TurboFlex® Aluminum Core, Duralectric™ D Insulation and Fabric Overbraid, 1000-3500 VAC • 961-167 Imperial

ABRASION-RESISTANT • HIGH-TEMP • ALUMINUM CORE

FEATURES

- Fabric overbraid provides abrasion and temperature protection. Choose the appropriate braid with the selection guide table at right.
- Voltage rating is dependent on insulation wall thickness, select per application requirements.

How to Order TurboFlex®

Sample Part Number	961-167	-1	-A	-G	-2	-D	-B
Basic No.	**TurboFlex** with Duralectric D Insulation and fabric overbraid						
Wall Thickness	**-2** = .093" (3500 VAC) **-3** = .062" (3000 VAC) **-4** = .032" (2000 VAC) **-5** = .016"						
Conductor Material	**-A** = Aluminum (-65° - 200°C)						
Wire Size (See Table I)	See Table I: (Conductor size availability depends on Insulation thickness) **A, B, C, D, E, F, G, H, I, J, K, L, R, S**						
Duralectric D Insulation Color	See Table II						
Braid Material	See Braid Material and Color Selection Guide						
Braid Color	See Braid Material and Color Selection Guide						

Table I: Conductor Size Code (availability depends on insulation thickness)

Conductor size (AWG)	Insulation Thickness in. (mm)			
	.093	.062	.032	.016
16	R	R	R	R
14	S	S	S	S
12	A	A	A	A
10	B	B	B	B
8	C	C	C	C
6	D	D	D	
4	E	E	E	
2	F	F	F	
1/0	G	G	G	
2/0	H	H		
3/0	I	I		
4/0	J	J		
250 MCM	K			
450 MCM	L			

Table IV: Approximate Outer Diameter

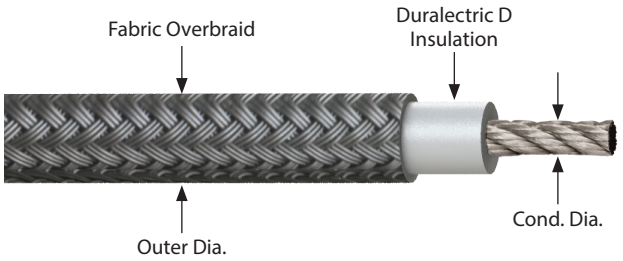
Conductor size (AWG)	Insulation Thickness in. (mm)			
	.093	.062	.032	.016
16	.31 (7.87)	.25 (6.35)	.19 (4.83)	.16 (4.06)
14	.33 (8.38)	.26 (6.60)	.20 (5.08)	.17 (4.32)
12	.35 (8.89)	.28 (7.11)	.22 (5.59)	.19 (4.83)
10	.37 (9.40)	.31 (7.87)	.25 (6.35)	.22 (5.59)
8	.41 (10.41)	.34 (8.64)	.28 (7.11)	.25 (6.35)
6	.45 (11.43)	.38 (9.65)	.32 (8.13)	
4	.52 (13.21)	.46 (11.68)	.40 (10.16)	
2	.59 (14.99)	.53 (13.46)	.47 (11.94)	
1/0	.68 (17.27)	.62 (15.75)	.56 (14.22)	
2/0	.73 (18.54)	.67 (17.02)		
3/0	.79 (20.07)	.73 (18.54)		
4/0	.86 (21.84)	.80 (20.32)		
250 MCM	.91 (23.11)			
450 MCM	1.14 (28.96)			

Table II: Duralectric D Insulation Color

Weatherproof, halogen free, flame resistant	
0	Black
1	Brown
2	Red
3	Orange
4	Yellow
5	Kelly Green
6	Blue
7	Violet
8	Gray
9	White
Consult factory for other specific colors	

Table III: Voltage Rating

Insulation Thickness	AC Voltage Rating, RMS
.093 (2.36)	3500
.062 (1.57)	3000
.032 (0.81)	2000
.016 (0.41)	1000



NOTES

1. Cable will be tagged with complete part number

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Dimensions in Inches (millimeters) are subject to change without notice.

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Braid Material and Color Selection Guide										
Principal Selection Criteria	**General Duty / Abrasion Resistance**					**Economy**		**Temperature Tolerance**	**Fire Resistance**	
Braid Code Material Construction	**Z** Monofilament FEP	**P** Monofilament PET, Type FR	**H** Monofilament Halar®	**M** Yarn, Nomex®	**R** Monofilament Ryton, Type R-7	**D** Yarn, Dacron®	**Y** Yarn, Nylon	**K** Monofilament PEEK	**X** Yarn, PTFE-Glass	**V** Yarn, Kevlar®
Color Code Options	**C** = Clear	**B** = Black **W** = White	**B** = Black **W** = White **BW** = Black w/ White Tracer **WB** = White w/ Black Tracer	**B** = Black **R** = Red **OR** = Orange **GN** = Green **GY** = Gray **W** = White **TN** = Desert Tan	**N** = Natural	**B** = Black	**B** = Black **GY** = Gray **OD** = Olive Drab	**B** = Black	**BR** = Brown **N** = Natural	**B** = Black **N** = Natural
Halogen-Free	NO	✓	NO	✓	✓	✓	✓	✓	NO	✓
Temperature Range	-55°C to +200°C	-55°C to +125°C	-65°C to +150°C	-55°C to +200°C	-65°C to +180°C	-62°C to +125°C	-20° to +170°	-65°C to +260°C	-204°C to +482°C	-73°C to +160°C
Tensile Strength (PSI) Yield	3300	50,000	7000	90,000	19,000	10,000	12,400	13,000	450,000	400,000
Elongation Percentage	50%	20%	15%	25%	40%	12%	90%	38%	5%	3.6%
Chemical Resistance	Excellent	Good	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Excellent	Excellent
Abrasion Resistance	Good	Good	Excellent	Good	Excellent	Fair	Excellent	Excellent	Excellent	Good
Weight / Duty (specific gravity)	Heavy (2.17)	Medium (1.38)	Medium (1.68)	Medium (1.58)	Light (1.25)	Medium (1.38)	Light (1.14)	Light (1.3)	Heavy (2.5)	Medium (1.44)
Flammability	Very Low	Flammable, Self-Extinguishing	Very Low	Will Not Melt	Very Low	Flammable	Flammable	Very Low	Will Not Burn	Will Not Melt

Table V: Temperature Range Matrix (min/max in °C) Service temperature dependent on conductor and braid material selected		
Braid Code	**Braid Material (and temperature range)**	**Aluminum (-60/+200)**
D	Dacron (-62/+125)	(-65/+125)
H	Halar (-65/+150)	(-65/+150)
Y	Nylon (-20/+170)	(-20/+150)
M	Nomex (-55/+200)	(-55/+150)
P	Polyester Type FR (-55/+125)	(-55/+125)
Z	FEP Teflon (-55/+200)	(-55/+150)
R	Ryton Type R-7 (-65/+180)	(-65/+150)
K	PEEK (-65/+260)	(-65/+150)
V	Kevlar (-73/+160)	(-65/+150)
X	PTFE-Glass (-204/+482)	(-65/+150)

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