWG	24# (7/32)				
	Material	--	Tinned Copper				
Jacket	Material	--	PVC				
	Diameter	mm	6.5 ± 0.19				
	Average Thickness	mm	0.78 Ref				
	Extrusion	--	Solid				
	Externals	--	Plane				
	Color	--	P001				

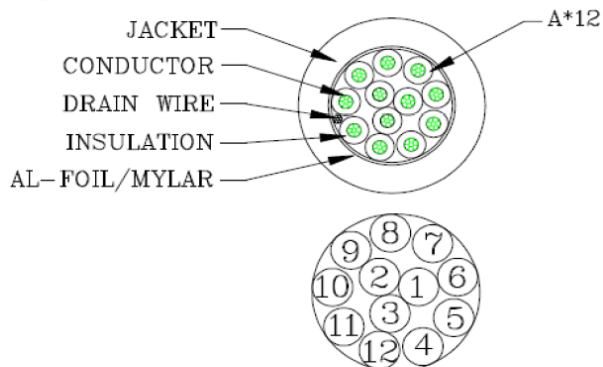


COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive,
Ste100 Woodridge, IL 60517

W97012404

Rev. A, 1/24/2008, Updated: 8/8/19

Draw NO.: 1/151.DWG



COLOR CODE

- | | |
|-----------------|-----------------------|
| 1.BLACK (P570) | 9.GRAY (P578) |
| 2.BROWN (P571) | 10.WHITE (P579) |
| 3.RED (P572) | 11.PINK (P600) |
| 4.ORANGE (P573) | 12.LIGHT GREEN (P601) |
| 5.YELLOW (P574) | |
| 6.GREEN (P575) | |
| 7.BLUE (P576) | |
| 8.VIOLET (P577) | |

MINIMUM BEND RADIUS: 10X O.D.

MVA Type #: 1 & MI Type #: 3

SPEC No.:	7/0.2TA*12C+EA						
Customer		Customer NO		8 Code:	341201--	Sample NO:	W97012404
UL File NO.	E101344	UL Style:	UL 2464	Date:	1/24/08	Spec NO:	12E7BB1P006517-----
CSA File NO.	0	CSA Style:	0	Edition.:	Original Edition	Operation NO:	0

Electric Characters

- 1.Voltage rating: 300V
- 2.Temperature rating : 80°C
- 3.Spark test : AC- 2500V/0.15 sec MIN.
- 4.Dielectric strength: AC- 1500V/3 sec MIN.
- 5.Insulation resistance : SR-PVC: DC- 500V 10 MΩ/KM MIN. at 20°C
- 6.Conductor resistance : 24AWG- 93.2Ω/KM MAX. at 20°C

Physical Characters

- 1.Flame test of cable:
 - 1.1 VW-1
- 2.Tensile strength test (before aging) :
 - 2.1 Sheath : > 1.05kg/mm²
 - 2.2 Insulation : > 2.11kg/mm²
- 3.Tensile strength test (after aging) :
 - 3.1 Sheath : > 70%
 - 3.2 Insulation : > 70%
- 4.Elongation(before aging):
 - 4.1 Sheath : > 100%
 - 4.2 Insulation : > 100%
- 5.Elongation (after aging) :
 - 5.1 Sheath : > 65%
 - 5.2 Insulation : > 70%
- 6.Requirements for green environment protection : Accord with RoHS



COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

W97012404

Rev. A, 1/24/2008, Updated: 8/8/19

Approve	Frend	Auditing	Joan	Producer	Tina
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MI Type #: 4

SPEC No.:	19/0.1TA*8.5PR+AB 85%						
Customer		Customer NO.		8Code:	34120131	Sample NO:	W99021103
UL File NO.	E101344	UL Style:	UL 20279	Date:	2/11/10	Spec NO:	6250G11U11754FT7----
CSA File NO.		CSA Style:		Edition:	Secondly edition	Operation NO:	0
Structure			Structure A				
Conductors	Structure AWG	AWG	26# (19/38)				
	Material	--	Tinned Copper				
	O.D.	mm	0.53 Ref				
Insulation	Material	--	SR-PVC				
	Diameter	mm	1.00±0.07				
	Average Thickness	mm	0.235 Ref				
	Color	--	AS Color Code				
Twist	Direction	--	Right (S)				
	Diameter	mm	2.00				
Layer	Direction	--	Right (S)				
	Pitch	mm	90 Ref				
	Diameter	mm	5.62 Ref				
Shielding 1	Material	--	--	AL-foil/mylar			--
	Conductive Side	--	--	Outside			--
	Overlap Rate	%	--	25			--
Shielding 2	Shield	--	Braid				
	Material	--	Tinned Copper				
	Coverage Rate	%	85MIN				
Jacket	Material	--	PU				
	Diameter	mm	7.5 ± 0.19				
	Average Thickness	mm	0.76				
	Extrusion	--	Solid				
	Externals	--	Plane				
	Color	--	U209 (黑色)				

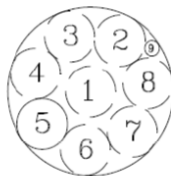
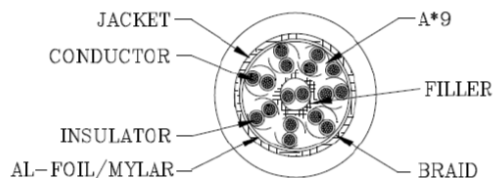


COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

W99021103 (E0914)

Rev. A, 2/11/2010, 8/8/19

Draw NO.:



MINIMUM BEND RADIUS: 10X O.D.

COLOR CODE

- 1.BLACK*BLACK/WHITE (P570*P570/P579)
- 2.BROWN*BROWN/WHITE (P571*P571/P579)
- 3.YELLOW*YELLOW/BLACK (P574*P574/P570)
- 4.VIOLET*VIOLET/WHITE (P577*P577/P579)
- 5.PINK*PINK/BLACK (P600*P600/P570)
- 6.LIGHT-GREEN*LIGHT-GREEN/BLACK (P601*P601/P570)
- 7.LIGHT-BLUE*LIGHT-BLUE/BLACK (P602*P602/P570)
- 8.BLUE*BLUE/WHITE (P576*P576/P579)
- 9.GRAY (P578)

MI Type #: 4

SPEC No.:	19/0.1TA*8.5PR+AB 85%						
Customer		Customer NO.		8Code:	34120131	Sample NO:	W99021103
UL File NO.	E101344	UL Style:	UL 20279	Date:	2/11/10	Spec NO:	6250G11U11754FT7----
CSA File NO.		CSA Style:		Edition:	Secondly edition	Operation NO:	0

Electric Characters

- 1.Voltage rating : 30V
- 2.Temperature rating : 80°C
- 3.Spark test : AC- 500V/0.15 sec MIN.
- 4.Dielectric strength : AC- 750V/1 sec MIN.
- 5.Insulation resistance :SR-PVC: DC- 500V 10 MΩ/KM MIN. at 20°C
- 6.Conductor resistance : 26AWG -148 Ω/KM MAX. at 20°C

Physical Characters

- 1.Flame test of cable:
 - 1.1 :Cable Flame Test
- 2.Tensile strength test (before aging) :
 - 2.1 Sheath : > 1.05kg/mm²
 - 2.2 Insulation : > 2.11kg/mm²
- 3.Tensile strength test (after aging) :
 - 3.1 Sheath : > 70%
 - 3.2 Insulation : > 70%
- 4.Elongation(before aging) :
 - 4.1 Sheath : > 100%
 - 4.2 Insulation : > 100%
- 5.Elongation(after aging) :
 - 5.1 Sheath : > 65%
 - 5.2 Insulation : > 70%
- 6.Requirements for green environment protection :Accord with RoHS



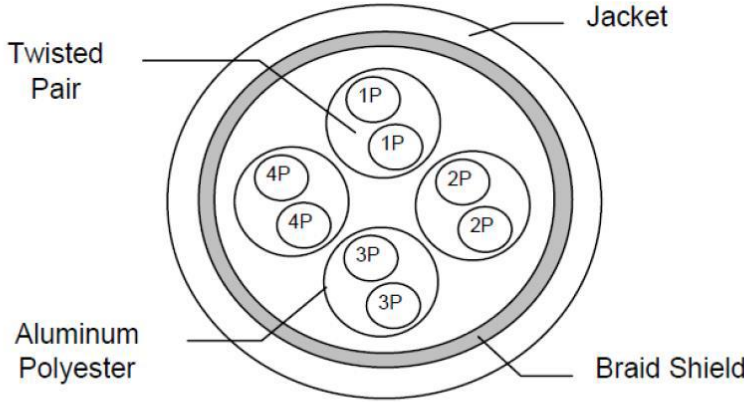

COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

W99021103 (E0914)

Rev. A, 2/11/2010, 8/8/19

Approval	Frend	Auditor	Joan	Producer	ping
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MV Type #: 1 & MI Type #: 5

CROSS SECTION	COLOR CODE
 <p style="text-align: center;">Twisted Pair</p> <p style="text-align: center;">Jacket</p> <p style="text-align: center;">Aluminum Polyester</p> <p style="text-align: center;">Braid Shield</p>	<p>P1: Blue & White</p> <p>P2: Orange & White</p> <p>P3: Green & White</p> <p>P4: Brown & White</p>
DESCRIPTION	PERFORMANCE
<p>Rated Temperature: (C°) 75</p> <p>Product Standard Certification: CM</p> <p>Flame Test: FT4</p> <p>Reference Standard: UL 444, & the customer's specification</p> <p>Typical Application: Telephone and other communication circuits such as voice, data and audio for on-premise customer systems.</p>	<p>Electrical Characteristics: (20°C)</p> <p>Max. Conductor DC Resistance (Ω /km) 142</p> <p>Min. Insulation Resistance (Ω/km) 100</p> <p>Dielectric Strength: AC-500V/1 Min.</p>
CONSTRUCTION	MECHANICAL CHARACTERISTICS
<p>Conductor: Stranded Bare Copper</p> <p>4 Twisted Pair 8C</p> <p>AWG 26</p> <p>Construction (mm) 7/0.16</p> <p>Stranded Dia. (mm) 0.50</p> <p>Insulation: Skin-Foam-Skin-PE</p> <p>Non. Thickness (mm) 0.26</p> <p>Insulation Dia. (±0.05mm) 1.03</p> <p>Shield: Natural Aluminum / Polyester</p> <p>Coverage (%) ≤ 125%</p> <p>Braid Shield: Tinned Copper</p> <p>Construction (mm) 16/5/0.10T</p> <p>Coverage (%) ≤ 55%</p> <p>Jacket: Polyvinyl Chloride (PVC)</p> <p>Nom. Thickness (mm) 0.58</p> <p>Outer Dia. (+0.2mm) 6.2</p>	<p>Test Object Jacket</p> <p>Test Material PVC</p> <p>Before Tensile Strength (kg/mm²) ≤ 1.4</p> <p>Aging Elongation (%) ≤ 100</p> <p>Aging Condition 100±2°Cx240 Hrs.</p> <p>After Tensile Strength: ≥85% of original</p> <p>Aging Elongation: ≥50% of original</p>
	 <p>COMPONENTS EXPRESS, INC. 10330 Argonne Woods Drive, Ste100 Woodridge, IL 60517</p>
	<p>Spec No. 50255-C</p> <p>Revision C</p> <p>Date 6/13/2011</p>
	MINIMUM BEND RADIUS: 10X O.D.
	8/8/19

MV Type #: 6 & MI Type #: 6

- | | | |
|------------------|---|--------------------------------------|
| 1) CONSTRUCTION: | | NOM. DIA. |
| CONDUCTOR: | 26 AWG 7/34 STRANDED TINNED COPPER | .019" |
| INSULATION: | HIGH DENSITY POLYETHYLENE, .009" NOM. WALL THICKNESS | .036" |
| PAIRS: | COLOR CODED SINGLES TWISTED INTO PAIRS | .072" |
| CABLE: | (4) TWISTED PAIRS TWISTED TOGETHER WITH A CENTRAL SPLINE AND WRAPPED WITH A FOAM POLYPROPYLENE TAPE TO FORM A CABLE CORE. | .176" |
| SHIELDS: | AN OVERALL SHIELD OF 38 AWG TINNED COPPER BRAID (80% MINIMUM COVERAGE) SHALL BE APPLIED OVER THE CABLE CORE. AN ALUMINIZED POLYESTER FOIL SHIELD (FOIL IN, 100% COVERAGE) SHALL BE APPLIED OVER THE BRAID SHIELD. | .195" |
| JACKET: | THERMOPLASTIC ELASTOMER, TEAL, .040" NOM. WALL THICKNESS | |
| | OVERALL CABLE DIAMETER | .275" NOM. (± .010")
(BY PI TAPE) |
- 2) PHYSICAL PROPERTIES:
- | | |
|---|--|
| TEMPERATURE RATING, MAX. | 75°C |
| TEMPERATURE RATING, MIN. | -20°C |
| WT./M', NOM., NET. | 41.5 LBS. |
| JACKET IS WELD SPATTER RESISTANT | |
| JACKET IS SUNLIGHT RESISTANT | |
| FLEX LIFE (PENDING) | |
| (126 CYCLES/MIN) | 1 MILLION CYCLE TEST (10X CABLE O.D., MINIMUM RADIUS) |
| | 10 MILLION CYCLE TEST (20X CABLE O.D., MINIMUM RADIUS) |
| TORSION TEST (PENDING) | |
| (1 LB LOAD, 360°, 71 CYCLES/MIN) | 3 MILLION CYCLE TEST |
| JACKET CUTTING/MACHINING OIL RESISTANCE | |
| (6 MONTHS @ 20°C) | |
| TENSILE STRENGTH RETENTION, NOM. | 80% |
| ELONGATION RETENTION, NOM. | 100% |
- 3) ELECTRICAL CHARACTERISTICS:
SEE PAGE 2
- 4) AGENCY APPROVALS:
NEC (UL) TYPE CMX OUTDOOR - CM
CEC C(UL) TYPE CMX OUTDOOR - CM
- 5) APPLICATION:
SHIELDED FLEXIBLE PATCH/JUMPER CABLE TO SUPPORT SCREENED 568-C.2 CATEGORY 6a APPLICATIONS.
RoHS COMPLIANT MATERIALS.

COLOR CODE:

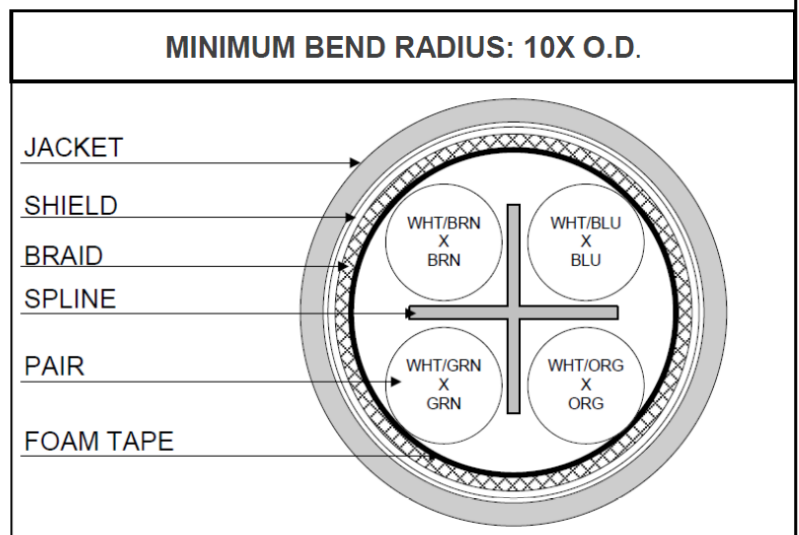
1. BLUE X WHITE/BLUE
2. ORANGE X WHITE/ORANGE
3. GREEN X WHITE/GREEN
4. BROWN X WHITE/BROWN



COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

Rev. 6

Date: 8/8/19



MV Type #: 6 & MI Type #: 6

3) ELECTRICAL CHARACTERISTICS: (FOR 100m OF CABLE)

CAPACITANCE, MUTUAL	13.5 PF/FT. AT 1 MHZ	
DIELECTRIC WITHSTANDING, MIN	1500V RMS	
VOLTAGE RATING, MAX.	300V	
D.C. RESISTANCE, MAX.	14.0 Ω	
IMPEDANCE, NOM.	100 \pm 15 Ω 1 - 100 MHz 100 \pm 20 Ω 100 - 500 MHz	
RETURN LOSS	1 $\leq f < 10$ MHz 20 + 6 LOG(f) dB MIN* 10 $\leq f < 20$ MHz 26 dB MIN* 20 $\leq f \leq 100$ MHz 26 -5 LOG($f/20$) dB MIN* 100 $< f \leq 250$ MHz 25 -8.6 LOG($f/20$) dB MIN	
PS NEXT	1 - 500 MHz	42.3 - 15 LOG (F/100) dB MIN
NEXT	1 - 500 MHz	44.3 - 15 LOG (F/100) dB MIN
PS ACRF	1 - 500 MHz	24.8 - 20 LOG(F/100) dB MIN
ACRF	1 - 500 MHz	27.8 - 20 LOG(F/100) dB MIN
ATTENUATION	1 - 500 MHz	1.5[1.82 SQRT(F) + .0091(F) + .25/SQRT(F)] dB MAX
DELAY	1 - 500 MHz	534 + 36/SQRT(F)
DELAY SKEW	1 - 500 MHz	<45 ns
PS ANEXT LOSS (6 AROUND 1)	1 - 500 MHz	62.5 - 15 LOG (F/100) dB 50 - 500 MHz 67 dB 1 - 50 MHz
PS AFEXT (6 AROUND 1)	1 - 500 MHz	38.2 - 20 LOG(F/100) dB
VELOCITY OF PROPAGATION	68%	

NOTE: ALL TESTING IS CONDUCTED OFF THE REEL.



COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste 100
Woodridge, IL 60517

Rev. 6

Date: 8/8/19

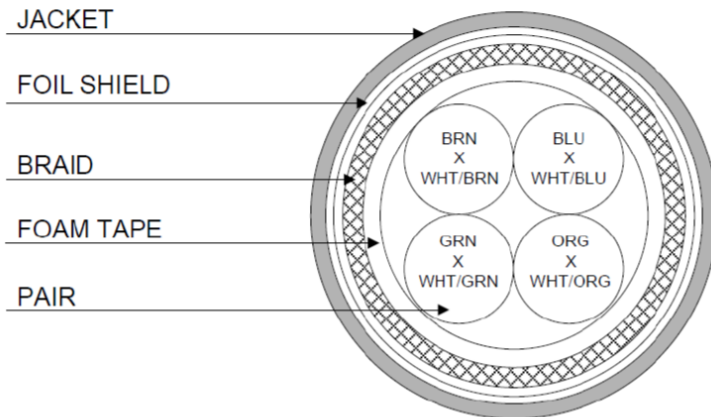
MV Type #: 5 & MI Type #: 7

COLOR CODE

1. BLUE X WHITE/BLUE
2. ORANGE X WHITE/ORANGE
3. GREEN X WHITE/GREEN
4. BROWN X WHITE/BROWN

PHYSICAL PROPERTIES

TEMPERATURE RATING, MAX. 75°C
 TEMPERATURE RATING, MIN. -20°C
 WT./M', NOM., NET. 35.6 LBS.
 JACKET IS WELD SPATTER RESISTANT



CONSTRUCTION

CONSTRUCTION:		NOM. DIA.
CONDUCTOR:	26 AWG 7/34 STRANDED TINNED COPPER	.019"
INSULATION:	HIGH DENSITY POLYETHYLENE, .009" NOM. WALL THICKNESS	.037"
PAIRS:	COLOR CODED SINGLES TWISTED INTO PAIRS	.074"
CABLE:	(4) TWISTED PAIRS TWISTED TOGETHER AND WRAPPED WITH A FOAM POLYPROPYLENE TAPE TO FORM A CABLE CORE.	
SHIELDS:	AN OVERALL SHIELD OF 38 AWG TINNED COPPER BRAID (75% MINIMUM COVERAGE), SHALL BE APPLIED OVER THE CABLE CORE. A SECOND SHIELD OF ALUMINIZED POLYESTER FOIL (FOIL IN, 100% COVERAGE) SHALL BE APPLIED OVER THE BRAID.	.143"
JACKET:	THERMOPLASTIC ELASTOMER, (BLACK OR VIOLET), .037" NOM. WALL THICKNESS (PRESSURE) OVERALL CABLE DIAMETER	.245" ± .005"

FLEX & TORSION TESTING

MINIMUM BEND RADIUS: 10X O.D.

FLEX LIFE (126 CYCLES/MIN)	1 MILLION CYCLE TEST (10X CABLE O.D., MINIMUM RADIUS) 10 MILLION CYCLE TEST (20X CABLE O.D., MINIMUM RADIUS)
TORSION TEST (1 LB LOAD, 360°, 71 CYCLES/MIN)	3 MILLION CYCLE TEST
JACKET CUTTING/MACHING OIL RESISTANCE (6 MONTHS @ 20° C)	
TENSILE STRENGTH RETENTION, NOM.	80%
ELONGATION RETENTION, NOM.	100%
POE COMPLIANT (802.3af) TO 80 METERS WHEN INSTALLED PER RECOMMENDATIONS IN TIA TSB-184	

ELECTRICAL CHARACTERISTICS SEE PAGE 2



COMPONENTS EXPRESS, INC.
 10330 Argonne Woods Drive, Ste 100
 Woodridge, IL 60517

Spec No. **ROBOTIC CABLE TYPE #5 (CAT 5E)**

Revision **7**

Date **8/8/19**

PRODUCT SPECIFICATION: ROBOTIC CABLE TYPE #5 (CAT 5E)**ELECTRICAL CHARACTERISTICS FOR 100m OF CABLE**

CAPACITANCE, MUTUAL, NOM.	13.5 PF/FT. AT 1 MHz
DIELECTRIC WITHSTANDING, MIN.	1500V RMS
VOLTAGE RATING, MAX.	300V
D.C. RESISTANCE, MAX.	14.0 Ω
IMPEDANCE, NOM.	100 +/- 15 Ω 1-100 MHz
RETURN LOSS	1 - 10 MHz 20 + 6 LOG(f) dB MIN* 10 - 20 MHz 26 dB MIN* 20 - 100 MHz 26- 5 LOG($f/20$) dB MIN*
NEXT	$1 \leq f \leq 100$ MHz 35.3 - 15 LOG($f/100$) dB MIN
PSNEXT	$1 \leq f \leq 100$ MHz 32.3 - 15 LOG($f/100$) dB MIN
ACRF	$1 \leq f \leq 100$ MHz 23.8 - 20 LOG($f/100$) dB MIN
PSACRF	$1 \leq f \leq 100$ MHz 20.8 - 20 LOG($f/100$) dB MIN
INSERTION LOSS	$1 \leq f \leq 100$ MHz 1.5[1.967 \sqrt{f} + 0.023(f) + 0.050/ \sqrt{f}] dB MAX
DELAY	$1 \leq f \leq 100$ MHz 534 + 36/ \sqrt{f} ns MAX
DELAY SKEW	$1 \leq f \leq 100$ MHz <25ns
COUPLING ATTENUATION PER IEC 62153-4-9	$30 \leq f \leq 100$ MHz 50 dB MINIMUM
VELOCITY OF PROPAGATION	68%

NOTE: ALL TESTING IS CONDUCTED OFF THE REEL.



COMPONENTS EXPRESS, INC.

10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

Spec No. **ROBOTIC CABLE TYPE #5 (CAT 5E)**

Revision **7**

Date **8/8/19**

MV Type #: 4 & MI Type #: 8

SHIELDED, OIL RESISTANT, UV-RESISTANT, FLAME RETARDANT, ABRASION RESISTANT

COLOR CODE

1. BLUE & WHITE/BLUE
2. ORANGE & WHITE/ORANGE
3. GREEN & WHITE/GREEN
4. BROWN & WHITE/BROWN

PHYSICAL PROPERTIES

TEMPERATURE RANGE -30°C TO +80°C
 WEIGHT LBS/MFT 60 LBS.
 RoHS COMPLIANT MATERIALS 2002/95/EC
 MIN BEND RADIUS: 12 X OUTER DIAMETER

CONSTRUCTION

CONDUCTOR: 26 AWG FINELY STRANDED BAR COPPER WIRES

INSULATION: FOAM POLYETHYLENE

PAIRS: COLOR CODED, 4 PAIRS TWISTED TOGETHER

CABLE: (4) TWISTED PAIRS TWISTED TOGETHER TO FORM A CABLE CORE.

OUTER JACKET: HALOGEN-FREE, LOW ADHESION BLEND, OUTSIDE DIAMETER .3", COLOR: VIOLET

INNER JACKET: LOW-ADHESION PVC, GUSSET FILLED PRES-SURE EXTRUDED

SHIELD: HIGHLY FLEXIBLE TINNED COPPER, 90% OPTICAL COVERAGE

MINIMUM BEND RADIUS: 10X O.D.

ELECTRICAL CHARACTERISTICS

CAPACITANCE, MUTUAL: 19PF/FT

REGULATIONS: UL AMW: 80°C 300V, CSA AWM: I/II A/B 80°C 300V FT1, CE: IN ACCORDANCE WITH EUROPEAN COUNCIL DIRECTIVE 73/23/EEC, RoHS: 202/95/EC

DIFFERENTIAL IMPEDANCE: 100 OHMS

INSERTION LOSS: MEETS EIA/TIA 568-B.2 FOR CAT5e STRANDED CONDUCTORS



**COMPONENTS
EXPRESS, INC.**

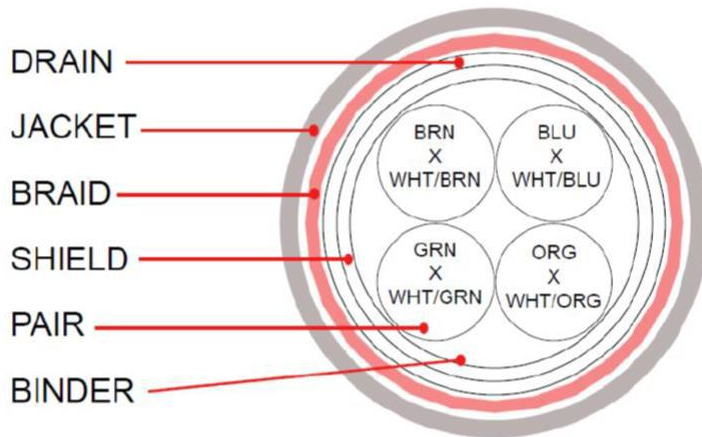
Ph: 800-578-6695
www.ComponentsExpress.com

Spec No. **C-TRACK CABLE TYPE #4**

Revision A

Date **9/06/2011** Updated: 8/8/19

MV Type #: 2 & MI Type #: 9



COLOR CODE

1. BLUE X WHITE / BLUE
2. ORANGE X WHITE / ORANGE
3. GREEN X WHITE / GREEN
4. BROWN X WHITE / BROWN

PHYSICAL PROPERTIES

TEMPERATURE RATING, MAX. 75°C (JACKET 105°C)
TEMPERATURE RATING, MIN.: -40°C

JACKET IS RESISTANT TO:

UV, WELD SPLATTER, MACHINE/CUTTING OIL

CONSTRUCTION

CONDUCTOR: 26 AWG 7/34 STRANDED TINNED COPPER

INSULATION: POLYOLEFIN, .010" NOM. WALL THICKNESS

PAIRS: COLOR CODED SINGLES TWISTED INTO PAIRS

CABLE: (4) TWISTED PAIRS TWISTED TOGETHER AND WRAPPED WITH A CLEAR POLYESTER BINDER TO FORM A CABLE CORE.

SHIELDS: AN OVERALL ALUMINIZED POLYESTER FOIL SHIELD (FOIL OUT, 100% COVERAGE) SHALL BE APPLIED OVER THE THE CABLE CORE AND SHALL CONTAIN A 26 AWG 7/34 STRANDED TINNED COPPER DRAIN WIRE IN CONTACT WITH THE METALIZED SURFACE. A SECOND SHIELD OF 38 AWG TINNED COPPER BRAID (85% MINIMUM COVERAGE), SHALL BE APPLIED OVER THE FOIL SHIELD.

JACKET: THERMOPLASTIC ELASTOMER, BLACK, .032" NOM. WALL THICKNESS (PRESURE) OVERALL CABLE DIAMETER .245"

ELECTRICAL CHARACTERISTICS

100m OF CABLE

CAPACITANCE, MUTUAL 13.5 PF/FT. AT 1 MHz
DIELECTRIC WITHSTANDING, MIN 1500V RMS
VOLTAGE RATING, MAX. 300V
D.C. RESISTANCE, MAX. 42.6 Ω /1000'
IMPEDANCE 100 \pm 15 Ω 1 -100 MHz

RETURN LOSS

1 \leq f<10 MHz 20 + 5LOG (f) dB MIN

10 \leq f<20 MHz 25 dB MIN

20 \leq f \leq 100 MHz 25 -8.6LOG(f/20) dB MIN

MINIMUM BEND RADIUS: 10X O.D.



COMPONENTS EXPRESS, INC.

10330 Argonne Woods Drive, Ste 100
Woodridge, IL 60517

Spec No. **CABLE TYPE #2, INDUSTRIAL HIFLEX TIC-TOC (CAT-5E)**

Revision: **4**

Date: **8/8/19**

MI Type #: A

Description: Five conductor unshielded cable manufactured as UL AWM Style 2586 105C 600V, C(UL) CMX OUTDOOR-CMG 105C, & CSA AWM I/II A/B 105C 600V FT4. Insulated conductors manufactured as UL AWM Style 10708 105C 600V.

(5) 18 AWG SINGLE CONDUCTORS:

Conductor: (5) 18 AWG stranded (19/.0092) tin copper conductors.

Insulation: 16 mils nominal wall of 105C rated PVC.

Nominal O.D. over insulation: .076"

OVERALL CABLE CONSTRUCTION:

Fillers: Central fibrillated foamed polypropylene filler used for roundness.

Jacket: .0475" nominal wall of 105C rated PVC.

Nominal O.D.: .300"

MINIMUM BEND RADIUS: 10X O.D.

Jacket Color: Black

Assembly: (5) 18 AWG single conductors twisted with fillers and left hand lay. Pressure extruded with PVC jacket and tissue separator between jacket and cable core.



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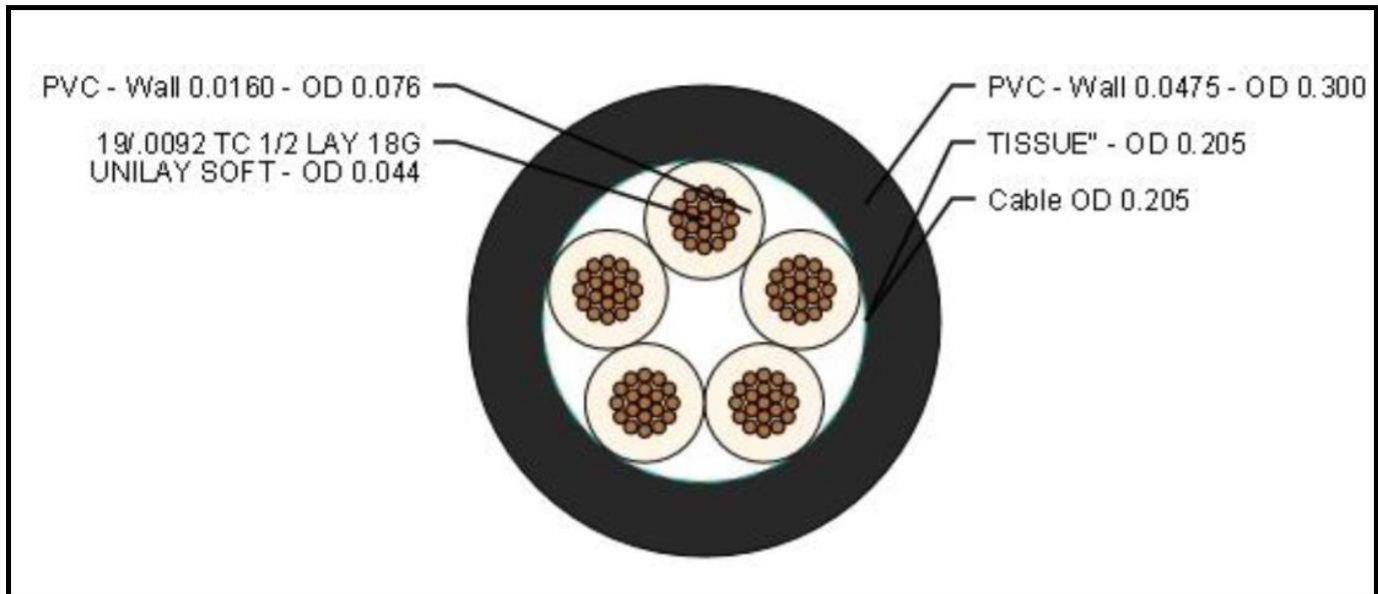
10330 Argonne Woods Drive, Ste100

Woodridge, IL 60517

REF: 1805CU

Rev. A, 1/31/2020

MI Type #: A



Cable Rotation: 1 – BLACK 4 – BROWN
 2 – BLUE 5 – WHITE
 3 – GREEN/YELLOW

RoHS Compliant: YES

Temperature Range: -40°C to 105°C (Static)

Test Voltage: 2000 Volts Conductor to Conductor

Conductor Resistance: 18 AWG – 7.06 Ohms/1,000 ft



COMPONENTS EXPRESS, INC.

10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

REF: 1805CU

Rev. A, 1/31/2020

MI Type #: B

Description: Five conductor unshielded cable manufactured as UL AWM Style 2586 105C 600V, C(UL) CMX OUTDOOR-CMG 105C, & CSA AWM I/II A/B 105C 600V FT4. Insulated conductors manufactured as UL AWM Style 10708 105C 600V.

(5) 18 AWG SINGLE CONDUCTORS:

Conductor: (5) 18 AWG stranded (19/.0092) tin copper conductors.

Insulation: 16 mils nominal wall of 105C rated PVC.

Nominal O.D. over insulation: .076"

OVERALL CABLE CONSTRUCTION:

Fillers: Central fibrillated foamed polypropylene filler used for roundness.

Jacket: .0475" nominal wall of 105C rated PVC.

Nominal O.D.: .300"

MINIMUM BEND RADIUS: 10X O.D.

Jacket Color: Yellow

Assembly: (5) 18 AWG single conductors twisted with fillers and left hand lay. Pressure extruded with PVC jacket and tissue separator between jacket and cable core.



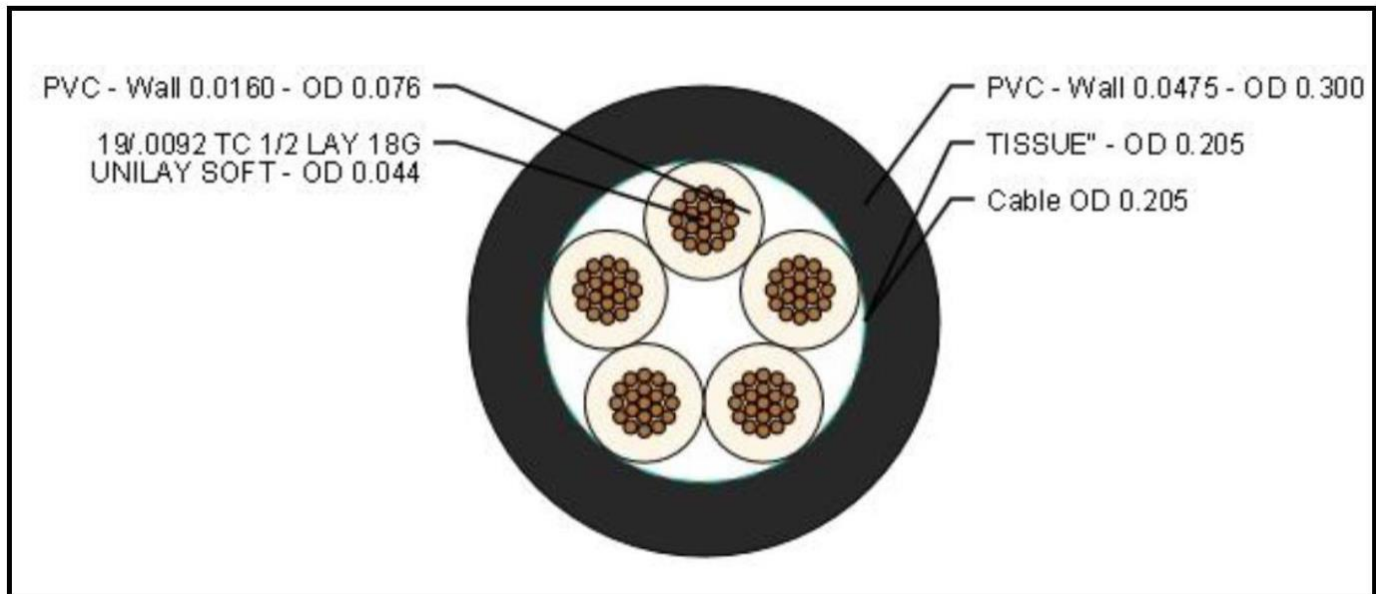
COMPONENTS EXPRESS, INC.

10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

REF: 1805CUY

Rev. A, 1/31/2020

MI Type #: B



Cable Rotation: 1 – BLACK 4 – BROWN
 2 – BLUE 5 – WHITE
 3 – GREEN/YELLOW

RoHS Compliant: YES

Temperature Range: -40°C to 105°C (Static)

Test Voltage: 2000 Volts Conductor to Conductor

Conductor Resistance: 18 AWG – 7.06 Ohms/1,000 ft



COMPONENTS EXPRESS, INC.

10330 Argonne Woods Drive, Ste100
 Woodridge, IL 60517

REF: 1805CUY

Rev. A, 1/31/2020

MI Type #: C / M8 Type #: 2

Description: Five conductor unshielded cable manufactured as UL AWM Style 2586 105C 600V, C(UL) CMX OUTDOOR-CMG 105C, & CSA AWM I/II A/B 105C 600V FT4. Insulated conductors manufactured as UL AWM Style 10708 105C 600V.

(5) 22 AWG SINGLE CONDUCTORS:

Conductor: (5) 22 AWG stranded (19/.0058) tin copper conductors.

Insulation: 16 mils nominal wall of 105C rated PVC.

Nominal O.D. over insulation: .060"

OVERALL CABLE CONSTRUCTION:

Fillers: Central fibrillated foamed polypropylene filler used for roundness.

Jacket: .041" nominal wall of 105C rated PVC.

Nominal O.D.: .244"

MINIMUM BEND RADIUS: 10X O.D.

Jacket Color: Black

Assembly: (5) 22 AWG single conductors twisted with fillers and left hand lay. Pressure extruded with PVC jacket and tissue separator between jacket and cable core.



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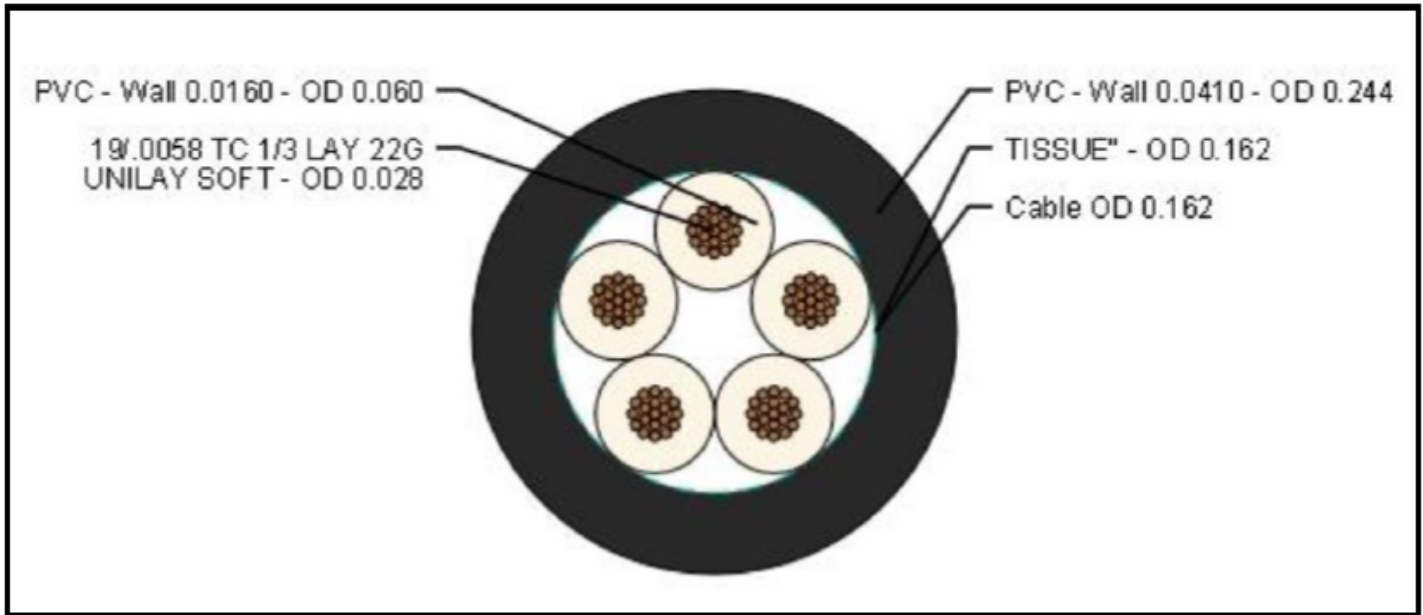
10330 Argonne Woods Drive, Ste 100
Woodridge, IL 60517

REF: 2205CU

Rev. A, 2/6/2020

Updated: 2/17/22

MI Type #: C



Cable Rotation: 1 – BLACK 4 – BROWN
 2 – BLUE 5 – WHITE
 3 – GREEN

RoHS Compliant: YES

Temperature Range: -40°C to 105°C (Static)

Test Voltage: 2000 Volts Conductor to Conductor

Conductor Resistance: 22 AWG – 15.04 Ohms/1,000 ft



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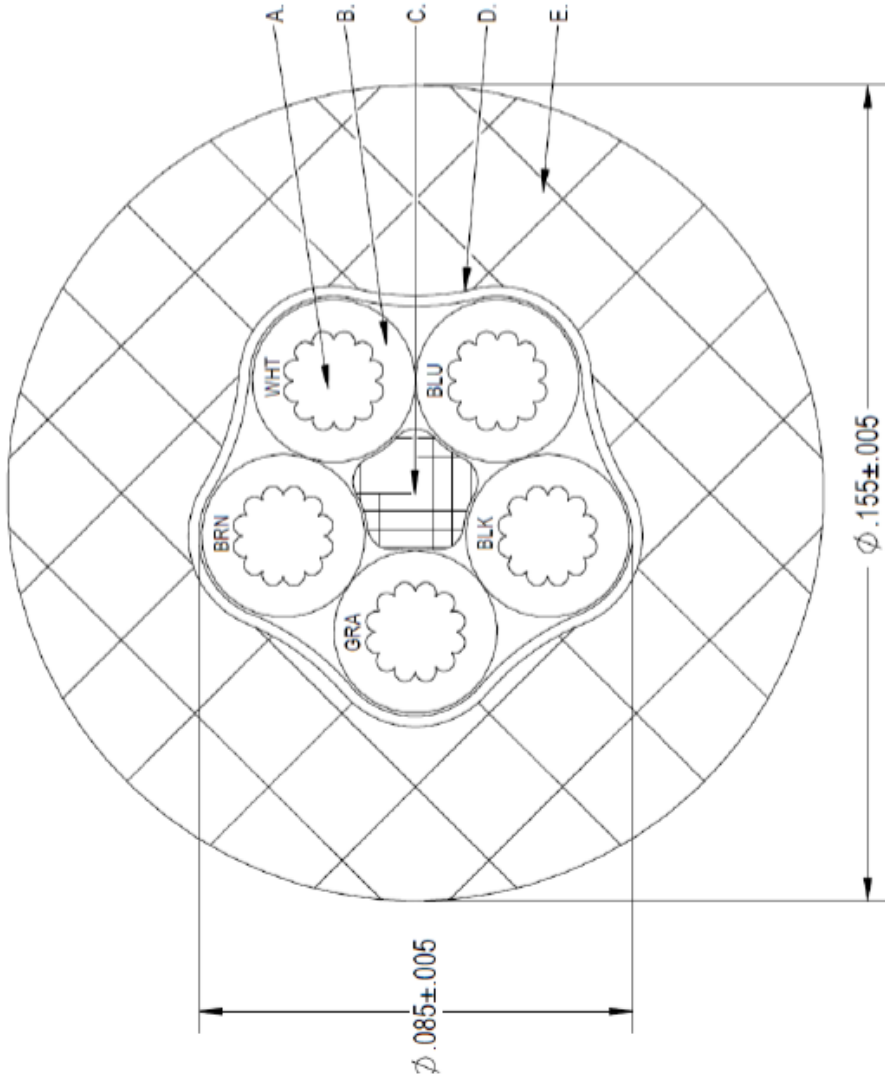
REF: 2205CU

Rev. A, 2/6/2020

Updated: 2/17/22

MI Type #: D / M8 Type #: 3

ITEM	SPECIFICATIONS
A.	26 AWG 19X.0040" TINNED COPPER STRANDING
B.	6 MIL SR-PVC INSULATION PER AWM 10535 5 MIL MIN SR-PVC INSULATION OD: .031±.001"
C.	POLY FILLER AS NEEDED FOR ROUNDNESS
D.	TISSUE PAPER SEPARATOR
E.	30 MIL PRESSURED TPU JACKET 24 MIL MIN BLACK TPU JACKET UL RECOGNIZED & CSA CERTIFIED
ROHS3 DIRECTIVE (EU) 2015/863 TO AMEND ANNEX II TO EU ROHS 2, 2011/65/EU WITH NO EXEMPTIONS	



MINIMUM BEND RADIUS: 10X O.D.



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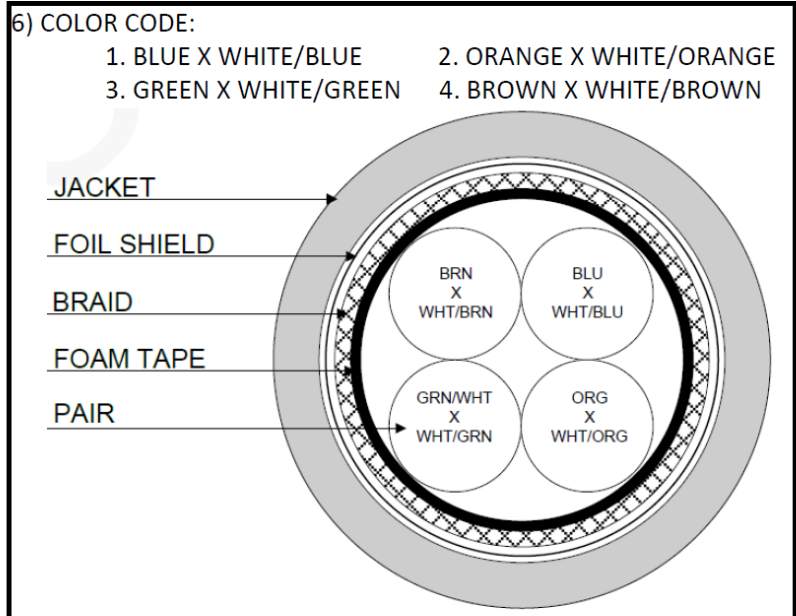
REF: 2605CU

Rev. 1, 11/26/2019 Update: 2/17/22

Pg. 1/1

MI Type #: E

- | | | |
|---|--|---------------|
| 1) CONSTRUCTION: NOM. | | DIA. |
| CONDUCTOR: 24 AWG 7/32 STRANDED TINNED COPPER | | .0236" |
| INSULATION: HIGH DENSITY POLYETHYLENE, .011" NOM. WALL THICKNESS | | .046" |
| PAIRS: COLOR CODED SINGLES TWISTED INTO PAIRS | | .092" |
| CABLE: 4 TWISTED PAIRS TWISTED TOGETHER WITH A WRAPPED WITH A FOAM POLYPROPYLENE TAPE TO FORM A CABLE CORE. | | .197" |
| SHIELDS: AN OVERALL SHIELD OF 38 AWG TINNED COPPER BRAID (75% MINIMUM COVERAGE), SHALL BE APPLIED OVER THE CABLE CORE. A SECOND SHIELD OF ALUMINIZED POLYESTER FOIL (FOIL IN, 100% COVERAGE) SHALL BE APPLIED OVER THE BRAID. | | .216" |
| JACKET: THERMOPLASTIC ELASTOMER, COLOR TEAL, .037" NOM. WALL THICKNESS (PRESSURE) OVERALL CABLE DIAMETER | | .290" ± .010" |
- 2) PHYSICAL PROPERTIES:
- | | |
|----------------------------------|------------------------------------|
| TEMPERATURE RATING, MAX. | 75°C & 80°C |
| TEMPERATURE RATING, MIN. | -40°C (MANUFACTURER'S RECOMMENDED) |
| WT./M', NOM., NET. | 46.7 LBS. |
| JACKET IS SUNLIGHT RESISTANT | |
| JACKET IS WELD SPATTER RESISTANT | |
- TENSILE STRENGTH RETENTION, NOM. 80%
- ELONGATION RETENTION, NOM. 100%
- FLEX LIFE (PENDING)
(126 CYCLES/MIN, @ 20°C)
- TORSION TEST (PENDING)
(1 LB LOAD, 360°, 71 CYCLES/MIN, @ 20°C) 4.8 MILLION CYCLE TEST
- MINIMUM BEND RADIUS: 10X O.D.**
1 MILLION CYCLE TEST (10X CABLE O.D., MINIMUM RADIUS)
10 MILLION CYCLE TEST (20X CABLE O.D., MINIMUM RADIUS)
- 3) ELECTRICAL CHARACTERISTICS: SEE PAGE 2
- 4) AGENCY APPROVALS:
UL AWM STYLE 2463 (80C 600V)
NEC (UL) TYPE CMX OUTDOOR - CM
EU CE MARKS: MEETS EU DIRECTIVE 2011/65/EU (RoHS II)
- 5) APPLICATION:
INDUSTRIAL ETHERNET PATCH CABLE CAT 5e



COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

Rev. 11, 7/18/12

MI Type #: E

6) ELECTRICAL CHARACTERISTICS:

POE COMPLIANT TO 85 METERS WHEN INSTALLED PER RECOMMENDATIONS IN TIA TSB-184
CABLE WILL MEET CAT 5E CHANNEL REQUIREMENTS TO 85 METER LENGTH

CAPACITANCE, MUTUAL, NOM.	13.5 PF/FT. AT 1 MHz
DIELECTRIC WITHSTANDING, MIN.	2000V RMS
VOLTAGE RATING, MAX.	600V
D.C. RESISTANCE, MAX.	26.2 Ω /1,000' (14.0 Ω /100m)

NOTE: TESTING FOR THE FOLLOWING IS CONDUCTED OFF THE REEL. (FOR 100m OF CABLE)

IMPEDANCE, NOM.	100 \pm 15 Ω 1 - 100 MHz 100 \pm 20 Ω 100 - 500 MHz
RETURN LOSS	1 \leq f < 10 MHz 20 + 6 LOG(f) dB MIN* 10 \leq f < 20 MHz 26 dB MIN* 20 \leq f < 100 MHz 26 - 5 LOG(f/20) dB MIN*
PS NEXT	1 \leq f \leq 100 MHz 32.3 - 15 LOG(f/100) dB MIN
NEXT	1 \leq f \leq 100 MHz 35.3 - 15 LOG(f/100) dB MIN
PSACRF	1 \leq f \leq 100 MHz 20.8 - 20 LOG(f/100) dB MIN
ACRF	1 \leq f \leq 100 MHz 23.8 - 20 LOG(f/100) dB MIN
INSERTION LOSS	1 \leq f \leq 100 MHz 1.2[1.967V(f) + 0.023(f) + 0.050/V(f)] dB MAX
DELAY	1 \leq f \leq 100 MHz 534 + 36/V(f) ns MAX
DELAY SKEW	1 \leq f \leq 100 MHz < 45 ns
COUPLING ATTENUATION	30 \leq f \leq 100 MHz \leq 60 dB) E3*
VELOCITY OF PROPAGATION	69%



COMPONENTS EXPRESS, INC.

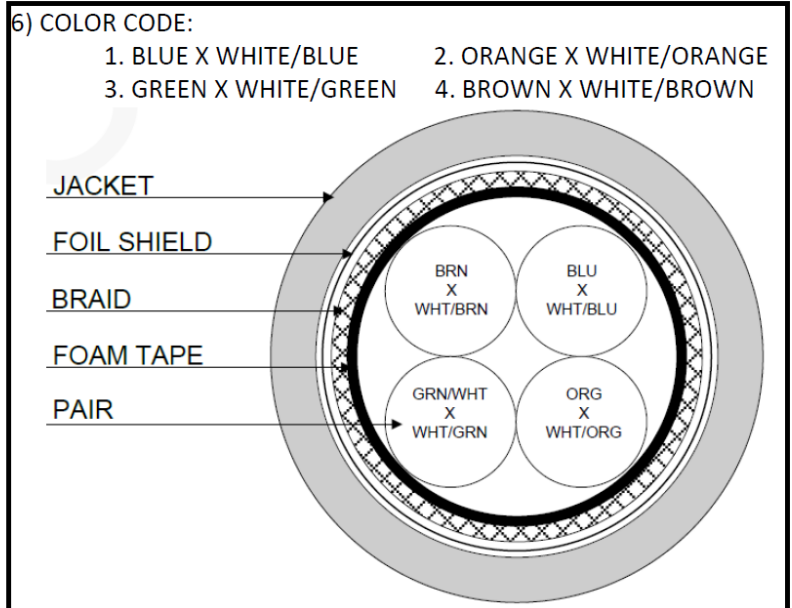
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

Rev. 11, 7/18/12

MV Type #: 8 & MI Type #: F

- | | | |
|---|--------------------------------------|-------------------------------|
| 1) CONSTRUCTION: NOM. | | DIA. |
| CONDUCTOR: 22 AWG 19/.0058 STRANDED TINNED COPPER | | .0280" |
| INSULATION: HIGH DENSITY POLYETHYLENE, .014" NOM. WALL THICKNESS | | .057" |
| PAIRS: COLOR CODED SINGLES TWISTED INTO PAIRS | | .092" |
| CABLE: 4 TWISTED PAIRS TWISTED TOGETHER WITH A WRAPPED WITH A
FOAM POLYPROPYLENE TAPE TO FORM A CABLE CORE. | | .250" |
| SHIELDS: AN OVERALL SHIELD OF 38 AWG TINNED COPPER BRAID (75% MINIMUM COVERAGE), SHALL
BE APPLIED OVER THE CABLE CORE. A SECOND SHIELD OF ALUMINIZED POLYESTER FOIL
(FOIL IN, 100% COVERAGE) SHALL BE APPLIED OVER THE BRAID. | | .272" |
| JACKET: THERMOPLASTIC ELASTOMER, COLOR TEAL, .041" NOM. WALL THICKNESS
(PRESSURE) OVERALL CABLE DIAMETER | | .354" ± .010"
(BY PI TAPE) |
| 2) PHYSICAL PROPERTIES: | | |
| TEMPERATURE RATING, MAX. | 75°C & 80°C (JACKET 105°C, 75°C OIL) | |
| TEMPERATURE RATING, MIN. | -40°C (MANUFACTURER'S RECOMMENDED) | |
| WT./M', NOM., NET. | 59.7 LBS. | |
| JACKET IS SUNLIGHT RESISTANT | | |
| JACKET IS WELD SPATTER RESISTANT | | |
| JACKET IS CUTTING/MACHINING OIL RESISTANT (6 MONTHS @ 20°C) | | |
| TENSILE STRENGTH RETENTION, NOM. | 80% | |
| ELONGATION RETENTION, NOM. | 100% | |
| FLEX LIFE (PENDING)
(126 CYCLES/MIN, @ 20°C) | | |
| TORSION TEST (PENDING)
(1 LB LOAD, 360°, 71 CYCLES/MIN, @ 20°C) | 3 MILLION CYCLE TEST | |
| 3) ELECTRICAL CHARACTERISTICS: SEE PAGE 2 | | |
| 4) AGENCY APPROVALS: | | |
| UL AWM STYLE 2463 (80C 600V) | | |
| NEC (UL) TYPE PLTC & ITC | | |
| EU CE MARKS: MEETS EU DIRECTIVE
2011/65/EU (RoHS II) | | |
| 5) APPLICATION: | | |
| RUGGED PATCH CABLE CAT 5e | | |

MINIMUM BEND RADIUS: 10X O.D.
1 MILLION CYCLE TEST (10X CABLE O.D., MINIMUM RADIUS)
10 MILLION CYCLE TEST (20X CABLE O.D., MINIMUM RADIUS)



COMPONENTS EXPRESS, INC.
10330 Argonne Woods Drive, Ste100
Woodridge, IL 60517

Rev. 6, 10/18/19

MV Type #: 8 & MI Type #: F

6) ELECTRICAL CHARACTERISTICS:

POE COMPLIANT TO 100 METERS WHEN INSTALLED PER RECOMMENDATIONS IN TIA TSB-184

CABLE WILL MEET CAT 5e CHANNEL REQUIREMENTS TO 100 METER LENGTH

CAPACITANCE, MUTUAL, NOM. 13.5 PF/FT. AT 1 MHz

DIELECTRIC WITHSTANDING, MIN. 2000V RMS

VOLTAGE RATING, MAX. 600V

D.C. RESISTANCE, MAX. 15.9 Ω /1,000' @ 20°C

NOTE: TESTING FOR THE FOLLOWING IS CONDUCTED OFF THE REEL. (FOR 100m OF CABLE)

IMPEDANCE, NOM. 100 \pm 15 Ω 1 - 100 MHz
100 \pm 20 Ω 100 - 500 MHz

RETURN LOSS
1 \leq f < 10 MHz 20 + 6 LOG(f) dB MIN*
10 \leq f < 20 MHz 26 dB MIN*
20 \leq f < 100 MHz 26 - 5 LOG(f/20) dB MIN*

PS NEXT 1 \leq f \leq 100 MHz 32.3 - 15 LOG(f/100) dB MIN
NEXT 1 \leq f \leq 100 MHz 35.3 - 15 LOG(f/100) dB MIN
PSACRF 1 \leq f \leq 100 MHz 20.8 - 20 LOG(f/100) dB MIN
ACRF 1 \leq f \leq 100 MHz 23.8 - 20 LOG(f/100) dB MIN
INSERTION LOSS 1 \leq f \leq 100 MHz 1.02[1.967v(f) + 0.023(f) + 0.050/v(f)] + 4*0.040vf dB MAX
DELAY 1 \leq f \leq 100 MHz 534 + 36/v(f) ns MAX
DELAY SKEW 1 \leq f \leq 100 MHz
(ORG X WHT/ORG, GRN/WHT X WHT/GRN PAIRS) \leq 20 ns Per IEC 61156-5
(BLU X WHT/BLU, BRN/WHT X WHT/BRN PAIRS) < 45 ns

COUPLING ATTENUATION 30 \leq f \leq 250 MHz \leq 60 dB) E3*
VELOCITY OF PROPAGATION 69%

For more information please contact:



BOCK OPTRONICS INC.

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Toronto, Ontario M9W 6M6

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Rev. 6, 10/18/19