

# FIRE WIRE IEEE-1394 CABLES

## PART NUMBER REFERENCE



### Select Connector Type: End "1"

1394b 9 Pin w/Thumbscrews = 1	1394b R/A <i>UP</i> w/Recessed Screws = 11
1394b 9 Pin Friction Fit = 2	1394b R/A <i>DOWN</i> w/Recessed Screws = 12
1394a 6 Pin w/Thumbscrews = 3	1394b 9 Pin Exit <i>RIGHT</i> w/Screw = 13
1394a 6 Pin Friction Fit = 4	1394b 9 Pin Exit <i>LEFT</i> w/Screw = 14
1394a 6 Pin w/Latches = 5	1394a 6 Pin R/A (Cable Exit Pin 1) = 15
1394b 9 Pin R/A <i>UP</i> = 6	1394a 6 Pin R/A (Cable Exit Pin 6) = 16
1394b 9 Pin R/A <i>DOWN</i> = 7	1394a 6 Pin Female = 17
1394b 9 Pin Exit <i>RIGHT</i> = 8	1394a 6 Pin R/A (Cable Exit Pin 1) = 18
1394b 9 Pin Exit <i>LEFT</i> = 9	1394a 6 Pin R/A (Cable Exit Pin 6) = 19
1394b 9 Pin Female = 10	

### Cable Type Options:

Standard Static Cable = 1
HIFLEX = 2
Extended Distance = 3
ROBOTIC = 4 *

### Select Connector Type: End "2"

1394b 9 Pin w/Thumbscrews = 1	1394b R/A <i>UP</i> w/Recessed Screws = 11
1394b 9 Pin Friction Fit = 2	1394b R/A <i>DOWN</i> w/Recessed Screws = 12
1394a 6 Pin w/Thumbscrews = 3	1394b 9 Pin Exit <i>RIGHT</i> w/Screw = 13
1394a 6 Pin Friction Fit = 4	1394b 9 Pin Exit <i>LEFT</i> w/Screw = 14
1394a 6 Pin w/Latches = 5	1394a 6 Pin R/A (Cable Exit Pin 1) = 15
1394b 9 Pin R/A <i>UP</i> = 6	1394a 6 Pin R/A (Cable Exit Pin 6) = 16
1394b 9 Pin R/A <i>DOWN</i> = 7	1394a 6 Pin Female = 17
1394b 9 Pin Exit <i>RIGHT</i> = 8	1394a 6 Pin R/A (Cable Exit Pin 1) = 18
1394b 9 Pin Exit <i>LEFT</i> = 9	1394a 6 Pin R/A (Cable Exit Pin 6) = 19
1394b 9 Pin Female = 10	

### Option: Length in Meters

- \* Cable type 1: Suitable up to 4.5M
- \* Cable type 2: Suitable up to 8M
- \* Cable type 3: Suitable for 6 - 10M
- \* Cable type 4: Is Not compatible w/Conn. Type: 5

Temp: 7-1-20

#### Physical:

Cable Color:	Black
Shell Color:	Black
Shell Construction:	Pre-molded in Polyethelene, fully shielded and over-molded in black PVC.
Cable Construction:	Meets industry S-400 and S-800 standards. All cables are fully certified.

# CONNECTOR TYPE OPTIONS:



1394b 9 Pin  
w/Thumbscrews



1394b 9 Pin  
Friction Fit



1394a 6 Pin  
w/Thumbscrews



1394a 6 Pin  
Friction Fit



1394a 6 Pin  
w/Latches



1394b 9 Pin  
R/A UP



1394b 9 Pin  
R/A DOWN



1394b 9 Pin  
Exit RIGHT  
Friction Fit



1394b 9 Pin  
Exit LEFT  
Friction Fit



1394b 9 Pin  
Female  
w/Removeable Hardware



1394b R/A UP  
w/Recessed Screws



1394b R/A DOWN  
w/Recessed Screws



1394b 9 Pin  
Exit RIGHT  
w/Recessed Screw



1394b 9 Pin  
Exit LEFT  
w/Recessed Screw



1394a 6 Pin R/A  
(Cable Exit Pin 1)  
Friction Fit



1394a 6 Pin R/A  
(Cable Exit Pin 6)  
Friction Fit



1394a 6 Pin  
Female  
Friction Fit



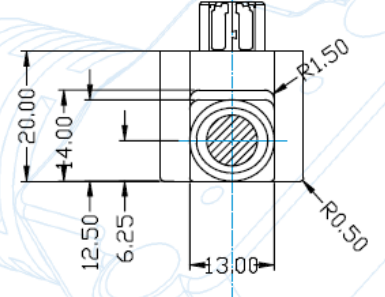
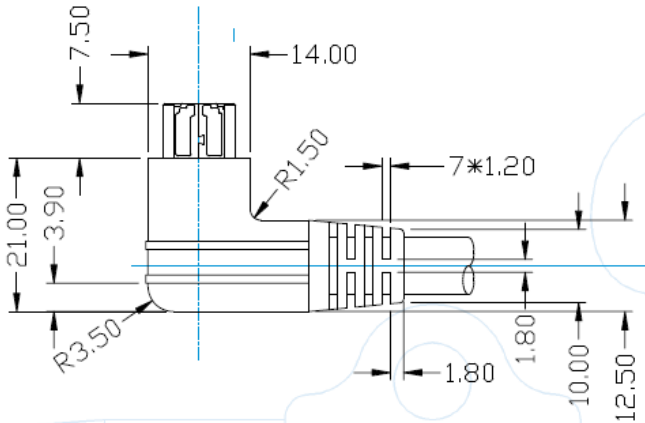
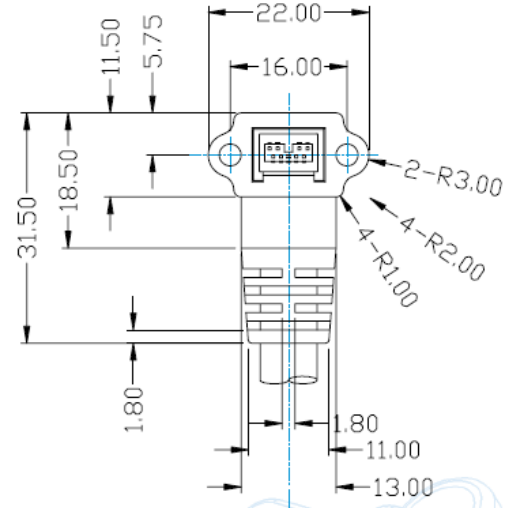
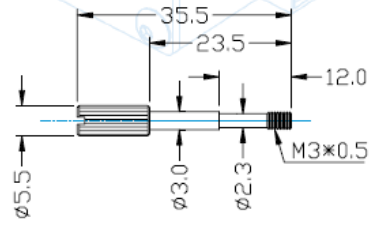
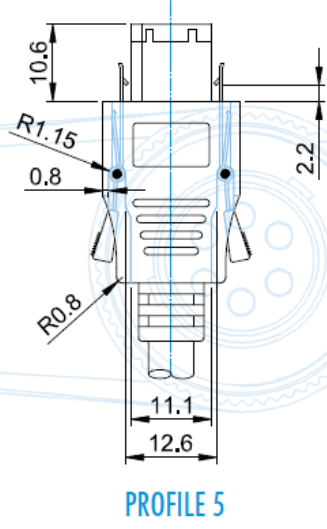
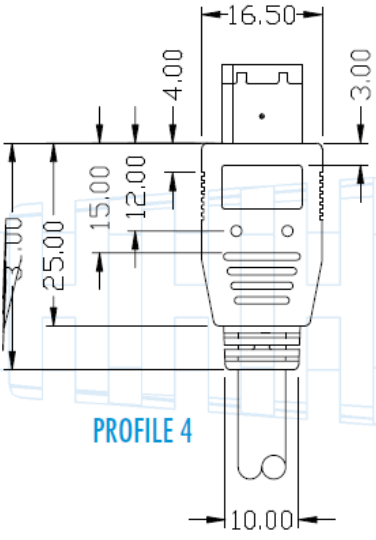
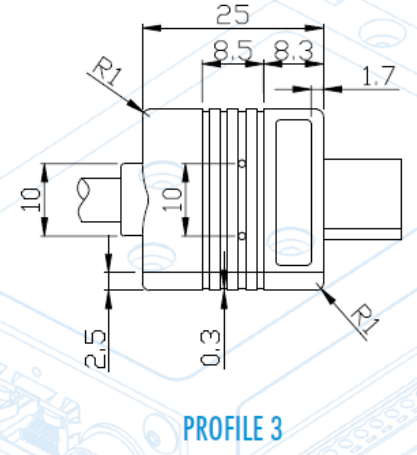
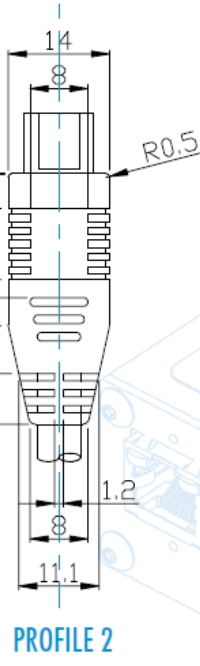
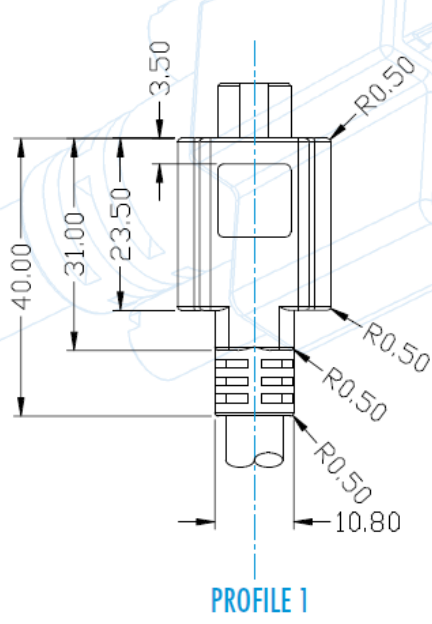
1394a 6 Pin R/A  
(Cable exit Pin 1)  
Friction Fit



1394a 6 Pin R/A  
(Cable Exit Pin 6)  
Friction Fit

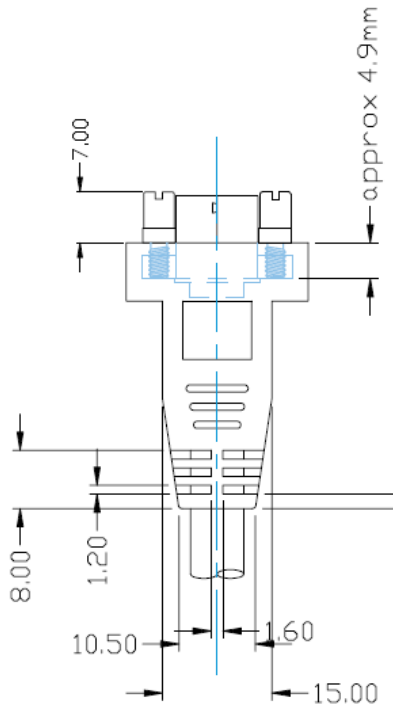
See page 12 & 13 for profile drawings.

Temp: 7-1-20

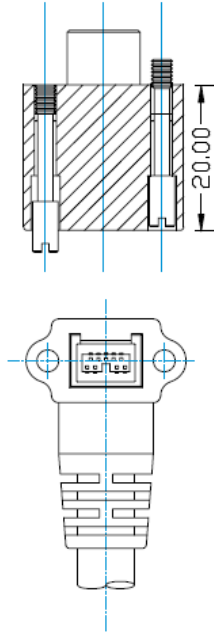


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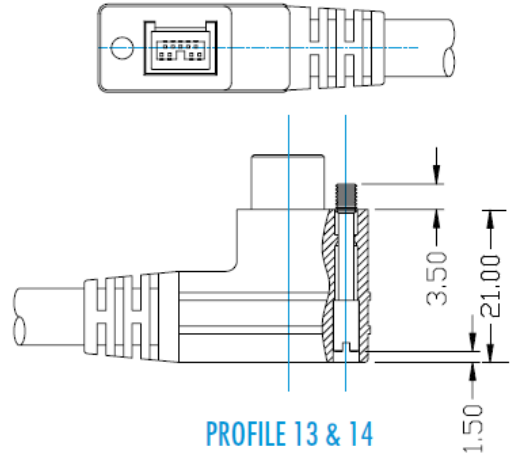




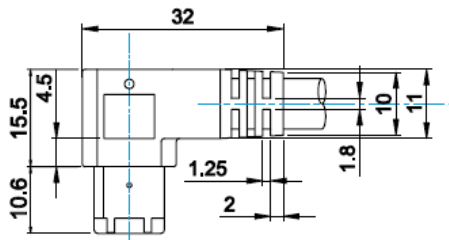
PROFILE 10



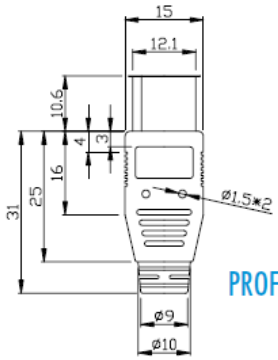
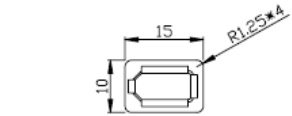
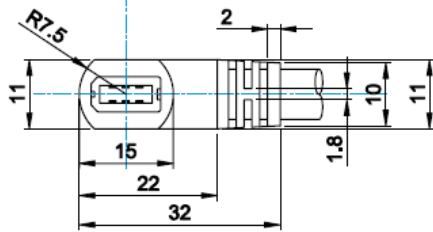
PROFILE 11 & 12



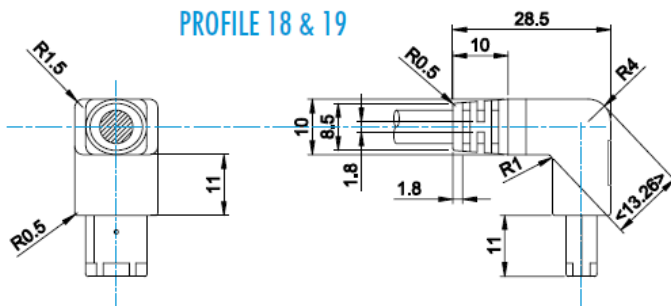
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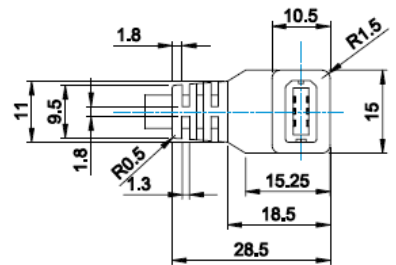
PROFILE 15 & 16



PROFILE 17



PROFILE 18 & 19



Temp: 7-1-20



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

**MVF Type #: 1**

W977072903

Rev. A, 7/29/2008, 8/8/19

SPEC No.:	( 19/0.1TA*1PR+2EAM)*2+ 19/0.16TA*2C+MAB 90% IEEE-1394b						
Customer		Customer NO.		8Code:	43120116	Sample NO:	W97072903
UL File NO.	E101344	UL Style:	UL 20279	Date:	7/29/08	Spec NO.	UD4V61RU11714FT7-H--
CSA File NO.	0	CSA Style:	0	Edition:	thirdly Edition	Operation NO:	0
Structure		Structure A			Structure B		
Conductors	Structure AWG	AWG	26# (19/38)			22# (19/34)	
	Material	--	Tinned Copper			Tinned Copper	
	O.D.	mm	0.49 Ref			0.785 Ref	
Insulation	Material	--	FOAM-PE			SR-PVC	
	Diameter	mm	1.45±0.09			1.20±0.07	
	Average Thickness	mm	0.480 Ref			0.208 Ref	
	Color	--	AS Color Code			AS Color Code	
Twist	Direction	--	Right (S)			--	
	Diameter	mm	2.90			--	
Shielding 1	Material	--	Free-edge-al-foil/mylar			--	
	Conductive Side	--	Inside			--	
	Overlap Rate	%	25 Ref			--	
Drain wire	Structure AWG	AWG	26# (19/38) *2PCS			--	
	Material	--	Tinned Copper			--	
Layer	Direction	--	Right (S)				
	Pitch	mm	80 Ref				
	Diameter	mm	5 Ref				
Shielding 3	Material	--	Free-edge-al-foil/mylar				
	Conductive Side	--	Outside				
	Overlap Rate	%	25				
Shielding 4	Shield	--	Braid				
	Material	--	Tinned Copper				
	Coverage Rate	%	95MIN				
Jacket	Material	--	PU				
	Diameter	mm	7.1 ± 0.19				
	Average Thickness	mm	0.78 Ref				
	Extrusion	--	Little Solid				
	Externals	--	Plane				
	Color	--	U209 (BLACK)				



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

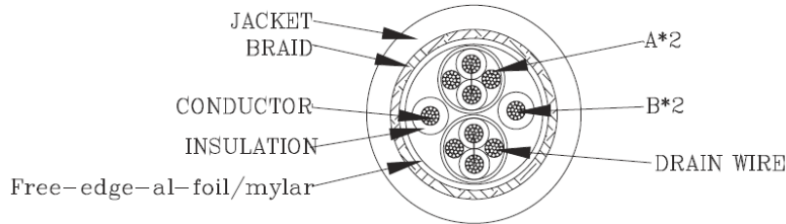
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**W977072903**

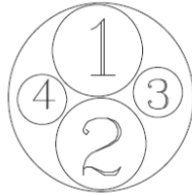
**Rev. A, 7/29/2008, 8/8/19**

SPEC No.:	( 19/0.1TA*1PR+2EAM)*2+ 19/0.16TA*2C+MAB 90% IEEE-1394b						
Customer		Customer NO.		8Code:	43120116	Sample NO:	W97072903
UL File NO.	E101344	UL Style:	UL 20279	Date:	7/29/08	Spec NO.	UD4V61RU11714FT7-H--
CSA File NO.	0	CSA Style:	0	Edition:	thirdly Edition	Operation NO:	0
Structure		Structure A			Structure B		

**MINIMUM BEND RADIUS: 10X O.D.**



- COLOR CODE**
- 1.RED\*GREEN
  - 2.ORANGE\*BLUE
  - 3.WHITE(P579)
  - 4.BLACK(P570)





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

**MVF Type #: 1**

W977072903

Rev. A, 7/29/2008, 8/8/19

SPEC No.:	(19/0.1TA*1PR+2EAM)*2+ 19/0.16TA*2C+MAB 90% IEEE-1394b						
Customer		Customer NO.		8Code:	43120116	Sample NO:	W97072903
UL File NO.	E101344	UL Style:	UL 20279	Date:	7/29/08	Spec NO.	UD4V61RU11714FT7-H--
CSA File NO.	0	CSA Style:	0	Edition:	thirdly 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/1sec MIN.
- 5.Insulation resistance : FOAM-PE,;DC-500V 100 MΩ/KM MIN. at 20°C  
SR-PVC:DC-500V 10 MΩ/KM MIN. at 20°C
- 6.Conductor resistance : 26AWG-148Ω/KM MAX. at 20°C

#### Transmission Characters :

##### 1.Attenuation:

Frequency ( MHz)	400	800	1000
Attenuation (MAX) dB/2.0M	2.9	4.6	5.5

- 2.Impedance : 110±6Ω (Differential) TDR at 1 & 2.5ns  
33±6Ω (Common mode)

- 3.Signal Pairs Propagation delay: ≤5.05ns/M MAX.
- 4.RiseTime ≤100ps
- 5.Intr-pair Skew ≤160ps
- 6.Crosstalk ≤3%

#### Physical Characters

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

Approval	Frend	Auditor	Joan	Producer	xiaojin
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**COMPONENTS EXPRESS, INC.**  
10330 Argonne Woods Drive,  
Ste100 Woodridge, IL 60517

**MVF Type #: 2**

W977072903

Rev. A, 7/29/2008, 8/8/19

SPEC No.:	( 19/0.1TA*1PR+2EAM)*2+ 19/0.16TA*2C+MAB 90% IEEE-1394b						
Customer		Customer NO.		8Code:	43120116	Sample NO:	W97072903
UL File NO.	E101344	UL Style:	UL 20279	Date:	7/29/08	Spec NO.	UD4V61RU11714FT7-H--
CSA File NO.	0	CSA Style:	0	Edition:	thirdly Edition	Operation NO:	0
Structure		Structure A			Structure B		
Conductors	Structure AWG	AWG	26# (19/38)			22# (19/34)	
	Material	--	Tinned Copper			Tinned Copper	
	O.D.	mm	0.49 Ref			0.785 Ref	
Insulation	Material	--	FOAM-PE			SR-PVC	
	Diameter	mm	1.45±0.09			1.20±0.07	
	Average Thickness	mm	0.480 Ref			0.208 Ref	
	Color	--	AS Color Code			AS Color Code	
Twist	Direction	--	Right (S)			--	
	Diameter	mm	2.90			--	
Shielding 1	Material	--	Free-edge-al-foil/mylar			--	
	Conductive Side	--	Inside			--	
	Overlap Rate	%	25 Ref			--	
Drain wire	Structure AWG	AWG	26# (19/38) *2PCS			--	
	Material	--	Tinned Copper			--	
Layer	Direction	--	Right (S)				
	Pitch	mm	80 Ref				
	Diameter	mm	5 Ref				
Shielding 3	Material	--	Free-edge-al-foil/mylar				
	Conductive Side	--	Outside				
	Overlap Rate	%	25				
Shielding 4	Shield	--	Braid				
	Material	--	Tinned Copper				
	Coverage Rate	%	95MIN				
Jacket	Material	--	PU				
	Diameter	mm	7.1 ± 0.19				
	Average Thickness	mm	0.78 Ref				
	Extrusion	--	Little Solid				
	Externals	--	Plane				
	Color	--	U209 (BLACK)				





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 10330 Argonne Woods Drive,  
 Ste100 Woodridge, IL 60517

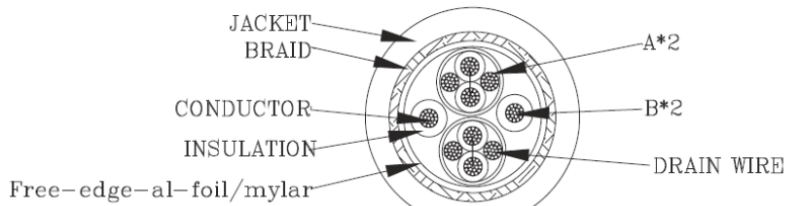
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W977072903

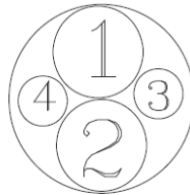
Rev. A, 7/29/2008, 8/8/19

SPEC No.:	( 19/0.1TA*1PR+2EAM)*2+ 19/0.16TA*2C+MAB 90% IEEE-1394b						
Customer		Customer NO.		8Code:	43120116	Sample NO:	W97072903
UL File NO.	E101344	UL Style:	UL 20279	Date:	7/29/08	Spec NO.	UD4V61RU11714FT7-H--
CSA File NO.	0	CSA Style:	0	Edition:	thirdly Edition	Operation NO:	0
Structure		Structure A			Structure B		

**MINIMUM BEND RADIUS: 10X O.D.**



- COLOR CODE**
- 1.RED\*GREEN
  - 2.ORANGE\*BLUE
  - 3.WHITE(P579)
  - 4.BLACK(P570)





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

**MVF Type #: 2**

W977072903

Rev. A, 7/29/2008, 8/8/19

SPEC No.:	( 19/0.1TA*1PR+2EAM)*2+ 19/0.16TA*2C+MAB 90% IEEE-1394b						
Customer		Customer NO.		8Code:	43120116	Sample NO:	W97072903
UL File NO.	E101344	UL Style:	UL 20279	Date:	7/29/08	Spec NO.	UD4V61RU11714FT7-H--
CSA File NO.	0	CSA Style:	0	Edition:	thirdly 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/1sec MIN.
- 5.Insulation resistance : FOAM-PE,:DC-500V 100 MΩ/KM MIN. at 20°C  
SR-PVC:DC-500V 10 MΩ/KM MIN. at 20°C
- 6.Conductor resistance : 26AWG-148Ω/KM MAX. at 20°C

#### Transmission Characters :

##### 1.Attenuation:

Frequency ( MHz)	400	800	1000
Attenuation (MAX) dB/2.0M	2.9	4.6	5.5

- 2.Impedance : 110±6Ω (Differential) TDR at 1 & 2.5ns  
33±6Ω (Common mode)

- 3.Signal Pairs Propagation delay: ≤5.05ns/M MAX.

- 4.RiseTime ≤100ps

- 5.Intr-pair Skew ≤160ps

- 6.Crosstalk ≤3%

#### Physical Characters

##### 1.Flame test of cable:

- 1.1 :Cable Flame Test

##### 2.Tensile strength test(before aging) :

- 2.1 Sheath : > 1.05kg/mm<sup>2</sup>
- 2.2 Insulation: > 2.11kg/mm<sup>2</sup> (SR-PVC)

##### 3.Tensile strength test(after aging) :

- 3.1 Sheath: >70%
- 3.2 Insulation : >70% (SR-PVC)

##### 4.Elongation(before aging) :

- 4.1 Sheath: >100%
- 4.2 Insulation: >100% (SR-PVC)

##### 5.Elongation(after aging) :

- 5.1 Sheath : >65%
- 5.2 Insulation : >70%(SR-PVC)

- 6.Requirements for green environment protection : Accord with RoHS

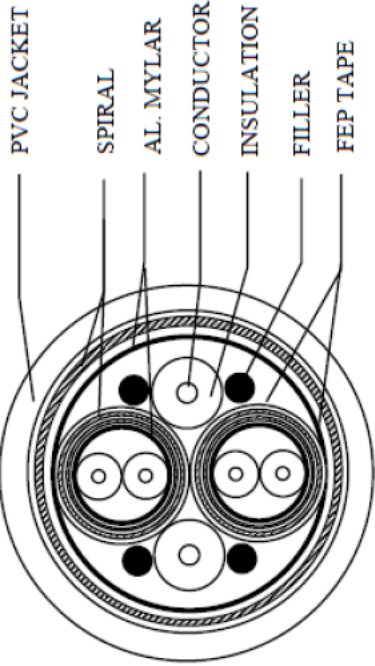
Approval	Frend	Auditor	Joan	Producer	xiaojin
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MVF-Cable Type #: 3

<b>SPECIFICATION:</b> (1P*24AWG+DAM)*2C+2C*22AWG+MAB / UL20276		<b>CONSTRUCTION D.W.G</b>	
<b>ITEM</b>	<b>SPECIFICATION</b>		
CONDUCTOR	24AWG TINNED COPPER	22AWG TINNED COPPER	
COND.SIZE	7/0.20±0.008MM	19/0.16±0.008MM	
MIN.AVG.THICK	0.45MM	0.23MM	
MATERIAL	FM-PE+SKIN	SR-PVC	
O.D	1.60±0.05MM	1.30±0.05MM	
N.O.	1P*2	2C	
AWG	24AWG	/	
MATERIAL	TINNED COPPER	/	
SIZE	7/0.20±0.008MM	/	
COVERAGE	100%	/	
OVERLAP	25% MIN	/	
COVERAGE	100%	/	
OVERLAP	25%MIN	/	
COVERAGE		100%	
OVERLAP		25%MIN	
COVERAGE		100%	
OVERLAP		25%MIN	
MATERIAL		TINNED COPPER	
SIZE		24*11/0.08MM (COVERAGE : 85%MIN)	
MIN.AVG.THICK		0.30MM	
MATERIAL		80°C-PVC	
COLOUR		BLACK	
O.D		7.10±0.20MM	
<b>ELECTRICAL CHARACTERISTICS</b>		<b>PHYSICAL PROPERTIES OF JACKET</b>	
1. Rating : TEMP 80°C : VOLTAGE 30V 2. Conductor Resistance: AT 20°C MAX 22AWG:55Ω/km, 24AWG: 93Ω/km 3. Insulation Resistance: 10MΩ/km min at 20°C 4. Dielectric Strength: AC 500V/1minute 5. Impedance: 110±6Ω 6. Cable Delay (max): 160ps /10m 7. Attenuation: at 400MHz 2.9dB/10m at 800MHz 4.6dB/10m at 1000MHz 5.5dB/10m *These data are limited to raw cable.		1. Tensile Strength: Unaged: 1500PSI min Aged: 70% min 2. Elongation: Unaged: 100% min Aged: 65% 3. Heat shock test: NO CRACKING 4. Cold bend test: NO CRACKING 5. Deformation test: MAX 50%	
<b>JACKET</b>			
		<b>COMPONENTS EXPRESS, INC.</b> 10330 Argonne Woods Drive, Ste100 Woodridge, IL 60517	
		E0919, Updated 8/8/19	
		<b>MINIMUM BEND RADIUS: 10X O.D.</b>	
		COLOUR CODE: (1P*24#+DAM)*2C: 1. Red*Green 2. Orange*Blue 2C*22#: 3. White 4.Black	
		APPROVED CHECKED DRAWING	
		CUSTOMER REV DATE	
		A / 0 chen 2017/8/31	

MVF-Cable Type #: 4

SPECIFICATION:		(1P*26AWG+AL+S+S+FEP TAPE)*2+2C*22AWG+AL+S+FEP TAPE	
ITEM	SPECIFICATION		
CONDUCTOR	AWG	26AWG	22AWG
	MATERIAL	BARE COPPER	TINNED COPPER
	COND.SIZE	19/0.10±0.008 mm	44/0.10±0.01 mm
	MIN.AVG.THICK	0.35 mm	0.35 mm
INSULATION	MATERIAL	FM-PE+SKIN	HD-PE
	O . D	1.30±0.05 mm	1.60 ± 0.05 mm
	N O.	/	/
Face outside	COVERAGE	100%	/
AL.MYLAR	OVERLAP	25% MIN	/
SPIRAL	MATERIAL	TINNED COPPER	/
COPPER	SIZE	84±2/0.10±0.008 mm	/
SPIRAL	MATERIAL	TINNED COPPER	/
COPPER	SIZE	94±2/0.10±0.008 mm	/
FEP TAPE	COVERAGE	100%	/
	OVERLAP	25% MIN	/
	N O.	1P*2	2C
Face outside	COVERAGE	100%	
AL.MYLAR	OVERLAP	25% MIN	
SPIRAL	MATERIAL	TINNED COPPER	
COPPER	SIZE	154±3/0.10±0.008 mm	
FEP TAPE	COVERAGE	100%	
	OVERLAP	25% MIN	
	MIN.AVG.THICK	0.38 mm	
JACKET	MATERIAL	MATT CL2 PVC	
	COLOUR	PURPLE	
	O . D	8.30 ± 0.20 mm	
<p><b>ELECTRICAL CHARACTERISTICS</b>      <b>PHYSICAL PROPERTIES OF JACKET</b></p> <p>1. Range : TEMP : 80°C : VOLTAGE : 30V                  2. Conductor Resistance: AT 20°C MAX                  22AWG: 550/ks; 26AWG: 148.960/ks;                  3. Impedance: 110±6 Ω                  4. Crosstalk: ≤ -26dB(-75MHz)                  5. Cable Delay: 5.03ns/m                  6. Skew: ≤ 40ps/4.5m                  7. Attenuation: 100MHz &lt; 2.3dB                  200MHz &lt; 3.2dB    400MHz &lt; 5.8dB/4.5m                  8. Insulation Resistance: 100MΩ.km min at 20°C de 500V.(EIA-364-21)                  9. Dielectric Strength, AC 500V/1minute no breakdown. (EIA-364-20)</p>			
<p><b>ELECTRICAL CHARACTERISTICS</b>      <b>PHYSICAL PROPERTIES OF JACKET</b></p> <p>1. Tensile Strength: Unaged: 1500PSI min    Aged: 70% min                  2. Elongation: Unaged: 100% min    Aged: 65%                  3. Heat shock test: NO CRACKING                  4. Cold bend test: NO CRACKING                  5. Deformation test: MAX 50%                  6. Flame test: PASS    VW-1</p>			



**COLOUR CODE:**  
 2P: 1P: RED \* GREEN    2P: BLUE \* ORANGE  
 2C: 1: WHITE    2: BLACK

**MINIMUM BEND RADIUS: 10X O.D.**



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

**96452282001 (E1005),**  
 Updated 8/8/19

APPROVED	CUSTOMER
CHECKED	REV
DRAWING	DATE
	16/10/18

CC-EW-206A