# **Detailed Specifications & Technical Data**



METRIC MEASUREMENT VERSION

### 82641 Multi-Conductor - Single-Pair Cable

For more Information please call

1-800-Belden1



#### **General Description:**

24 AWG stranded (7x32) TC conductors, plenum, FEP insulation, twisted pair, overall Beldfoil shield (100% coverage), 24 AWG stranded TC drain wire, Flamarrest® jacket.

Conductor   Conductor     WRS:   Conductor     WRS:   Conductor     WRS:   Conductor     WRS:   Conductor     Tabl Number of Conductor   2     Image of Conductor   Conductor     Image of Conductor   Conductor     Image of Conductor   Wait Thickness (mn)     FEP - Floridate Streight Physics (Party Conductor Material Conductor   Conductor     Conductor   Conductor   Conductor   Conductor     Conductor   Conductor   Conductor   Conductor   Conductor     Conductor   Conductor   Conductor   Conductor   Conductor	Physical Characteristics (Ove	rall)
Image: Arriag Conductor Material 2   Total Number of Conductors: 2   Total Number of Conductors: 2   Image: Arriag Conductor Number of Conductors: 2   Image: Arriag Conductor Number of Conductors: 2   Image: Arriag Conductor Number of Conductors: 0.0524   Image: Arriag Conductor Number of Con	Conductor	
Image: 1 2 / 7.32   T.C Tinned Copper     Total Number of Conductors:   2     Image: 1 2 / 7.32   T.C Tinned Copper     Image: 2 / 7.32   T.C Tinned Copper<		ter Motorial
Total Number of Conductors: 2   Insulation Insulation Material:   Insulation Material: Insulation Material:   Insulation Material: Voil Thickness (mm)   EEP - Floomated Elhylene Proprieme () 1524 Outer Shield   Outer Shield Same Shield Material:   Duter Shield Tape (Auminum Foil - Polycelor Tape (10)   Outer Shield Material: Concers Shield Numerial:   Duter Shield Material: Tape (Auminum Foil - Polycelor Tape (10)   Outer Shield Material: Concers Shield Material:   Duter Jacket Material: Same (10)   Outer Jacket Material: Same (10)   Duter Jacket Material: Same (10)   Material: Same (10)   Diversition Material Material: Same (10)   Material: Same (10)   Material: Same (10)   Diversition: O'C To + 60°		
Insulation Insulation Material: Insulation Material: Insulation Material: Ver Shield Outer Shield Staterial: Ver Shield Take Name Toy Outer Shield Material Arrow Shield Staterial: Ver Jacket Material: Ver Jacket Shield Take Manerial Parmerste Ver Jacket Material: Ver Jacket Material: Ver Jacket Material: Ver Jacket Material: Ver Jacket Material: Ver Jacket Material: Ver Jacket Shield Take Material Ver Jacket Material: Ver Jacket Material: Ver Jacket Material: Ver Jacket Material: Ver Jacket Material: Ver Jacket Shield Take Material Ver Jacket Material: Ver Jacket	Total Number of Conductors:	2
Wall Tackenses (mm)   FEP - Fluorination Elliptione Propyleme [0.1524   Outer Shield   Outer Shield Material:   Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2"   Colspan="2">Colspan="2">Colspan="2"   Colspan="2">Colspan="2"   Colspan="2"   Colspan="2" <th< th=""><th>Insulation</th><th></th></th<>	Insulation	
FEP - Fuorinated Elityline Propiere 0.1524   Outer Shield Material: Overage (%)   Gastdraide Tape Adminum Fol-Polyeser Tape 100   Outer Shield Drain Wire Conductor Material Coverage (%)   Mark Stranding Drain Wire Conductor Material Tape Adminum Fol-Polyeser Tape 100   Outer Jackst Material: Mark Stranding Drain Wire Conductor Material   Outer Jackst Material: Mark Stranding Drain Wire Conductor Material   Outer Jackst Material: Nom. Wall Thickness (mm)   Outer Shield Nominal Dameter: 2.692 mm   Overall Colle Voerall Nominal Dameter:   Overall Colle 0.010 - 600 °C   Build Cole Code Chart: Nome Color - 600 °C   Stranding Tape Faulton Range: 0 °C To - 600 °C   Build Cole Marks: 31 750 mm   Mark Accolle Material: 11 908 Kg/Km   Max. Recommeddel Pulling Tension: 1171 N   Applicable Spacifications and Agency Compliance (Overall) CAPP   Cecor(UL) Specifications and Agency Compliance (Overall) Pape   Pulcicable Specifications: CMP   EU Directive 2010/65/EU (KONS II): Yes   EU Directive 2000/65/EU (KONS II): Yes   EU Dir		
Outer Shield Material   Coverage (%)     Duter Shield Tade Nam Yupo Outer Shield Material   Coverage (%)     Duter Shield Dain Wire AWG:   Market Material:     Duter Shield Dain Wire XWG:   XWG Standard Shield Material     Outer Shield Dain Wire AWG:   XWG Standard Shield Material     Duter Jacket   Colspan="2">Colspan="2"Colspan="2">Colspan="2"Colspan="2"Colspan="2"Colspan="2"C		
Baidfoli®   Tape   Aluminum Foil-Polyester Tape   100     Outer   Shed Drain Wire AWG:   Marge Stranding Drain Wire Conductor Material   Stranding Drain Wire Conductor Material     Auror Stranding Drain Wire Conductor Material   Nom. Wall Thickness (mm)     Outer Jacket Material:   Nom. Wall Thickness (mm)     Duter Jacket Material:   Nom. Wall Thickness (mm)     Outer Jacket Material:   Nom. Wall Thickness (mm)     Paire Color Code Chart:   2.892 mm     Pair Color Code Code Chart:   Nom. Wall SkyKm     Mexember Code   O'Cr To +60°C     Builk Gale Weight:   11.906 Kg/Km     Max. Recommended Pulling Tension:   71.171 N     Min. Bend Radius/Minor Axie:   31.750 mm     Applicable Spacifications and Agency Compliance (Overall)   Color     EU Unective 2001/SFEC (ELV):   Yes     EU Directive 2001/SFEC (ELV):   Yes     EU Directive 2001/SFEC (ELV):   Yes     EU Directive 2001/SFEC (WEEE):   Yes		
Outer Shield Drain Wire AWG:   WG Stranding Drain Wire Conductor Material   24 7x32   TO - Trinned Copper   Outer Jacket   Outer Jacket Material:   Outer Jacket Material:   Outer Jacket Material:   Outer Jacket Trade Name Outer Jacket Material   Nome Jacket Material:   Outer Jacket Material:   Outer Jacket Material:   Outer Jacket Material:   Description:   2.692 mm   Pair   Pair   Pair   Balk Cable Weight:   1 Black & Rec   Wechanical Characteristics (Overall)   Operating Temperature Range: 0°C To +60°C   Bulk Cable Weight: 11.906 Kg/Km   Mas: Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall)   Applicable Standards & Environmental Programs   KEC/(UL) Specification: CMP   EU Directive 2001/SFEC (ELV): Yes   EU Directive 2001/SFEC (ELV): Yes   EU Directive 2002/SFEC (RuHS): Yes	Outer Shield Trade Name Type	Duter Shield Material   Coverage (%)
AWG Stranding Drain Wire Conductor Material   Yas2 TG - Tinned Copper   Outer Jacket Material:   Outer Jacket Material:   Outer Jacket Trade Name Outer Jacket Material Nom. Wall Thickness (mm)   Flamarest8 LIS PVC - Low Smoke Polyvinyl Chlonde [0.3556   Overall Cable 2.892 mm   Overall Nominal Diameter: 2.892 mm   Pair Diaco Code Chart:   Number Color 1   Black & Red 0°C To +60°C   Buck Cable Weight: 11.906 Kg/Km   Muk Cable Weight: 11.906 Kg/Km   Muk Cable Weight: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specification: CMP   EC/(UL) Specification: CMP   EU Directive 2001/54/EC (EV): Yes   EU Directive 2001/54/EC (EV): Yes   EU Directive 2001/54/EC (EV): Yes   EU Directive 2001/54/EC (WEEE): Yes	Beldfoil® Tape	Aluminum Foil-Polyester Tape 100
24 7x32 TC - Tinned Copper   Outer Jacket Material: Nom. Wall Thickness (nm)   Planartest® LS PVC - Low Smoke Polyvinyl Choide [0.3556   Overall Cable Overall Nominal Diameter:   Overall Cable 2.692 mm   Pair Pair Color   Pair Factor Code Chart:   Mumber Color 0°C To +60°C   Bulk Cable Weight: 11.906 Kg/Km   Make Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall)   Applicable Standards & Environmental Programs   KEC/(UL) Specification: CMP   EU Directive 200/053/EC (ELV): Yes   EU Directive 2000/053/EC (ELV): Yes   EU Directive 2000/053/EC (EVSE): Yes		
Outer Jacket Trade Material Non. Wall Thickness (nm)   Flammare Stole [S P/C - Low Smoke Polyvinyl Chilode 0.3556   Overall Cable 0verall Nominal Diameter: 2.692 mm   Pair Color Code Chart: 2.692 mm   Pair Color Code Chart: 2.692 mm   Pair Color Code Chart: 2.692 mm   Mumber Color 1 9lack & Red   Veschartical Characteristics (Overall) 0   Mumber Color 0'C To +60°C   Buik Cable Weight: 11.906 Kg/Km   Max. Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall) 0MP   CEC/CUL Specification: CMP   EU/Club Specification: CMP   EU/Club Specification: CMP   EU Directive 201/I6S/EU (ROHS II): Yes   EU Directive 200/SIZE (ELV): Yes   EU Directive 200/SIZE (CoHS): Yes   EU Directive 200/SIZE (CELV): Yes   EU Directive 200/SIZE (CeHEE): Yes		
Famarrest® LS PVC - Low Smoke Polyvinyl Chloride [0.3556   Overall Cable Overall Nominal Diameter: 2.692 mm   Pair Color Code Chart: Number Color   Immber Color 1 Black & Red   Vectanical Characteristics (Overall) OrC To +60°C   Bulk Cable Weight: 11.906 Kg/Km   Max. Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall)   Applicable Specification: CMP   CEC/C(UL) Specification: CMP   EU Directive 2001/53/EC (ELV): Yes   EU Directive 2003/53/EC (KMEE): Yes		
Overall Cable 2.692 mm   Pair Pair   Pair Pair Color Code Chart:   Number Color 1   Black & Red   Wechanical Characteristics (Overall)   Operating Temperature Range: 0°C To +60°C   Bulk Cable Weight: 11.906 Kg/Km   Max. Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall)   Applicable Specifications: CMP   CEC/C(UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU Directive 2002/85/EC (RoHS): Yes	Outer Jacket Trade Name Outer	lacket Material Nom. Wall Thickness (mm)
Overall Nominal Diameter: 2.692 mm   Pair Pair Color Code Chart:   Number Color Image Color   1 Black & Red   Wet-hancal Characteristics (Overall) Operating Temperature Range:   Operating Temperature Range: 0°C To +60°C   Buik Cable Weight: 11.906 Kg/Km   Max. Recommended Pulling Tension: 71.171 N   Min. Bend Radlus/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Verall)   Applicable Standards & Environmental Programs   NEC/(UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU Directive 2002/55/EC (ROHS): Yes	Flamarrest® LS PV0	- Low Smoke Polyvinyl Chloride 0.3556
Pair Color Code Chart:   Number Color Our Code Chart:   Number Color 0°C To +60°C   Black & Red 0°C To +60°C   Buik Cable Weight: 1.906 Kg/Km   Max. Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Ov=rall)   Applicable Standards & Environmental Programs   NEC/UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU Directive 2000/53/EC (ELV): Yes   EU Directive 2000/53/EC (ELV): Yes   EU Directive 2002/55/EC (RoHS): Yes   EU Directive 2002/55/EC (WEEE): Yes	Overall Cable	
Pair Color Code Chart:   Number Color   1 Black & Red	Overall Nominal Diameter:	2.692 mm
Number Color   1 Black & Red   Mechanical Characteristics (Overall)   Operating Temperature Range: 0°C To +60°C   Bulk Cable Weight: 11.906 Kg/Km   Max. Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall)   Applicable Standards & Environmental Programs   NEC/(UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU Directive 2000/53/EC (ELV): Yes   EU Directive 2002/95/EC (RoHS): Yes		
1 Black & Red   VBcichanctal Characteristics (Overall)   Operating Temperature Range: 0°C To +60°C   Bulk Cable Weight: 11.906 Kg/Km   Max. Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall)   Applicable Specifications:   NEC/(UL) Specification: CMP   CEC/C(UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU Directive 2002/95/EC (RoHS): Yes   EU Directive 2002/95/EC (WEEE): Yes		
Operating Temperature Range:   0°C To +60°C     Bulk Cable Weight:   11.906 Kg/Km     Max. Recommended Pulling Tension:   71.171 N     Min. Bend Radius/Minor Axis:   31.750 mm     Applicable Specifications and Agency Compliance (Ov=rall)     Applicable Standards & Environmental Programs     NEC/(UL) Specification:   CMP     CEC/C(UL) Specification:   CMP     EU Directive 2011/65/EU (ROHS II):   Yes     EU Directive 2000/53/EC (ELV):   Yes     EU Directive 2000/53/EC (RoHS):   Yes		
Operating Temperature Range:   0°C To +60°C     Bulk Cable Weight:   11.906 Kg/Km     Max. Recommended Pulling Tension:   71.171 N     Min. Bend Radius/Minor Axis:   31.750 mm     Applicable Specifications and Agency Compliance (Ov=rall)     Applicable Standards & Environmental Programs     NEC/(UL) Specification:   CMP     CEC/C(UL) Specification:   CMP     EU Directive 2011/65/EU (ROHS II):   Yes     EU Directive 2000/53/EC (ELV):   Yes     EU Directive 2000/53/EC (RoHS):   Yes		
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Max. Recommended Pulling Tension: 71.171 N   Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall)   Applicable Standards & Environmental Programs   NEC/(UL) Specification: CMP   CEC/C(UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU CE Mark: Yes   EU Directive 2000/53/EC (ELV): Yes   EU Directive 2000/53/EC (ROHS): Yes   EU Directive 2002/96/EC (ROHS): Yes   EU Directive 2002/96/EC (WEEE): Ves		0°C To +60°C
Min. Bend Radius/Minor Axis: 31.750 mm   Applicable Specifications and Agency Compliance (Overall)   Applicable Standards & Environmental Programs   NEC/(UL) Specification: CMP   CEC/C(UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU CE Mark: Yes   EU Directive 2000/53/EC (ELV): Yes   EU Directive 2000/53/EC (ROHS): Yes   EU Directive 2000/53/EC (ROHS): Yes   EU Directive 2002/95/EC (WEEE): Ves		
Applicable Specifications and Agency Compliance (Overall)   Applicable Standards & Environmental Programs   NEC/(UL) Specification: CMP   CEC/C(UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU Directive 2000/53/EC (ELV): Yes   EU Directive 2000/53/EC (ROHS): Yes   EU Directive 2000/53/EC (ROHS): Yes   EU Directive 2000/53/EC (ROHS): Yes   EU Directive 2002/95/EC (ROHS): Yes		
Applicable Standards & Environmental Programs CMP   NEC/(UL) Specification: CMP   CEC/C(UL) Specification: CMP   EU Directive 2011/65/EU (ROHS II): Yes   EU Directive 2001/35/EC (ROHS II): Yes   EU Directive 2000/53/EC (ELV): Yes   EU Directive 2000/55/EC (RoHS): Yes   EU Directive 2002/95/EC (ROHS): Yes	Min. Bend Radius/Minor Axis:	31.750 mm
NEC/(UL) Specification:CMPCEC/C(UL) Specification:CMPEU Directive 2011/65/EU (ROHS II):YesEU CE Mark:YesEU Directive 2000/53/EC (ELV):YesEU Directive 2002/95/EC (RoHS):YesEU Directive 2002/95/EC (RoHS):YesEU Directive 2002/95/EC (RoHS):YesEU Directive 2002/95/EC (RoHS):YesEU Directive 2002/95/EC (WEEE):Yes	Applicable Specifications and	Agency Compliance (Overall)
CEC/C(UL) Specification:CMPEU Directive 2011/65/EU (ROHS II):YesEU CE Mark:YesEU Directive 2000/53/EC (ELV):YesEU Directive 2002/95/EC (RoHS):YesEU Directive 2002/95/EC (RoHS):YesEU Directive 2002/95/EC (WEEE):04/01/2005EU Directive 2002/96/EC (WEEE):Yes		-
EU Directive 2011/65/EU (ROHS II):YesEU CE Mark:YesEU Directive 2000/53/EC (ELV):YesEU Directive 2002/95/EC (ROHS):YesEU Directive 2002/95/EC (ROHS):O4/01/2005EU Directive 2002/96/EC (WEEE):Yes	NEC/(UL) Specification:	CMP
EU CE Mark:YesEU Directive 2000/53/EC (ELV):YesEU Directive 2002/95/EC (RoHS):YesEU RoHS Compliance Date (mm/dd/yyyy):04/01/2005EU Directive 2002/96/EC (WEEE):Yes	CEC/C(UL) Specification:	СМР
EU Directive 2000/53/EC (ELV):   Yes     EU Directive 2002/95/EC (RoHS):   Yes     EU RoHS Compliance Date (mm/dd/yyyy):   04/01/2005     EU Directive 2002/96/EC (WEEE):   Yes	EU Directive 2011/65/EU (ROHS II)	: Yes
EU Directive 2002/95/EC (RoHS):   Yes     EU RoHS Compliance Date (mm/dd/yyyy):   04/01/2005     EU Directive 2002/96/EC (WEEE):   Yes	EU CE Mark:	Yes
EU RoHS Compliance Date (mm/dd/yyyy):   04/01/2005     EU Directive 2002/96/EC (WEEE):   Yes	EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/96/EC (WEEE): Yes	EU Directive 2002/95/EC (RoHS):	Yes
	EU RoHS Compliance Date (mm/d	d/yyyy): 04/01/2005
EU Directive 2003/11/EC (BFR): Yes	EU Directive 2002/96/EC (WEEE):	Yes
	EU Directive 2003/11/EC (BFR):	Yes

## **Detailed Specifications & Technical Data**



#### METRIC MEASUREMENT VERSION

#### 82641 Multi-Conductor - Single-Pair Cable

Yes
Yes
NFPA 262
FT6
Yes
88641
8641

#### **Electrical Characteristics (Overall)**

Nom. Inductance:
Inductance (µH/m)
0.55777
Nom. Capacitance Conductor to Conductor:
Capacitance (pF/m)
101.711
Nom. Capacitance Cond. to Other Conductor & Shield:
Capacitance (pF/m)
193.579
Nom. Conductor DC Resistance:
DCR @ 20°C (Ohm/km)
79.0721
Nominal Outer Shield DC Resistance:
DCR @ 20°C (Ohm/km)
55.777
Max. Operating Voltage - UL:
Voltage
300 V RMS
Max. Recommended Current:
Current
2.2 Amps per conductor @ 25°C

#### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
82641 877U1000	1,000 FT	9.000 LB	NATURAL		1 PR #24 FEP FS FLMRST
82641 8771000	1,000 FT	10.000 LB	NATURAL	С	1 PR #24 FEP FS FLMRST

Notes: C = CRATE REEL PUT-UP.

Revision Number: 2 Revision Date: 09-04-2012

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Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 2014/35/EU).