

## Description:

22 and 24 AWG stranded tinned copper conductors, PVC insulation (power), FPE insulation (Data), individually foil shielded (100% coverage) and an overall tinned copper braid (65% coverage), CPE jacket.

## Physical Characteristics (Overall)

### Conductor

AWG:

# Conductors	# Pairs	AWG	Stranding	Conductor Material
4	1	22	19x34	TC - Tinned Copper
	1	24	19x36	TC - Tinned Copper

### Insulation

Insulation Material:

Insulation Material	AWG
PVC - Polyvinyl Chloride	22
FPE - Foam Polyethylene	24

### Inner Shield

Inner Shield Material:

Layer #	Type	Inner Shield Material	Coverage (%)
22 AWG Pair	Tape	Aluminum Foil-Polyester Tape	100
24 AWG Pair	Tape	Aluminum Foil-Polyester Tape	100

Inner Shield Drain Wire AWG:

AWG
22

Inner Shield Drain Wire Stranding: 19x34

Inner Shield Drain Wire Conductor Material: TC - Tinned Copper

### Outer Shield

Outer Shield Material:

Type	Outer Shield Material	Coverage (%)
Braid	TC - Tinned Copper	65

### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
CPE - Chlorinated Polyethylene

### Overall Cabling

Overall Nominal Diameter: 0.280 in.

### Pair

Pair Color Code Chart:

Number	Color
22 AWG Pair	Red & Black
24 AWG Pair	Blue & White

## Mechanical Characteristics (Overall)

Operating Temperature Range: -30°C To +75°C

## 3085A Multi-Conductor - DeviceBus® for ODVA DeviceNet™

UL Temperature Rating:	75°C
Bulk Cable Weight:	46 lbs/1000 ft.
Max. Recommended Pulling Tension:	65 lbs.
Min. Bend Radius (Install)/Minor Axis:	2.750 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMG, CL2
CEC/C(UL) Specification:	CMG
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	10/13/2005
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Other Specification:	ODVA Class 2 Thin

#### Flame Test

UL Flame Test:	UL1685 FT4 Loading
CSA Flame Test:	FT4

#### Plenum/Non-Plenum

Plenum (Y/N):	No
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### Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Description	Impedance (Ohm)
24 AWG Pair	120

#### Nom. Capacitance Conductor to Conductor:

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Capacitance (pF/ft)
24 AWG Pair	1			12.0

#### Nominal Velocity of Propagation:

Description	VP (%)
24 AWG Pair	75

#### Maximum Delay:

Description	Freq. (MHz)	Start Freq. (MHz)	Stop Freq. (MHz)	Delay (ns/ft)
24 AWG Pair				1.36

#### Maximum Conductor DC Resistance:

Description	DCR @ 20°C (Ohm/100 m)
22 AWG	17.5
24 AWG	28.0

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
3.2

#### Max. Attenuation:

()	Description	Freq. (MHz)
.29	24 AWG Pair Only	.125
.50		.500
.70		1.000

#### Max. Operating Voltage - UL:

## 3085A Multi-Conductor - DeviceBus® for ODVA DeviceNet™

**Voltage**

300 V RMS

**Max. Recommended Current:**

**Current**

1.7 Amps per conductor @ 25°C (24 AWG)

4 Amps per conductor @ 24 V per NEC CL2 (Power Pair)

### Notes (Overall)

**Notes:** Thin. Meter marks on jacket to aid users in installation. ODVA Devicenet is an Open DeviceNet Vendor Association, Inc. trademark.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
3085A 5601000	1,000 FT	47.000 LB	YELLOW, BRIGHT	C	2 #22, 2 #24 SHLD CPE
3085A 5602000	2,000 FT	96.000 LB	YELLOW, BRIGHT	C	2 #22, 2 #24 SHLD CPE
3085A 560500	500 FT	22.000 LB	YELLOW, BRIGHT	C	2 #22, 2 #24 SHLD CPE

**Notes:**

C = CRATE REEL PUT-UP.


# Industrial Data Solutions® — Industrial Data

DeviceBus® for ODVA DeviceNet™


Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Shielding Materials Nom. DCR	Color Code	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg				Inch	mm			pF/Ft.	pF/m	MHz	dB/ 100 Ft.	dB/ 100m

**300V Class 2 Thick • 15 and 18 AWG Stranded TC Cond. • Individually Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)**

**PVC Insulation (Power) • FPE Insulation (Data) • Sunlight- and Oil-resistant PVC Jacket (Available in Gray or Red)**

Thick 75°C 	<b>3082A</b>	NEC:	500†	152.4	71.0	32.2	(2)15 AWG TC	100%	Power Pair:	.480	12.19	—	—	—	—	—	—	—
		CMG:	1000	304.8	138.0	62.6	(19x28)	Individual	Red&Black									
		PLTC-ER	2000†	609.6	280.0	127.0	3.6Ω/M'	Foil										
		CEC:					11.8Ω/km	+ Overall										
		CMG FT4				(2)18 AWG TC	65%	Data Pair:										
						(19x30)	TC Braid	Blue&White				120	75%	12.0	39.4	.125	.13	.43
						6.9Ω/M'	1.8Ω/M'								.500	.25	.82	
						22.6Ω/km	5.9Ω/km								1.000	.36	1.18	

†500 ft. and 2000 ft. put-ups not available in Red.  
UL AWM 20201 (600V) • C(UL) AWM I/II A  
18 AWG stranded (19x30) tinned copper drain wire.  
Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A

High-Flex Thick 75°C 	<b>3082F</b>	NEC:	500†	152.4	72.5	32.9	(2)15 AWG TC	100%	Power Pair:	.480	12.19	—	—	—	—	—	—	—
		CMG:	1000	304.8	140.0	63.5	(65x33)	Individual	Red&Black									
		PLTC-ER	2000†	609.6	284.0	128.8	3.6Ω/M'	Foil										
		CEC:					11.8Ω/km	+ Overall										
		CMG FT4				(2)18 AWG TC	65%	Data Pair:										
						(65x36)	TC Braid	Blue&White				120	75%	12.0	39.4	.125	.13	.43
						6.9Ω/M'	1.8Ω/M'								.500	.25	.82	
						22.6Ω/km	5.9Ω/km								1.000	.36	1.18	

†500 ft. and 2000 ft. put-ups not available in Red.  
UL AWM 20201 (600V) • C(UL) AWM I/II A  
18 AWG stranded (65x36) tinned copper drain wire.  
Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A


**PVC Insulation (Power) • FPE Insulation (Data) • Yellow CPE Jacket**

Thick 75°C 	<b>3083A</b>	NEC:	1000	304.8	137.0	62.1	(2)15 AWG TC	100%	Power Pair:	.475	12.07	—	—	—	—	—	—	—
		CMG, PLTC	2000	609.6	278.0	126.1	(19x28)	Individual	Red&Black									
		CEC:					3.6Ω/M'	Foil										
		CMG FT4					11.8Ω/km	+ Overall										
						(2)18 AWG TC	65%	Data Pair:										
						(19x30)	TC Braid	Blue&White				120	75%	12.0	39.4	.125	.13	.43
						6.9Ω/M'	1.8Ω/M'								.500	.25	.82	
						22.6Ω/km	5.9Ω/km								1.000	.36	1.18	


18 AWG stranded (19x30) tinned copper drain wire.  
Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-A

**300V Class 2 Thin • 22 and 24 AWG Stranded TC Conductors • Individ. Foil Shielded (100% Coverage) + Overall TC Braid (65% Coverage)**

**PVC Insulation (Power) • FPE Insulation (Data) • Gray Sunlight- and Oil-resistant PVC Jacket**


Thin 75°C 	<b>3084A</b>	NEC:	500	152.4	22.0	10.0	(2)22 AWG TC	100%	Power Pair:	.280	7.11	—	—	—	—	—	—	—
		CL2 CMG	1000†	304.8	47.0	21.3	(19x34)	Individual	Red&Black									
		CEC:	2000	609.6	96.0	43.6	17.5Ω/M'	Foil										
		CMG FT4					57.4Ω/km	+ Overall										
						(2)24 AWG TC	65%	Data Pair:										
						(19x36)	TC Braid	Blue&White				120	75%	12.0	39.4	.125*	.29*	.95*
						91.9Ω/km	10.5Ω/km								.500*	.50*	1.64*	
															1.000*	.70*	2.30*	

†1000 ft. put-up also available in Red.  
22 AWG stranded (19x34) tinned copper drain wire. • C(UL) AWM I/II A  
Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C

High-Flex Thin 75°C 	<b>3084F</b>	NEC:	500	152.4	22.0	10.0	(2)22 AWG TC	100%	Power Pair:	.275	6.99	—	—	—	—	—	—	—
		CL2 CMG	1000	304.8	47.0	21.3	(15x44)	Individual	Red&Black									
		CEC:	2000	609.6	96.0	43.6	17.5Ω/M'	Foil										
		CMG FT4					57.4Ω/km	+ Overall										
						(2)24 AWG TC	65%	Data Pair:										
						(105x44)	TC Braid	Blue&White				120	75%	12.0	39.4	.125*	.29*	.95*
						28.0Ω/M'	3.2Ω/M'								.500*	.50*	1.64*	
						91.9Ω/km	10.5Ω/km								1.000*	.70*	2.30*	

C(UL) AWM I/II A  
22 AWG stranded (26x36) tinned copper drain wire.  
Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C

**PVC Insulation (Power) • FPE Insulation (Data) • Yellow CPE Jacket**

Thin 75°C 	<b>3085A</b>	NEC:	500	152.4	25.0	11.4	(2)22 AWG TC	100%	Power Pair:	.280	7.11	—	—	—	—	—	—	—
		CL2 CMG	1000	304.8	47.0	21.4	(19x34)	Individual	Red&Black									
		CEC:	2000	609.6	96.0	43.6	17.5Ω/M'	Foil										
		CMG FT4					57.4Ω/km	+ Overall										
						(2)24 AWG TC	65%	Data Pair:										
						(19x36)	TC Braid	Blue&White				120	75%	12.0	39.4	.125*	.29*	.95*
						28.0Ω/M'	3.2Ω/M'								.500*	.50*	1.64*	
						91.9Ω/km	10.5Ω/km								1.000*	.70*	2.30*	

22 AWG stranded (19x34) tinned copper drain wire.  
Meter marks on jacket to aid users in installation. • Allen-Bradley P/N 1485 CPI-C

DCR = DC Resistance • FPE = Foam Polyethylene • PLTC-ER = Power Limited Tray Cable - Exposed Run per 2005 NEC Article 725 • TC = Tinned Copper

\*These values are Maximum Attenuation.

ODVA DeviceNet is an Open DeviceNet Vendor Association, Inc. trademark.

