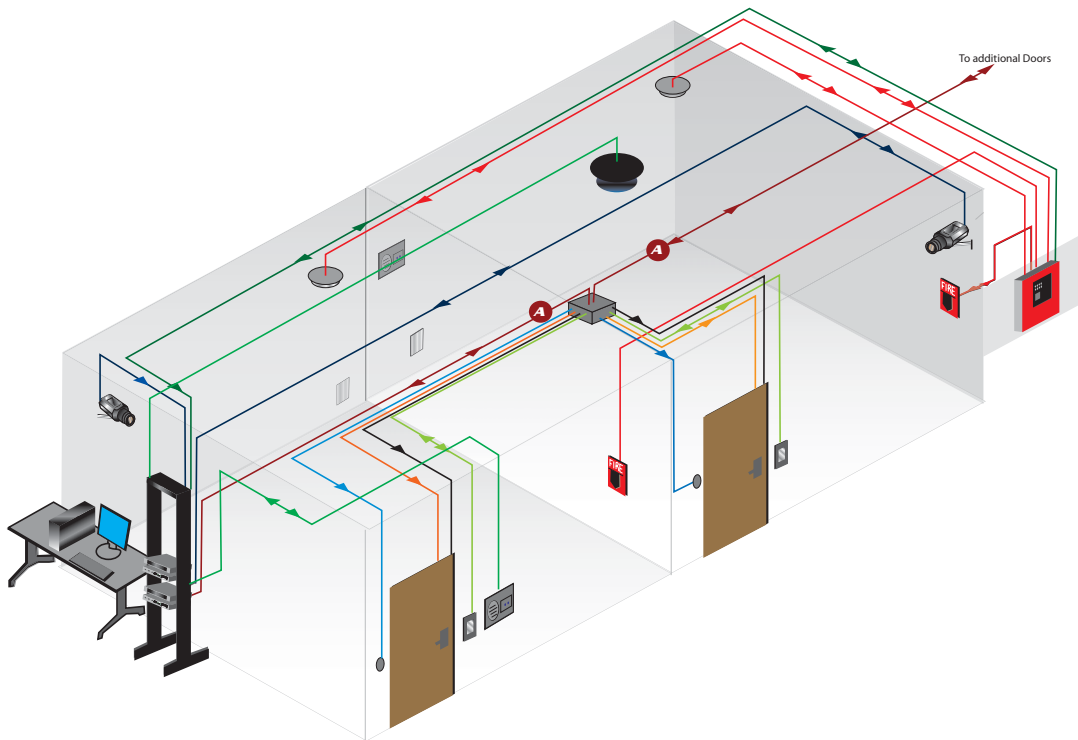


Serial Data Grade Cables

Data. Delivered. Serial digital systems such as RS-232, RS-422, and RS-485 require digital signals to be delivered from component to component with minimal distortion. West Penn Wire serial data grade cables are manufactured with low loss insulation providing superior electrical characteristics with either single or dual shields. When the application calls for digital 1's and 0's, graduate to the level of serial data grade.



FEATURES

- Superior electrical characteristics
- Low Loss Insulations
- Superior Shielding
- RS-232 Applications
- RS-422 Applications
- RS-485 Applications
- 1-1000ft Incremental Footage Markers
- Imprinted Cable Labeling
- Advantage Box Packaging

MINI INDEX



Non-Plenum Low Capacitance Cables

- Multiple Pair/ Overall Shield..... 140
- Multiple Pair Series/ Individually Shielded..... 141

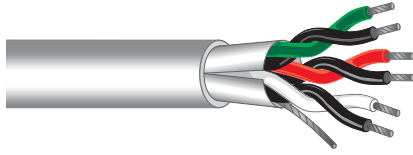
Plenum Low Capacitance Cables

- Multiple Pair Series/ Overall Shielded.....142
- Multiple Pair Series/ Individually Shielded..... 141

RS-485 Cables

- Non-Plenum RS-485 143
- Plenum RS-485144

Serial Data Grade Cable



Data Grade Cable Multiple Pair / Overall Shielded

Description:

- ASTM Tinned Copper • Polyolefin insulation
- Overall shield 100% coverage of aluminum polyester foil with 24 AWG strd. TC drain wire • Twisted Pair Construction • Overall PVC jacket

Rating:

- NEC Type CM
- (UL) Listed
- Meets 300V requirements as specified in the NEC
- Flame Rating: UL1685

Applications:

Indoor for:

- Control
- Signaling
- Electronic Data
- Microprocessor Based
- Serial Data
- DMX Audio
- RS-485
- RS-232

Standard spool size 1000ft.

| Catalog No. | No. of Pairs | Conductor Type & Nom. D.C.R. | Insulation Type & Thickness Inches | Shielding & Coverage | Jacket Type & Thickness Inches | Nom. O.D. Inches | NEC Type | Nom. Capacitance | Jacket Color |
|-------------|--------------|------------------------------|---------------------------------------|----------------------|-----------------------------------|---------------------|----------|--------------------------|--------------|
| D2401 | 1 Pair | 24 AWG (7x32) 26 Ω/Mft | Polyolefin .013 | Al. Foil 100% | PVC .030 | .160 | CM | 14.5pf/ft* 26pf/ft ** | Gray |
| D2402 | 2 Pair | 24 AWG (7x32) 26 Ω/Mft | Polyolefin .013 | Al. Foil 100% | PVC .030 | .228 | CM | 14.5pf/ft* 26pf/ft ** | Gray |
| D2404 | 4 Pair | 24 AWG (7x32) 26 Ω/Mft | Polyolefin .013 | Al. Foil 100% | PVC .030 | .268 | CM | 14.5pf/ft* 26pf/ft ** | Gray |
| D3651 | 2 Pair | 22 AWG (7x30) 17 Ω/Mft | Polyolefin .010 | Al. Foil 100% | PVC .030 | .235 | CM | 26pf/ft* 47pf/ft ** | Gray |
| D3653 | 4 Pair | 22 AWG (7x30) 17 Ω/Mft | Polyolefin .010 | Al. Foil 100% | PVC .030 | .268 | CM | 26pf/ft* 47pf/ft ** | Gray |

Special Notes:

- Cables are packaged in the Advantage Box.
- Orange ripcord included on cables containing 3 or more pairs.

Electrical Characteristics

Nom. Vel of Propagation - 66%
Nom. Impedance Ω 24 Awg.- 100Ω
Nom. Impedance Ω 22 Awg.- 55Ω

* Capacitance between conductors.

** Capacitance between one conductor and the other connected to the shield

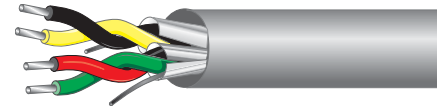
Color Code

| Pair No. | Colors |
|----------|-------------|
| 1 | Black/Red |
| 2 | Black/White |
| 3 | Black/Green |
| 4 | Black/Blue |

JACKET: Gray

Serial Data Grade Cable

Data Grade Cable Multiple Pair Series / Individually Shielded



Applications:

Indoor for:

- Control
- Signaling
- Electronic Data
- Microprocessor Based
- Serial Data

Description:

- ASTM Tinned Copper • Polyolefin insulation • Each pair shielded 100% coverage of aluminum foil with 24 AWG Strd. TC drain wire • Twisted pair construction
- Overall PVC Jacket

Rating:

- NEC Type CM
- (UL) Listed
- Meets 300V requirements as specified in the NEC
- Flame Rating: UL1685

Standard pool size 1000ft.

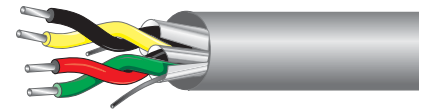
| Catalog No. | No. of Pairs | Conductor Type & Nom. D.C.R | Insulation Type & Thickness Inches | Shielding & Coverage | Jacket Type & Thickness Inches | Nom. O.D. Inches | NEC Type | Nom. Capacitance | Jacket Color |
|-------------|--------------|-----------------------------|------------------------------------|-----------------------------|--------------------------------|------------------|----------|---------------------------|--------------|
| D420 † | 2 | 22 AWG Solid 17.5 Ω/Mft | Polyolefin .015 | Individual Al. Foil 100% | PVC .030 | .261 | CM | 15.5 pf/ft* 28 pf/ft** | Gray |

* Capacitance between conductors.

** Capacitance between one conductor and the other connected to the shield

| Color Code | |
|--------------|--------------|
| Pair No. | Colors |
| 1 | Black/Yellow |
| 2 | Red/Green |
| JACKET: Gray | |

Data Grade Plenum Cable Multiple Pair Series / Individually Shielded



Rating:

- NEC Type CMP
- (UL)-C(UL) Listed or c(ETL)us Listed
- Meets 300V requirements as specified in the NEC
- Flame Rating: NFPA-262 Smoke & Flame Test

Description:

- ASTM Tinned Copper • Teflon insulation • Each pair shielded 100% coverage of aluminum foil with 24 AWG Strd. drain wire • Twisted pair construction
- Flexible plenum jacket

Standard pool size 1000ft.

| Catalog No. | No. of Pairs | Conductor Type & Nom. D.C.R | Insulation Type & Thickness Inches | Shielding & Coverage | Jacket Type & Thickness Inches | Nom. O.D. Inches | NEC Type | Nom. Capacitance | Jacket Color |
|-------------|--------------|-----------------------------|------------------------------------|-----------------------------|--------------------------------|------------------|----------|---------------------------|--------------|
| D25420† | 2 | 22 AWG Solid 17.5 Ω/Mft | Teflon .012 | Individual Al. Foil 100% | PVDF .015 | .185 | CMP | 15.5 pf/ft* 28 pf/ft** | Gray |

Special Notes:

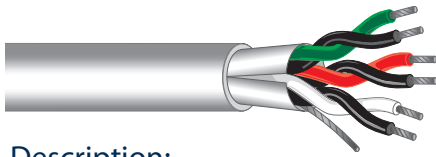
- † Drain wire 22 AWG Solid Tinned copper
- Cables are packaged in the Advantage Box.

| Electrical Characteristics |
|--------------------------------------|
| Nom. Vel of Propagation - 66% |
| Nom. Impedance Ω D420 & D25420- 100Ω |

* Capacitance between conductors.

** Capacitance between one conductor and the

Serial Data Grade Cable



Description:

- ASTM Tinned Copper • Teflon Insulation • Overall shield 100% coverage of aluminum polyester foil with 24 Awg. Strd. drain wire • Twisted Pair Construction • Flexible plenum jacket

Rating:

- NEC Type CMP
- (UL)-C(UL) Listed or c(ETL)us Listed
- Meets 300V requirements as specified in the NEC
- Flame Rating: NFPA-262 Smoke & Flame Test

Data Grade Plenum Cable Multiple Pair Series / Overall Shielded

Applications:

Indoor within ducts, plenums and other spaces used for environmental air:

- Control
- Signaling
- Electronic Data
- Microprocessor Based
- Serial Data

Standard spool size 1000ft.

| Catalog No. | No. of Pairs | Conductor Type & Nom. D.C.R | Insulation Type & Thickness Inches | Shielding & Coverage | Jacket Type & Thickness Inches | Nom. O.D. Inches | NEC Type | Nom. Capacitance | Jacket Color |
|-------------|--------------|-----------------------------|------------------------------------|----------------------|--------------------------------|------------------|----------|---------------------------|--------------|
| D252401 | 1 | 24 AWG (7x32) 26 Ω/Mft | Teflon .013 | Al. Foil 100% | Flexible Plenum .015 | .115 | CMP | 14.5 pf/ft* 26 pf/ft** | Gray |
| D252402 | 2 | 24 AWG (7x32) 26 Ω/Mft | Teflon .013 | Al. Foil 100% | Flexible Plenum .015 | .188 | CMP | 14.5 pf/ft* 26 pf/ft** | Gray |
| D252404 | 4 | 24 AWG (7x32) 26 Ω/Mft | Teflon .013 | Al. Foil 100% | Flexible Plenum .015 | .224 | CMP | 14.5 pf/ft* 26 pf/ft** | Gray |
| D253651 | 2 | 22 AWG (7x30) 17 Ω/Mft | Teflon .010 | Al. Foil 100% | Flexible Plenum .015 | .191 | CMP | 25 pf/ft* 45 pf/ft** | Gray |
| D253652 | 3 | 22 AWG (7x30) 17 Ω/Mft | Teflon .010 | Al. Foil 100% | Flexible Plenum .015 | .204 | CMP | 25 pf/ft* 45 pf/ft** | Gray |
| D253653 | 4 | 22 AWG (7x30) 17 Ω/Mft | Teflon .010 | Al. Foil 100% | Flexible Plenum .015 | .224 | CMP | 25 pf/ft* 45 pf/ft** | Gray |

Electrical Characteristics
 Nom. Vel of Propagation - 69%
 Nom. Impedance Ω 24 Awg.- 100Ω
 Nom. Impedance Ω 22 Awg.- 55Ω

| Color Code | |
|--------------|-------------|
| Pair No. | Colors |
| 1 | Black/Red |
| 2 | Black/White |
| 3 | Black/Green |
| 4 | Black/Blue |
| JACKET: Gray | |

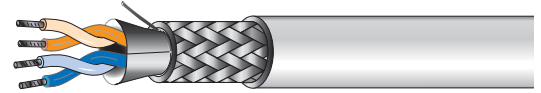
- * Capacitance between conductors.
- ** Capacitance between one conductor and the other connected to the shield

Special Notes:

- Cables are packaged in the Advantage Box.
- Teflon®- Dupont Tradename for FEP-Fluorinated Ethylene Propylene
- Plenum Installation Precautions see Technical Reference Section Page 192

Serial Data Grade Cable

Data Grade Cable Multiple Pair Series / Overall Shielded RS-485 Data Cables



Applications:

Indoor for:

- Computer Application
- Low Capacitance Data
- RS-485 Data Applications

Description:

- ASTM Tinned Copper • Polyolefin Insulation • Twisted pair construction • Polyester wrap • Overall shield 100% coverage of aluminum polyester foil with 24 Awg. Stranded drain wire
- 90% Tinned Copper Braid • Overall PVC Jacket

Rating:

- NEC Type CM
- (UL) Listed
- Meets 300V requirements as specified in the NEC
- Flame Rating: UL1685

Standard pool size 1000ft.

| Catalog No. | No. of Pairs | Conductor Type & Nom. D.C.R | Insulation Type & Thickness Inches | Shielding & Coverage | Jacket Type & Thickness Inches | Nom. O.D. Inches | NEC Type | Nom. Capacitance | Jacket Color |
|-------------|--------------|-----------------------------|------------------------------------|--|--------------------------------|------------------|----------|---------------------------|--------------|
| D4851 | 1 | 24 AWG (7x32) 26 Ω/Mft | Polyolefin .020 | Al. Foil-100% with drain wire TC Braid 90% | PVC .032 | .275 | CM | 12.8 pf/ft* 23 pf/ft** | Gray |
| D4852 | 2 | 24 AWG (7x32) 26 Ω/Mft | Polyolefin .020 | Al. Foil-100% with drain wire TC Braid 90% | PVC .032 | .305 | CM | 12.8 pf/ft* 23 pf/ft** | Gray |
| D4853 | 3 | 24 AWG (7x32) 26 Ω/Mft | Polyolefin .020 | Al. Foil-100% with drain wire TC Braid 90% | PVC .032 | .320 | CM | 12.8 pf/ft* 23 pf/ft** | Gray |
| D4854 | 4 | 24 AWG (7x32) 26 Ω/Mft | Polyolefin .020 | Al. Foil-100% with drain wire TC Braid 90% | PVC .032 | .345 | CM | 12.8 pf/ft* 23 pf/ft** | Gray |

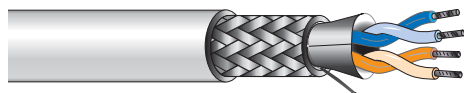
| Color Code | |
|--------------|---------------|
| Pair No. | Colors |
| 1 | Blue- White |
| 2 | Orange- White |
| 3 | Green- White |
| 4 | Brown- White |
| JACKET: Gray | |

| Electrical Characteristics |
|--------------------------------|
| Nom. Vel of Propagation - 66% |
| Nom. Impedance Ω 24 Awg.- 120Ω |

- * Capacitance between conductors.
- ** Capacitance between one conductor and the other connected to the shield

Serial Data Grade Cable

Data Grade Plenum Cable Multiple Pair Series / Overall Shielded RS-485 Data Cables



Description:

- ASTM Tinned Copper • Foam Teflon Insulation • Twisted Pair Construction • Polyester wrap • Overall shield 100% coverage of aluminum polyester foil with 24 Awg. Stranded drain wire
- 90% Tinned Copper Braid • Overall Flexible Plenum Jacket

Rating:

- NEC Type CMP
- (UL) Listed
- Meets 300V requirements as specified in the NEC
- Flame Rating: NFPA-262 Smoke & Flame Test

Applications:

- Indoor within ducts, plenums and other spaces used for environmental air:
- Computer Application
 - Low Capacitance Data
 - RS-485 Data Applications

Standard pool size 1000ft.

| Catalog No. | No. of Pairs | Conductor Type & Nom. D.C.R | Insulation Type & Thickness Inches | Shielding & Coverage | Jacket Type & Thickness Inches | Nom. O.D. Inches | NEC Type | Nom. Capacitance | Jacket Color |
|-------------|--------------|-----------------------------|------------------------------------|---|--------------------------------|------------------|----------|-------------------------|--------------|
| D254851 | 1 | 24 AWG (7x32) 26 Ω/Mft | Foam Teflon® | Al. Foil-100% with drain wire TC Braid 90% | Flex. Plenum | .202 | CMP | 12 pf/ft* 22 pf/ft** | Gray |
| D254852 | 2 | 24 AWG (7x32) 26 Ω/Mft | Foam Teflon® | Al. Foil-100% with drain wire TC Braid 90% | Flex. Plenum | .305 | CMP | 12 pf/ft* 22 pf/ft** | Gray |

| |
|--|
| <p>Electrical Characteristics Nom. Vel of Propagation - 76% Nom. Impedance Ω 24 Awg.- 120Ω</p> |
|--|

- * Capacitance between conductors.
- ** Capacitance between one conductor and the other connected to the shield

| Color Code | |
|--------------|---------------|
| Pair No. | Colors |
| 1 | Blue- White |
| 2 | Orange- White |
| JACKET: Gray | |

Special Notes:

- Teflon®- Dupont Tradename for FEP-Fluorinated Ethylene Propylene

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