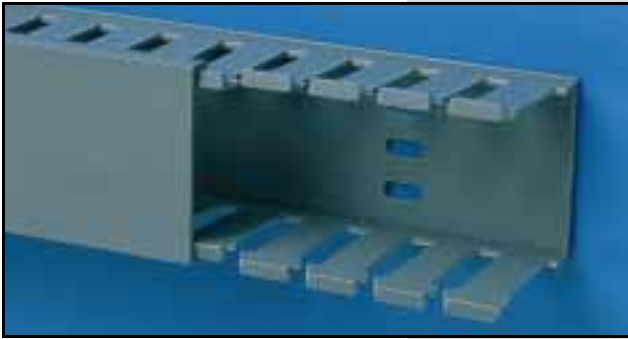


# PANDUCT® Type E — Slotted Wall Wiring Duct



## Type E Slotted Wall Wiring Duct

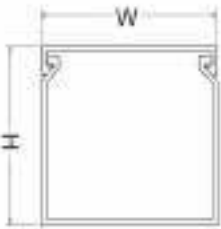
- Made of rigid PVC (See [pg. 34](#) for material specifications)
- Rated for continuous use temperatures up to 50°C (122°F)
- Available in a variety of colors as a standard part (See [page 36](#) for details)
- Provided with standard mounting holes (dimensions [page 31](#))
- Available without mounting holes (See ordering information below)
- Available with adhesive backing\* (See [page 22](#) for details)



### Type E— Wiring Duct Standard Colors†:

 LG	 DG	 WH
Light Gray	Dark Gray	White
 BL	 IB	
Black	Intrinsic Blue	

Colors shown are approximate.



Duct Part Number	Duct External Dimensions		Cover Part Number	Duct Std. Ctn. Qty.	Cover Std. Ctn. Qty.	Std. Lgth
	WxH IN.	WxH (mm)				
E.5X.5LG6 E.5X.62LG6 E.5X1LG6 E.5X1.25LG6 E.5X1.75LG6 E.5X2LG6	0.63 x 0.56 0.63 x 0.68 0.63 x 1.06 0.63 x 1.31 0.63 x 1.81 0.63 x 2.06	(16.0) x (14.2) (16.0) x (17.3) (16.0) x (26.9) (16.0) x (33.3) (16.0) x (46.0) (16.0) x (52.3)	C.5LG6	120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft.	120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft.	6 ft.
E.75X.75LG6 E.75X1LG6 E.75X1.5LG6 E.75X2LG6	0.88 x 0.81 0.88 x 1.06 0.88 x 1.56 0.88 x 2.12	(22.4) x (20.6) (22.4) x (26.9) (22.4) x (39.6) (22.4) x (53.8)	C.75LG6	120 ft. 120 ft. 120 ft. 120 ft.	120 ft. 120 ft. 120 ft. 120 ft.	6 ft.
E1X1LG6 E1X1.25LG6 E1X1.5LG6 E1X2LG6 E1X2.5LG6 E1X3LG6 E1X4LG6	1.14 x 1.12 1.14 x 1.37 1.14 x 1.62 1.14 x 2.12 1.14 x 2.62 1.14 x 3.12 1.14 x 4.12	(29.0) x (28.4) (29.0) x (34.8) (29.0) x (41.1) (29.0) x (53.8) (29.0) x (66.5) (29.0) x (79.2) (29.0) x (104.6)	C1LG6	120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft.	120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft.	6 ft.
E1.5X1 LG6 E1.5X1.5LG6 E1.5X2LG6 E1.5X3LG6 E1.5X4LG6	1.64 x 1.12 1.64 x 1.62 1.64 x 2.12 1.64 x 3.12 1.64 x 4.12	(41.7) x (28.4) (41.7) x (41.1) (41.7) x (53.8) (41.7) x (79.2) (41.7) x (104.6)	C1.5LG6	120 ft. 120 ft. 120 ft. 120 ft. 60 ft.	120 ft. 120 ft. 120 ft. 120 ft. 120 ft.	6 ft.
E2X1LG6 E2X1.5LG6 E2X2LG6 E2X2.5LG6 E2X3LG6 E2X4LG6 E2X5LG6	2.14 x 1.12 2.14 x 1.62 2.14 x 2.12 2.14 x 2.62 2.14 x 3.12 2.14 x 4.12 2.14 x 5.12	(54.4) x (28.4) (54.4) x (41.1) (54.4) x (53.8) (54.4) x (66.5) (54.4) x (79.2) (54.4) x (104.6) (54.4) x (130.0)	C2LG6	120 ft. 120 ft. 120 ft. 60 ft. 60 ft. 60 ft. 60 ft.	120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft.	6 ft.
E2.5X3LG6	2.64 x 3.12	(67.1) x (79.2)	C2.5LG6	60 ft.	120 ft.	6 ft.
E3X1LG6 E3X1.25LG6 E3X2LG6 E3X3LG6 E3X4LG6 E3X5LG6	3.14 x 1.12 3.14 x 1.37 3.14 x 2.12 3.14 x 3.12 3.14 x 4.12 3.14 x 5.12	(79.8) x (28.4) (79.8) x (34.8) (79.8) x (53.8) (79.8) x (79.2) (79.8) x (104.6) (79.8) x (130.0)	C3LG6	120 ft. 120 ft. 60 ft. 60 ft. 60 ft. 60 ft.	120 ft. 120 ft. 120 ft. 120 ft. 120 ft. 120 ft.	6 ft.
E4X1.5LG6 E4X2LG6 E4X3LG6 E4X4LG6 E4X5LG6	4.14 x 1.62 4.14 x 2.12 4.14 x 3.12 4.14 x 4.12 4.14 x 5.12	(105.2) x (41.1) (105.2) x (53.8) (105.2) x (79.2) (105.2) x (104.6) (105.2) x (130.0)	C4LG6	120 ft. 60 ft. 60 ft. 60 ft. 60 ft.	120 ft. 120 ft. 120 ft. 120 ft. 120 ft.	6 ft.

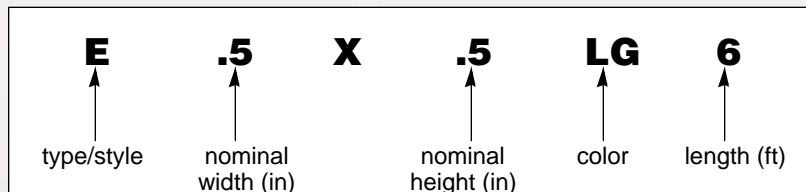
See [page 31](#) for complete listing of dimensions. \*Adhesive tape is not CSA Certified.

### Ordering Information:

- Order number of feet required in multiples of 6 ft or Std. Carton quantities.
- To order duct without mounting holes, add NM to Part Number.
- To order with pressure-sensitive adhesive mounting tape applied, add -A to Part Number.
- Part Number shown for Light Gray LG. To order other colors, substitute WH White, DG Dark Gray, BL Black, and IB Intrinsic Blue

†See [page 36](#) to determine which sizes are available in each color

### Part Number Nomenclature —



# PANDUCT® Type NE, NS, PE, PS, D, E & S—Wirefill

NOMINAL DUCT SIZE (W X H)	AREA in <sup>2</sup>	ELECTRICAL											CAT 5 CABLES					
		8 AWG		10 AWG		12 AWG		14 AWG			16 AWG		18 AWG		22 AWG	24 AWG		
		.216	.153	.122	.158	.105	.139	.165	.096	.125	.084	.113	.065	.217	.250	.422		
		THHN	THHN	THHN	MTW	THHN	MTW	MTW	TFFN	MTW	TFFN	MTW	MTW	UTP/ CM CAT 5	STP/ CM CAT 5	UTP/CM		
.5 x .5	0.250	3	5	8	5	11	6	5	14	8	18	10	30	3	2	1		
.5 x .62	0.310	3	7	10	6	14	8	6	17	10	22	12	37	3	2	1		
.5 x 1	0.500	5	11	17	10	23	13	9	27	16	35	20	59	5	4	1		
.5 x 1.25	0.625	7	13	21	13	28	16	11	34	20	44	24	74	7	5	2		
.5 x 1.75	0.875	9	19	29	18	40	23	16	47	28	62	34	104	9	7	2		
.5 x 2	1.000	11	21	34	20	45	26	18	54	32	71	39	118	11	8	3		
.75 x .75	0.563	6	12	19	11	26	15	10	31	18	40	22	67	6	5	2		
.75 x 1	0.750	8	16	25	15	34	19	14	41	24	53	29	89	8	6	2		
.75 x 1.5	1.125	12	24	38	23	51	29	21	61	36	80	44	133	12	9	3		
.75 x 2	1.500	16	32	50	30	68	39	28	81	48	106	59	178	16	12	4		
1 x 1	1.000	11	21	34	20	45	26	18	54	32	71	39	118	11	8	3		
1 x 1.25	1.250	13	27	42	25	57	32	23	68	40	89	49	148	13	10	4		
1 x 1.5	1.500	16	32	50	30	68	39	28	81	48	106	59	178	16	12	4		
1 x 2	2.000	21	43	67	40	91	52	37	109	64	142	78	237	21	16	6		
1 x 2.5	2.500	27	53	84	50	113	65	46	136	80	177	98	296	27	20	7		
1 x 3	3.000	32	64	101	60	136	78	55	163	96	213	117	355	32	24	8		
1 x 4	4.000	43	85	134	80	181	104	73	217	128	283	157	473	42	32	11		
1.5 x 1	1.500	16	32	50	30	68	39	28	81	48	106	59	178	16	12	4		
1.5 x 1.5	2.250	24	48	76	45	102	58	41	122	72	159	88	266	24	18	6		
1.5 x 2	3.000	32	64	101	60	136	78	55	163	96	213	117	355	32	24	8		
1.5 x 3	4.500	48	96	151	90	204	116	83	244	144	319	176	533	48	36	13		
1.5 x 4	6.000	64	128	202	120	272	155	110	326	192	425	235	710	64	48	17		
2 x 1	2.000	21	43	67	40	91	52	37	109	64	142	78	237	21	16	6		
2x1.5	3.000	32	64	101	60	136	78	55	163	96	213	117	355	32	24	8		
2x2	4.000	43	85	134	80	181	104	73	217	128	283	157	473	42	32	11		
2 x 2.5	5.000	54	107	168	100	227	129	92	271	160	354	196	592	53	40	14		
2 x 3	6.000	64	128	202	120	272	155	110	326	192	425	235	710	64	48	17		
2x4	8.000	86	171	269	160	363	207	147	434	256	567	313	947	85	64	22		
2 x 5	10.000	107	214	336	200	454	259	184	543	320	709	392	1183	106	80	28		
2.5 x 3	7.500	80	160	252	150	340	194	138	407	240	531	294	888	80	60	21		
3 x 1	3.000	32	64	101	60	136	78	55	163	96	213	117	355	32	24	8		
3 x 1.25	3.750	40	80	126	75	170	97	69	203	120	266	147	444	40	30	11		
3x2	6.000	64	128	202	120	272	155	110	326	192	425	235	710	64	48	17		
3x3	9.000	96	192	302	180	408	233	165	488	288	638	352	1065	96	72	25		
3x4	12.000	129	256	403	240	544	311	220	651	384	850	470	1420	127	96	34		
3x5	15.000	161	320	504	300	680	388	275	814	480	1063	587	1775	159	120	42		
4 x 1.5	6.000	64	128	202	120	272	155	110	326	192	425	235	710	64	48	17		
4x2	8.000	86	171	269	160	363	207	147	434	256	567	313	947	85	64	22		
4x3	12.000	129	256	403	240	544	311	220	651	384	850	470	1420	127	96	34		
4x4	16.000	171	342	537	320	726	414	294	868	512	1134	627	1893	170	128	45		
4x5	20.000	214	427	672	401	907	518	367	1085	640	1417	783	2367	212	160	56		

Not all sizes available for each duct type (see pg. 36 for color and size chart).

### Formula used to calculate fill capacity:

$$\text{Number of Wires} = \frac{\text{Duct W x H}}{2.00 \times (\text{Wire O.D.})^2}$$

### Formula to approximate wiring duct size needed:

#### Wire O.D. for multiple wire types:

$$\text{Wire O.D.} = \frac{\sum(\text{Number of Wires} \times \text{Wire O.D.})}{\text{Number of Wires}}$$

#### Example:

15 wires with .165 O.D. = 15 x .165 = 2.475  
 28 wires with .065 O.D. = 28 x .065 = 1.820  
 16 wires with .125 O.D. = 16 x .125 = 2.000  
 59 total wires = 6.295

$$6.295 \div 59 = \text{Wire O.D.} = \boxed{.107}$$

- Determine the **number of wires** the duct will need to hold.
- Determine the **wire outside diameter** (for multiple wires see formula at left).
- Calculate the necessary **wire area** using the following formula:  

$$\text{Wire Area} = \text{Number of Wires} \times [2 \times (\text{Wire O.D.})^2]$$

Example: Wire Area = 59 X [2 X (.107)<sup>2</sup>] = 59 X .023 = **1.357**
- Choose a Duct** with W X H that is equal to or greater than the result from step 3.  

$$\text{Selected Duct Area} \geq \text{Calculated Wire Area}$$

Example: For Duct Size .75 X 1.5 Duct Area = .75 X 1.5 = 1.125 No Good 1.125 < 1.357  
 For Duct Size 1.5 X 1.0 Duct Area = 1.5 X 1.0 = 1.500 Good 1.500 > 1.357

In the above example 1 x 1.5 duct or a larger duct size could also be used.

# PANDUCT® Wiring Duct & Raceway—Physical Properties

PROPERTIES	UNITS	TEST METHOD	PVC	NORYL	POLYCARB.
<b>GENERAL</b>					
Specific Gravity	g/cc	ASTM D 792	1.38	1.08	1.21
Heat Deflection Temperature @264 psi	°F	ASTM D 648	163	212	270
Thermal Expansion	10 <sup>-5</sup> in/in/°F	ASTM D 696	3.7	3.8	3.9
Thermal Conductivity	(BTU-in/hr-ft <sup>2</sup> -F°)	ASTM C 177	1.3	1.1	1.4
Compressive Yield Strength	psi	ASTM D 695	8,100	12,000	11,000
<b>BURNING CHARACTERISTICS</b>					
Flammability Class	—	UL94	V-0	V-1	N/A
Smoke Density	—	ASTM E 662	538	N/A	108
Limited Oxygen Index (LOI)	—	ASTM D 2863	45	30	35
<b>HARDNESS</b>					
Durometer Hardness	“D”	ASTM D 2240	78	85	88
Rockwell Hardness	“R”	ASTM D 785	111	115	118
<b>TENSILE</b>					
Strength at Yield	psi	ASTM D 638	6,200	6,900	9,000
Modulus	psi	ASTM D 638	390,000	380,000	350,000
<b>FLEXURAL</b>					
Strength at Yield	psi	ASTM D 790	9,500	11,400	13,200
Modulus	psi	ASTM D 790	350,000	365,000	330,000
<b>IMPACT STRENGTH</b>					
Notched Izod (.125") at:		ASTM D 256			
23°C (73°F)	ft-lb/in		17.0	5.0	16.0
0°C (32°F)	ft-lb/in		1.6	N/A	N/A
-18°C (0°F)	ft-lb/in		1.1	N/A	N/A
Unnotched Modified Izod at:		ASTM D 256			
23°C (73°F)	ft-lb/in		>64.0	N/A	60.0
0°C (32°F)	ft-lb/in		>64.0	N/A	N/A
-18°C (0°F)	ft-lb/in		>42.0	N/A	N/A
<b>ELECTRICAL PROPERTIES</b>					
Power Factor:		ASTM D 150			
60 Hz @30°C (86°F)	—		2.90	N/A	N/A
1 MHz @30°C (86°F)	—		4.00	N/A	N/A
Dielectric Constant:		ASTM D 150			
60 Hz @30°C (86°F)	—		3.90	2.65	3.01
1 MHz @30°C (86°F)	—		3.30	N/A	2.96
Dielectric Strength:		ASTM D 149			
Normal	volts/mil		690	400	425
Moist	volts/mil		700	N/A	N/A

NOTE: To the best of our knowledge the above information is accurate, is based upon accepted technical practices and is believed to be reliable. Panduit assumes no liability for the accuracy or completeness of this information.

## Rigid Polyvinyl Chloride (PVC)

A general purpose material for use in indoor applications. PVC has a UL flammability rating of V-0 and is UL Recognized for continuous use up to 50°C (122°F). PVC is an economical wiring duct material.

**Duct Types: G, F, FS, D, E & S**

## NORYL®

A special purpose material for use in halogen free, or high temperature applications. NORYL® has a UL flammability rating of V-1 and is UL Recognized for continuous use up to 95°C (203°F), and is 20% lighter than PVC.

**Duct Types: NE & NS**

## POLYCARBONATE (PC)

A special purpose material for use where low halogen and low smoke generation is critical. Ideally suited for transportation industry regulations. Polycarbonate has a recommended temperature use of up to 125°C (257°F), and is 14% lighter than PVC.

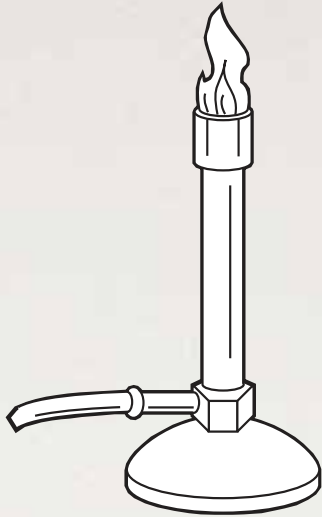
**Duct Types: PE & PS**

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# PANDUCT® Wiring Duct & Raceway—Physical Properties

## Flammability

This test method measures the comparative burning characteristics of solid plastic materials.



### UL Vertical Burning Test

Test samples measure 125mm by 13mm by the minimum thickness of the end product. Tests are conducted utilizing unaged samples (as manufactured) and aged samples (7 days @ 70°C, 158°F.) A standard test flame is applied for two 10 second applications to the unsupported end of a vertically clamped sample. The afterflame time is recorded following the first flame application. Both afterflame and afterglow times are recorded following the second flame application. Also observed and documented are, if the sample drips flaming particles that ignite the cotton layer below.

### Materials Classed V-0 (Criteria)\*

- Afterflame for each sample does not exceed 10 seconds following the removal of each flame application.
- Total afterflame time for a set of five samples following both flame applications is not greater than 50 seconds.
- Afterflame plus afterglow time for each sample does not exceed 30 seconds following the second flame application.
- A sample does not exhibit afterflame or afterglow up to the holding clamp.
- The cotton indicator below the sample does not ignite from flaming particles or droplets from the test sample.

### Materials Classed V-1 (Criteria)\*

- Not have any specimens which burn with flaming combustion for more than 30 seconds after either application of the test flame.
- Not have a total flaming combustion time exceeding 250 seconds for the 10 flame applications for each set of five specimens.
- Not have any specimens which burn with flaming or glowing combustion up to the holding clamp.
- Not have any specimens which drip flaming particles that ignite the dry absorbent surgical cotton located 12" (305mm) below the test specimen.
- Not have any specimens with glowing combustion which persists for more than 60 seconds after the second removal of the test flame.

\*The flammability rating determined from this method does not indicate its performance in end-use applications.

### Cutting Wiring Duct & Cover

For small quantities, use the DCT Duct Cutting Tool. For larger quantities use a plastic cutting saw blade for clean burr-free cuts. Recommend: Carbide 80T or 100T; 0.90" thickness, 0.125 kerf.

# PANDUCT® Wiring Duct & Raceway—Color Selection

DUCT SIZE (W X H) inches	LG	WH	DG	BL	CL	IB
	Light Gray	White	Dark Gray	Black	Clear	Intrinsic Blue
.5 x .5	G F FS E S	G F FS E S	G E S	E S		
.5 x.62	E S NE NS	E S NE NS	E S			
.5 x 1	G F FS E S NE NS	F FS E S NE NS	G E S			
.5 x 1.25	E S NE NS	G F FS E S NE NS	G FS E S			
.5 x 1.75	E S NE NS	G F FS E S NE NS	G FS E S			
.5 x 2	E S	G F FS E S	G FS E S			
.75 x .75	G F FS E S D	G F FS E S D	G FS E S	E S D		
.75 x 1	G FS E S D	G E S D	G FS E S	E S D	PE PS	
.75 x 1.5	G F FS E S D	G F FS E S D	G FS E S	E S D		
.75 x 2	G FS E S D	G FS E S D	G FS E S	E S D		
1 x 1	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		G FS E S
1 x 1.25	E S	E S	E S			
1 x 1.5	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
1 x 2	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		G FS E S
1 x 2.5	E S	E S	E S			
1 x 3	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
1 x 4	G FS E S D NE NS	G FS E S D NE NS	G FS E S	G FS E S D		
1.5 x 1	G F FS E S	G F FS E S	G FS E S			
1.5 x 1.5	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D	PE PS	
1.5 x 2	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		G FS
1.5 x 3	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
1.5 x 4	G FS E S D NE NS	G FS E S D NE NS	G FS E S	G FS E S D		
2 x 1	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
2x1.5	G F FS E S	G F FS E S	G FS E S		PE PS	
2x2	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D	PE PS	G FS E S
2 x 2.5	E S	E S	E S			
2 x 3	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		G FS E S
2x4	G FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
2 x 5	G FS E S	G FS E S	G FS E S			
2.5 x 3	G FS E S D NE NS	G FS E S D NE NS	G FS E S	E S D		
3 x 1	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
3 x 1.25	E S D NE NS	E S D NE NS	E S	E S D	PE PS	
3x2	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
3x3	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		G FS E S
3x4	G FS E S D NE NS	G FS E S D NE NS	G FS E S	G FS E S D		
3x5	G FS E S NE NS	G F FS E S D NE NS	G FS E S			
4 x 1.5	G FS E S D NE NS	G FS E S D NE NS	G FS E S			
4x2	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
4x3	G F FS E S D NE NS	G F FS E S D NE NS	G FS E S	G FS E S D		
4x4	G FS E S D NE NS	G FS E S D NE NS	G FS E S	G FS E S D	PE PS	G FS E S
4x5	G FS E S NE NS	G F FS E S D NE NS	G FS E S			
6x4	G FS	FS				

## Intrinsic Blue Color—IB

Intrinsic Blue wiring duct is made from the same PVC material as our standard PVC duct. Intrinsic Blue is an internationally recognized standard Blue color that identifies the wiring inside the duct as “incapable of releasing sufficient electrical or thermal energy under normal or abnormal conditions to cause ignition of a specific hazardous atmospheric mixture in its most easily ignited concentrations.”\* This is excellent for use in electrical panels that are designed for Chemical Plants, Grain Elevators or wherever explosive gases may exist.

\*ISA-RD12.6 (Instrument Society of America)

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