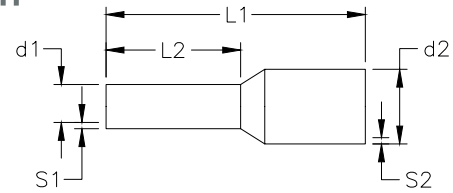


# Wiring Accessories



## Single Insulated Wire Ferrules

These tin-plated copper single insulated ferrules are designed to accommodate conductors with cross-sections ranging from 20AWG to 1AWG (0.5 to 50 mm<sup>2</sup>). Tolerances according to DIN 46228 part 4.



- Heat resistant from -5° to 105°C [23° to 221°F]
- CE / RoHs 2011/65/EU

- UL E333905
- CSA-US 1176867

Insulating Collar: Polypropylene-fluoropolymer

Tube:

Copper (Cu-DHP)

Tin Plating:

Galvanically tin-plated, bright finish

Single Insulated Wire Ferrules											
Part Number		Cross Section		Dimensions (mm)						Pcs/Pkg	Price
Standard	DIN	AWG	mm <sup>2</sup>	L1	L2	D1	D2	S1	S2		
V30AE000006	V30AE000038	20	0.5	14	8	1	2.6	0.15	0.25	500	\$5.75
V30AE000009	V30AE000041	18	0.75	14	8	1.2	2.8	0.15	0.25	500	\$5.75
V30AE000013	V30AE000045	18	1.0	14	8	1.4	3.0	0.15	0.25	500	\$5.75
V30AE000016	V30AE000048	16	1.5	14	8	1.7	3.5	0.15	0.25	500	\$5.75
V30AE000017	V30AE000049	16	1.5	16	10	1.7	3.5	0.15	0.25	500	\$10.00
V30AE000052	V30AE000052	14	2.5	15	8	2.2	4.2	0.15	0.25	500	\$7.50
V30AE000053	V30AE000053	14	2.5	19	12	2.2	4.2	0.15	0.25	500	\$11.00
V30AE000055	V30AE000055	12	4	18	10	2.8	4.8	0.2	0.3	500	\$10.50
V30AE000056	V30AE000056	12	4	20	12	2.8	4.8	0.2	0.3	500	\$13.50
V30AE000025	V30AE000058	10	6	20	12	3.5	6.3	0.2	0.3	100	\$3.00
V30AE000026	V30AE000059	10	6	26	18	3.5	6.3	0.2	0.3	100	\$4.00
V30AE000027	V30AE000060	8	10	22	12	4.5	7.6	0.2	0.4	100	\$4.00
V30AE000028	V30AE000061	8	10	28	18	4.5	7.6	0.2	0.4	100	\$4.50
V30AE000029	V30AE000062	6	16	22	12	5.8	8.8	0.2	0.4	100	\$4.50
V30AE000030	V30AE000063	6	16	28	18	5.8	8.8	0.2	0.4	100	\$6.50
V30AE000031	V30AE000064	4	25	30	16	7.3	11.2	0.2	0.4	50	\$5.25
V30AE000033*	V30AE000067	2	35	30	16	8.3	12.7	0.2	0.4	50	\$7.00
V30AE000035	V30AE000070	1	50	36	20	10.3	15	0.3	0.5	50	\$10.00

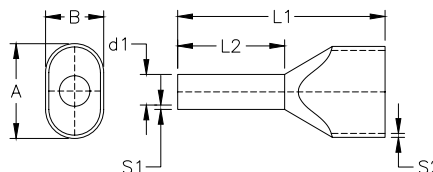
\* Not UL Certified

Available Colors	
Orange	White
Blue	Ivory
Black	Green
Gray	Brown
Yellow	Beige
Red	Olive



## Twin Insulated Wire Ferrules

These tin-plated copper twin insulated ferrules are designed to accommodate conductors with cross-sections ranging from 20 AWG to 6 AWG (0.5 to 16 mm<sup>2</sup>). Tolerances according to DIN 46228 part 4.



- Heat resistant from -5° to 105°C [23° to 221°F]
- CE / RoHs 2011/65/EU

- UL E333905
- CSA-US 1176867

Insulating Collar: Polypropylene-fluoropolymer

Tube:

Copper (Cu-DHP)

Tin Plating:

Galvanically tin-plated, bright finish

Twin Insulated Wire Ferrules												
Part Number		Cross Section		Dimensions (mm)							Pcs/ Pkg	Price
Standard	DIN	AWG	mm²	L1	L2	D1	S1	S2	A	B		
V30AE001134	V30AE001145	2 x 20	2 x 0.5	14	8	1.4	0.15	0.3	5	3	500	\$13.00
V30AE000606	V30AE000607	2 x 18	2 x 0.75	14	8	1.7	0.15	0.3	5.5	3	500	\$13.50
V30AE000733	V30AE000734	2 x 18	2 x 0.75	16	10	1.7	0.15	0.3	5.5	3	500	\$17.00
V30AE000608	V30AE000609	2 x 18	2 x 1	15	8	2	0.15	0.3	5.8	3.2	500	\$13.50
V30AE000735	V30AE000736	2 x 18	2 x 1	19	12	2	0.15	0.3	5.8	3.2	500	\$17.00
V30AE000623	V30AE000625	2 x 16	2 x 1.5	16	8	2.2	0.15	0.3	6.5	3.6	500	\$13.50
V30AE000737	V30AE000738	2 x 16	2 x 1.5	20	12	2.2	0.15	0.3	6.5	3.6	500	\$17.00
V30AE000611	V30AE000611	2 x 14	2 x 2.5	19	10	2.8	0.15	0.4	8	4.5	500	\$15.50
V30AE000748	V30AE000748	2 x 14	2 x 2.5	21	12	2.8	0.15	0.4	8	4.5	100	\$3.50
V30AE001148	V30AE001148	2 x 12	2 x 4	22	12	3.5	0.2	0.5	9	5.2	100	\$8.00
V30AE001139	V30AE001150	2 x 10	2 x 6	23	12	4.5	0.2	0.5	11.4	6.2	100	\$9.50
V30AE001141	V30AE001152	2 x 8	2 x 10	24	12	5.8	0.2	0.5	13.4	7.6	100	\$12.00
V30AE001143	V30AE001154	2 x 6	2 x 16	29	16	8.3	0.3	0.6	17.2	9.5	50	\$7.50

Colors
Orange
Blue
Black
Gray
Yellow
Red
White
Ivory
Green

# Wiring Accessories



## Crimp Terminals

Partially insulated crimp terminals are constructed from high quality tin-plated copper and PVC. Heat resistant from -4°F [-20°C] up to +167°F [+75°C]. Flammability classification UL 94-V0.

Insulation: polyvinyl chloride

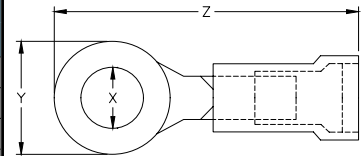
Sleeve material: copper



## Ring Terminals



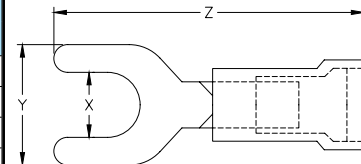
Partially Insulated PVC Ring Terminals							
Part Number	Cross Section		Dimension (mm)			Pcs/Pkg	Price
	AWG	mm²	X	Y	Z		
V70RK004004	20 - 18	0.5 - 1	4.0	8.0	22.2	100	\$8.00
V70RK004005	20 - 18	0.5 - 1	5.0	8.0	22.2	100	\$8.00
V70RK004011	16 - 14	1.5 - 2.5	4.0	8.6	23.0	100	\$8.50
V70RK004012	16 - 14	1.5 - 2.5	5.0	8.6	23.0	100	\$9.00
V70RK004017	12 - 10	4 - 6	4.0	9.5	26.9	100	\$13.00
V70RK004018	12 - 10	4 - 6	5.0	9.5	26.9	100	\$13.00



## Fork Terminals



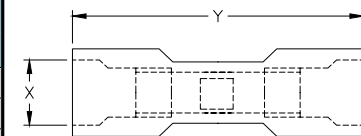
Partially Insulated PVC Fork Terminals							
Part Number	Cross Section		Dimension (mm)			Pcs/Pkg	Price
	AWG	mm²	X	Y	Z		
V70GK004003	20 - 18	0.5 - 1	4.0	7.3	22.3	100	\$8.00
V70GK004004	20 - 18	0.5 - 1	5.0	8.0	21.7	100	\$8.50
V70GK004008	16 - 14	1.5 - 2.5	4.0	7.3	22.3	100	\$8.00
V70GK004009	16 - 14	1.5 - 2.5	5.0	8.1	22.3	100	\$9.00
V70GK004011	12 - 10	4 - 6	4.0	9.1	25.8	100	\$12.00
V70GK004012	12 - 10	4 - 6	5.0	9.1	25.8	100	\$12.00



## Butt Connectors



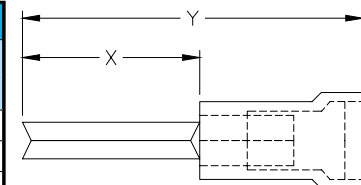
Fully Insulated PVC Butt Connectors							
Part Number	Cross Section		Dimension (mm)		Pcs/Pkg	Price	
	AWG	mm²	X	Y			
V70SV004001	20 - 18	0.5 - 1	5.4	26.0	100	\$8.50	
V70SV004002	16 - 14	1.5 - 2.5	6.1	26.0	100	\$9.50	
V70SV004003	12 - 10	4 - 6	8.0	26.0	100	\$13.50	



## Pin Terminals



Partially Insulated PVC Pin Terminals							
Part Number	Cross Section		Dimension (mm)		Pcs/Pkg	Price	
	AWG	mm²	X	Y			
V70SS004001	20 - 18	0.5 - 1	12.0	23.3	100	\$9.00	
V70SS004002	16 - 14	1.5 - 2.5	12.0	23.4	100	\$9.50	
V70SS004003	12 - 10	4 - 6	14.0	28.2	100	\$14.50	



Note: Dimensions are approximate. Please visit our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

# Wiring Accessories



## Disconnect Terminals

Disconnect terminals are constructed from copper-enhanced PVC and brass. Heat resistant from -4°F [-20°C] up to +167°F [+75°C]. Flammability classification UL 94-V0.

Insulation: polyvinyl chloride strengthened with copper

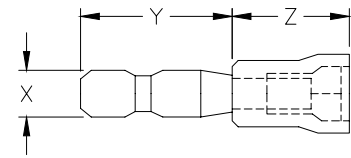
Sleeve material: brass



### Male Bullet Disconnect Terminals



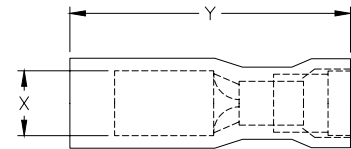
Partially Insulated Male Bullet Disconnect Terminals							
Part Number	Cross Section		Dimension (mm)			Pcs/ Pkg	Price
	AWG	mm²	X	Y	Z		
V70RS004001	20 - 18	0.5 - 1	4.0	11.3	9.8	100	\$7.50
V70RS004002	16 - 14	1.5 - 2.5	5.0	11.8	11.7	100	\$8.50
V70RS004003	12 - 10	4 - 6	5.0	11.0	10.2	100	\$10.00



### Female Bullet Disconnect Terminals



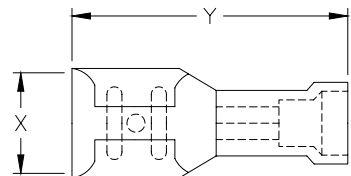
Fully Insulated Female Bullet Disconnect Terminals						
Part Number	Cross Section		Dimension (mm)		Pcs/ Pkg	Price
	AWG	mm²	X	Y		
V70RV004001	20 - 18	0.5 - 1	4.0	23.9	100	\$9.50
V70RV004002	16 - 14	1.5 - 2.5	5.0	23.9	100	\$10.00
V70RV004003	12 - 10	4 - 6	5.0	27.8	100	\$17.00



### Partially Insulated PVC Female Disconnect Terminals



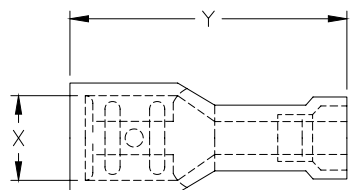
Partially Insulated Female Disconnect Terminals						
Part Number	Cross Section		Dimension (mm)		Pcs/Pkg	Price
	AWG	mm²	X	Y		
V70FH004001	20 - 18	0.5 - 1	2.8 x 0.5	19.5	100	\$7.00
V70FH004002	20 - 18	0.5 - 1	2.8 x 0.8	18.8	100	\$7.00
V70FH004003	20 - 18	0.5 - 1	4.8 x 0.5	19.5	100	\$7.00
V70FH004004	20 - 18	0.5 - 1	4.8 x 0.8	19.5	100	\$7.00
V70FH004005	20 - 18	0.5 - 1	6.3 x 0.8	20.9	100	\$8.00
V70FH004006	16 - 14	1.5 - 2.5	2.8 x 0.5	18.8	100	\$7.50
V70FH004007	16 - 14	1.5 - 2.5	2.8 x 0.8	18.8	100	\$7.50
V70FH004008	16 - 14	1.5 - 2.5	4.8 x 0.5	19.5	100	\$7.50
V70FH004009	16 - 14	1.5 - 2.5	4.8 x 0.8	19.5	100	\$7.50
V70FH004010	16 - 14	1.5 - 2.5	6.3 x 0.8	20.9	100	\$8.50
V70FH004011	12 - 10	4 - 6	6.3 x 0.8	23.8	100	\$13.50



### Fully Insulated PVC Female Disconnect Terminals



Fully Insulated Female Disconnect Terminals						
Part Number	Cross Section		Dimension (mm)		Pcs/Pkg	Price
	AWG	mm²	X	Y		
V70FV004003	20 - 18	0.5 - 1	2.8 x 0.5	18.6	100	\$9.00
V70FV004004	20 - 18	0.5 - 1	2.8 x 0.8	18.6	100	\$9.00
V70FV004005	20 - 18	0.5 - 1	4.8 x 0.5	20.4	100	\$9.50
V70FV004006	20 - 18	0.5 - 1	4.8 x 0.8	20.3	100	\$9.50
V70FV004001	20 - 18	0.5 - 1	6.3 x 0.8	22.5	100	\$10.00
V70FV004007	16 - 14	1.5 - 2.5	4.8 x 0.5	18.8	100	\$10.00
V70FV004008	16 - 14	1.5 - 2.5	4.8 x 0.8	20.5	100	\$10.00
V70FV004002	16 - 14	1.5 - 2.5	6.3 x 0.8	22.5	100	\$10.50
V70FV004009	12 - 10	4 - 6	6.3 x 0.8	24.2	100	\$16.50



Note: Dimensions are approximate. Please visit our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

# Wiring Accessories

## Disconnect Terminals



Disconnect terminals are constructed from copper-enhanced PVC and brass. Heat resistant from -4°F [-20°C] up to +167°F [+75°C]. Flammability classification UL 94-V0.



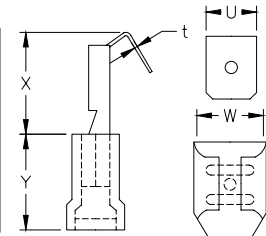
Insulation: polyvinyl chloride strengthened with copper

Sleeve material: brass

### Partially Insulated Piggy Back Disconnect Terminals



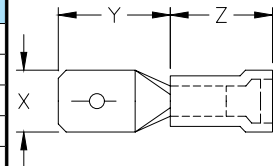
Piggy Back Disconnect Terminals									
Part Number	Cross Section		Dimension (mm)					Pcs/ Pkg	Price
	AWG	mm²	w	u	t	x	y		
V70FP004001	20 - 18	0.5 - 1	6.6	6.3	0.8	13.4	10.0	100	\$9.50
V70FP004002	16 - 14	1.5 - 2.5	6.6	6.3	0.8	13.4	11.0	100	\$10.00
V70FP004003	12 - 10	4 - 6	6.6	6.3	0.8	13.4	12.0	100	\$14.50



### Partially Insulated PVC Male Disconnect Terminals



Partially Insulated Male Disconnect Terminals								
Part Number	Cross Section		Dimension (mm)			Pcs/Pkg	Price	
	AWG	mm <sup>2</sup>	X	Y	Z			
V70FS004001	20 - 18	0.5 - 1	2.8 x 0.5	8.0	10	100	\$7.00	
V70FS004002	20 - 18	0.5 - 1	2.8 x 0.8	9.0	9.5	100	\$7.00	
V70FS004003	20 - 18	0.5 - 1	4.8 x 0.5	9.0	9.9	100	\$7.00	
V70FS004004	20 - 18	0.5 - 1	4.8 x 0.8	9.4	10	100	\$7.00	
V70FS004005	20 - 18	0.5 - 1	6.3 x 0.8	10.8	10	100	\$7.50	
V70FS004008	16 - 14	1.5 - 2.5	4.8 x 0.5	8.7	10	100	\$7.00	
V70FS004009	16 - 14	1.5 - 2.5	4.8 x 0.8	9.2	10	100	\$7.50	
V70FS004010	16 - 14	1.5 - 2.5	6.3 x 0.8	10.8	10	100	\$7.50	
V70FS004011	12 - 10	4 - 6	6.3 x 0.8	10.8	13	100	\$13.00	



Note: Dimensions are approximate. Please visit our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

# Wiring Accessories

## Crimping Tools



Crimping Tools			
Part Number	Description	Weight	Price
<b>K70ZA000113</b>	Crimping tool for use with single ferrules AWG 20 - 10 (0.5 - 6 mm <sup>2</sup> ) and twin ferrules AWG 2 x 18 - 2 x 12 (2 x 0.75 - 2 x 4 mm <sup>2</sup> ). 5 crimping positions. With and without insulating collar. Conforms to DIN 46228 part 1 and 2.	0.74 lb (335g)	\$104.00
<b>K70ZA000117</b>	Crimping tool for use with single ferrules AWG 10 - 4 (6 - 25 mm <sup>2</sup> ) and twin ferrules AWG 2 x 12 - 2 x 8 (2 x 4 - 2 x 10 mm <sup>2</sup> ). 4 crimping positions. Conforms to DIN 46228 part 1 and 4.	1.19 lb (540g)	\$111.00
<b>K70ZA000118</b>	Crimping tool for use with single ferrules AWG 2 - 1 (35 - 50 mm <sup>2</sup> ) and twin ferrules AWG 2 x 6 (2 x 16 mm <sup>2</sup> ). 2 crimping positions. Conforms to DIN 46228 part 1 and 4.	1.19 lb (540g)	\$111.00
<b>K70ZA000130</b>	Crimping tool for PVC-insulated terminals AWG 20 - 10 (0.5 - 6 mm <sup>2</sup> ). 3 crimping positions.	1.12 lb (510g)	\$104.00

**K70ZA000113****K70ZA000130****K70ZA000118****K70ZA000117**

*Note: Z&F crimping tools recommended by the ferrule manufacturer before terminating in terminal blocks, wire connectors, or end-product terminals (such as starters, etc.).*

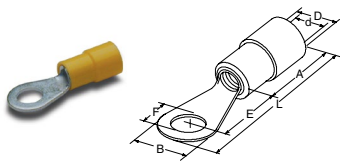
Crimping Tools Cross Reference					
	Part Number		K70ZA000113	K70ZA000117	K70ZA000118
	Standard	DIN			
Single Ferrules	V30AE000006	V30AE000038	✓		
	V30AE000009	V30AE000041	✓		
	V30AE000013	V30AE000045	✓		
	V30AE000016	V30AE000048	✓		
	V30AE000017	V30AE000049	✓		
	V30AE000052	V30AE000052	✓		
	V30AE000053	V30AE000053	✓		
	V30AE000055	V30AE000055	✓		
	V30AE000056	V30AE000056	✓		
	V30AE000025	V30AE000058	✓	✓	
	V30AE000026	V30AE000059	✓	✓	
	V30AE000027	V30AE000060		✓	
	V30AE000028	V30AE000061		✓	
	V30AE000029	V30AE000062		✓	
	V30AE000030	V30AE000063		✓	
	V30AE000031	V30AE000064		✓	
	V30AE000033	V30AE000067			✓
	V30AE000035	V30AE000070			✓
	V30AE001134	V30AE001145	✓		
Twin Ferrules	V30AE000606	V30AE000607	✓		
	V30AE000733	V30AE000734	✓		
	V30AE000608	V30AE000609	✓		
	V30AE000735	V30AE000736	✓		
	V30AE000623	V30AE000625	✓		
	V30AE000737	V30AE000738	✓		
	V30AE000611	V30AE000611	✓		
	V30AE000748	V30AE000748	✓		
	V30AE001148	V30AE001148	✓	✓	
	V30AE001139	V30AE001150		✓	
	V30AE001141	V30AE001152		✓	
	V30AE001143	V30AE001154			✓

# Wiring Accessories – Crimp Terminals

## Crimp Terminals

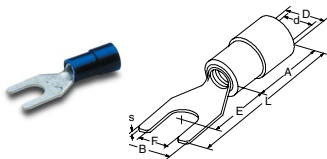
Our PVC insulated crimping terminals are manufactured using high quality electrolytically tin-plated (99.9%) copper, and are rated up to 105°C. Our ring and fork terminals feature a special easy-entry wire guide design to speed and ease wiring.

### Ring terminals



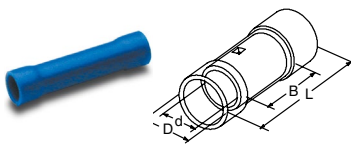
PVC Ring Terminal Specifications																
Part # (BM-)	AWG	Max Voltage Rating	Max Current Rating*	Color	Bolt Hole Size	Pcs/ Pkg	Price/ Pkg	Screw Dia. (mm)	Dimensions (mm)							
									F	B	A	E	L	d	D	s
BM-00119	22-16	300 VAC/VDC	12 A	Red	#6-8	100	retired	4	4.2	8.0	10.4	7.5	22.0	1.95	4.2	0.8
BM-00125	22-16		12 A	Red	#10	100	retired	5	5.2	8.0	10.4	8.0	22.4	1.95	4.2	0.8
BM-00219	16-14		20 A	Blue	#6-8	100	retired	4	4.2	8.0	11.0	8.0	23.0	2.45	4.8	0.8
BM-00225	16-14		20 A	Blue	#10	100	retired	5	5.2	9.0	11.0	7.5	23.6	2.5	4.8	0.8
BM-00319	12-10		35 A	Yellow	#6-8	50	retired	4	4.2	8.0	14.0	8.4	26.5	3.5	6.6	1.0
BM-00325	12-10		35 A	Yellow	#10	50	retired	5	5.2	10.0	14.0	8.5	27.5	3.5	6.6	1.0

### Fork terminals



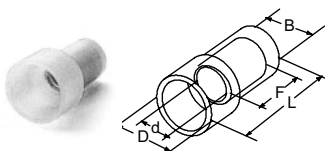
PVC Fork Terminal Specifications																
Part #	AWG	Max Voltage Rating	Max Current Rating*	Color	Bolt Hole Size	Pcs/Pkg	Price/Pkg	Screw Dia. (mm)	Dimensions (mm)							
									F	B	A	E	L	d	D	s
BM-00120	22-16	300 VAC/VDC	12 A	Red	#6-8	100	retired	4.0	4.2	6.4	10.4	6.3	20.9	1.95	4.2	0.8
BM-00126	22-16		12 A	Red	#10	100	retired	5.0	5.2	8.0	10.4	8.0	21.2	1.95	4.2	0.8
BM-00220	16-14		20 A	Blue	#6-8	100	retired	4.0	4.2	6.6	11.0	5.3	20.3	2.45	4.8	0.8
BM-00226	16-14		20 A	Blue	#10	100	retired	5.0	5.2	9.1	11.0	9.5	25.0	2.45	4.8	0.8
BM-00320	12-10		35 A	Yellow	#6-8	50	retired	4.0	4.2	8.1	14.0	7.2	26.0	3.50	6.6	1.0
BM-00326	12-10		35 A	Yellow	#10	50	retired	5.0	5.2	9.0	14.0	10.5	28.5	3.50	6.6	1.0

### Butt connectors



PVC Butt Connector Specifications										
Part #	AWG	Max Voltage Rating	Max Current Rating*	Color	Pcs/Pkg	Price/Pkg	Dimensions (mm)			
							B	L	d	D
BM-00160	22-16	300 VAC/VDC	12 A	Red	100	retired	15.0	26	1.8	4.2
BM-00260	16-14		20 A	Blue	100	retired	15.0	26	2.5	4.8
BM-00360	12-10		35 A	Yellow	50	retired	15.0	27	3.7	6.5

### End connectors



Nylon End Connector Specifications											
Part #	AWG	Max Voltage Rating	Max Current Rating*	Color	Pcs/ Pkg	Price/ Pkg	Dimensions (mm)				
							B	F	L	d	D
BM-00170	22-16	300 VAC/VDC	12 A	Clear	100	retired	5.6	6.8	15.2	2.6	6.2
BM-00270	16-14		20 A	Clear	100	retired	5.9	7.0	15.2	3.2	6.5
BM-00370	12-10		35 A	Clear	50	retired	7.3	8.5	17.8	4.0	9.4

\*Note: According to UL 486AB, Tab 7



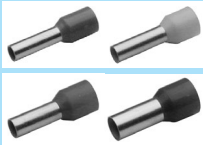
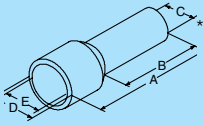

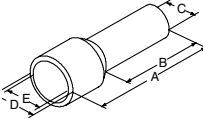
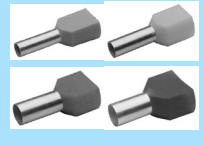
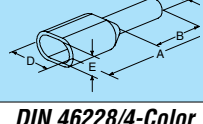

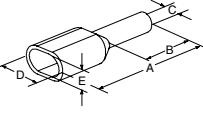
# Wiring Accessories – Insulated Ferrules

## Insulated ferrules

Ferrules are cylindrically-shaped copper tubes crimped to the ends of stranded wire to create a secure, reliable connection. They are primarily used to consolidate wire strands for the purpose of eliminating wire fraying and resulting shorts, as well as for allowing easier insertion and removal of wires from terminal blocks or other termination devices, especially in areas of confined space or when using small wires. Ferrules also create a reliable connection by ensuring that each wire strand conducts current. Two-wire ferrules allow two individual stranded conductors to be connected to the same termination, which can be especially useful in jumpering applications. Our ferrules are made from electrolytically tin-plated copper (99.9%) with either standard or DIN color polypropylene insulation rated to 105°C. When selecting ferrules for use with DINnectors, choose the longest length version where available.

**Note:** See PLC Compatibility Chart on the next page.

\* Standard Colors are defined by the Manufacturer's identification system. DIN Colors are defined to meet the DIN standard 46228/4 identification system.

	Part #	Color*	AWG (mm <sup>2</sup> )	Pcs/ Pkg	Price/ Pkg	Dimensions (mm)				
						A	B	C	D	E
<b>Standard Color Single Wire</b>    	BM-00501	Orange	22 (.5)	500	retired	14	8	1	3.1	2.6
	BM-00502	White	20 (.75)	500	retired	14	8	1.2	3.3	2.8
	BM-00503	Yellow	18 (1)	500	retired	14	8	1.4	3.5	3
	BM-00504	Red	16 (1.5)	500	retired	14	8	1.7	4	3.5
	BM-005041	Red	16 (1.5)	500	retired	16	10	1.7	4	3.5
	BM-005061	Blue	14 (2.5)	250	retired	18	12	2.2	4.7	4.2
	BM-00508	Gray	12 (4)	200	retired	17	10	2.8	5.4	4.8
	BM-005081	Gray	12 (4)	200	retired	20	12	2.8	5.4	4.8
	BM-00510	Black	10 (6)	100	retired	20	12	3.5	6.9	6.3
	BM-00511	Black	10 (6)	100	retired	26	18	3.5	6.9	6.3
	BM-00512	Ivory	8 (10)	50	retired	22	12	4.5	8.4	7.6
	BM-00513	Ivory	8 (10)	50	retired	28	18	4.5	8.4	7.6
	BM-00514	Green	6 (16)	50	retired	24	12	5.8	9.6	8.8
	BM-00515	Green	6 (16)	50	retired	28	18	5.8	9.6	8.8
	BM-00516	Brown	4 (25)	100	retired	30	16	7.3	12	11.2
	BM-00517	Beige	2 (35)	100	retired	30	16	8.3	13.5	12.7
	BM-00518	Olive	1 (50)	50	retired	36	20	10.3	16	15
<b>DIN 46228/4-Color Single Wire</b>    	BM-00601	White	22 (.5)	500	retired	14	8	1	3.1	2.6
	BM-00602	Gray	20 (.75)	500	retired	14	8	1.2	3.3	2.8
	BM-00603	Red	18 (1)	500	retired	14	8	1.4	3.5	3
	BM-00604	Black	16 (1.5)	500	retired	14	8	1.7	4	3.5
	BM-006041	Black	16 (1.5)	500	retired	16	10	1.7	4	3.5
	BM-005061	Blue	14 (2.5)	250	retired	18	12	2.2	4.7	4.2
	BM-00508	Gray	12 (4)	200	retired	17	10	2.8	5.4	4.8
	BM-005081	Gray	12 (4)	200	retired	20	12	2.8	5.4	4.8
	BM-00610	Yellow	10 (6)	100	retired	20	12	3.5	6.9	6.3
	BM-00611	Yellow	10 (6)	100	retired	26	18	3.5	6.9	6.3
	BM-00613	Red	8 (10)	50	retired	28	18	4.5	8.4	7.6
	BM-00614	Blue	6 (16)	50	retired	24	12	5.8	9.6	8.8
	BM-00615	Blue	6 (16)	50	retired	28	18	5.8	9.6	8.8
	BM-00616	Yellow	4 (25)	100	retired	30	16	7.3	12	11.2
	BM-00617	Red	2 (35)	100	retired	30	16	8.3	13.5	12.7
	BM-00618	Blue	1 (50)	50	retired	36	20	10.3	16	15
<b>Standard Color Twin Wire</b>    	BM-00551	Orange	2x22 (.5)	200	retired	15	8	1.4	4.7	2.5
	BM-00552	White	2x20 (.75)	200	retired	15	8	1.7	5	2.8
	BM-00553	White	2x20 (.75)	200	retired	17	10	1.7	5	2.8
	BM-00554	Yellow	2x18 (1)	200	\$8.25	15	8	1.95	5.4	3.4
	BM-00555	Yellow	2x18 (1)	200	retired	17	10	1.95	5.4	3.4
	BM-00556	Red	2x16 (1.5)	200	retired	16	8	2.2	6.6	3.6
	BM-00557	Red	2x16 (1.5)	200	retired	20	12	2.2	6.6	3.6
	BM-00558	Blue	2x14 (2.5)	100	retired	18.5	10	2.8	7.8	4.2
	BM-00559	Blue	2x14 (2.5)	100	retired	21.5	13	2.8	7.8	4.2
	BM-00560	Gray	2x12 (4)	100	retired	23	12	3.7	8.8	4.9
	BM-00561	Black	2x10 (6)	50	retired	26	14	4.8	10	6.9
	BM-00562	Ivory	2x8 (10)	100	retired	26	14	6.4	13	7.2
	BM-00563	Green	2x6 (16)	50	retired	30	14	8.2	18.4	9.6
<b>DIN 46228/4-Color Twin Wire</b>    	BM-00651	White	2x22 (.5)	200	retired	15	8	1.4	4.7	2.5
	BM-00652	Gray	2x20 (.75)	200	retired	15	8	1.7	5	2.8
	BM-00653	Gray	2x20 (.75)	200	retired	17	10	1.7	5	2.8
	BM-00654	Red	2x18 (1)	200	retired	15	8	1.95	5.4	3.4
	BM-00655	Red	2x18 (1)	200	retired	17	10	1.95	5.4	3.4
	BM-00656	Black	2x16 (1.5)	200	retired	16	8	2.2	6.6	3.6
	BM-00657	Black	2x16 (1.5)	200	retired	20	12	2.2	6.6	3.6
	BM-00558	Blue	2x14 (2.5)	100	retired	18.5	10	2.8	7.8	4.2
	BM-00559	Blue	2x14 (2.5)	100	retired	21.5	13	2.8	7.8	4.2
	BM-00560	Gray	2x12 (4)	100	retired	23	12	3.7	8.8	4.9
	BM-00661	Yellow	2x10 (6)	50	retired	26	14	4.8	10	6.9
	BM-00662	Red	2x8 (10)	100	retired	26	14	6.4	13	7.2
	BM-00663	Blue	2x6 (16)	50	retired	30	14	8.2	18.4	9.6

# Wiring Accessories – Wiring Kits

## Wiring ferrule, connector, and terminal kits

Kit	Description	Price
<b>BM-80409</b>	Connector assortment kit; Includes: assorted PVC ring, fork, and butt connectors; case; BM-534 crimping tool	retired
<b>BM-80418</b>	Ferrule assortment kit; Includes: assorted ferrules; case; ferrule crimping tool (tool not sold separately)	retired

<b>BM-80418 Contents</b>	
Part #	Quantity
<b>BM-00501</b>	50
<b>BM-00502</b>	50
<b>BM-00503</b>	50
<b>BM-00504</b>	50
<b>BM-005041</b>	50
<b>BM-00506</b>	50
<b>BM-005061</b>	50
<b>BM-00508</b>	50
<b>BM-005081</b>	50
<b>BM-541 *</b> <b>(crimp tool)</b>	1
<i>* BM-541 crimping tool not sold separately</i>	

**BM-80418  
ferrule kit**



*Crimping tool included!*

**BM-80409  
PVC ring, fork, butt terminal kit**



*Crimping tool included!*

<b>BM-80409 Contents</b>	
Part #	Quantity
<b>BM-00119</b>	25
<b>BM-00125</b>	25
<b>BM-00120</b>	25
<b>BM-00126</b>	25
<b>BM-00160</b>	25
<b>BM-00170</b>	25
<b>BM-00225</b>	25
<b>BM-00220</b>	25
<b>BM-00226</b>	25
<b>BM-00260</b>	25
<b>BM-00319</b>	25
<b>BM-00325</b>	25
<b>BM-00326</b>	25
<b>BM-00360</b>	25
<b>BM-00270</b>	25
<b>BM-00370</b>	25
<b>BM-534</b>	1

## Ferrule - Wire Size chart for AutomationDirect PLCs

<b>Ferrule - Wire Size Chart for AutomationDirect PLCs</b>						
<b>Wire Size (AWG)</b>		<b>20</b>	<b>18</b>	<b>16</b>	<b>14</b>	<b>12</b>
<b>PLC Terminals</b>	<b>Ferrule Part #</b>	<b>BM-00502</b>	<b>BM-00503</b>	<b>BM-00504</b>	<b>BM-00506</b>	<b>BM-00508</b>
	<b>Crimping Tool</b>	<b>DN-CT-xxx tool with DN-CT-D4 die - or - BM-537 tool</b>				
	CLICK	Y	Y	N	N	N
	DL05	Y	N	N	N	N
	DL06	Y	Y	N	N	N
	DL105	Y	Y	N	N	N
	205 8 pt	Y	Y	Y	N	N
	205 16 pt	Y	Y	N	N	N
	305 8 pt	Y	Y	Y	Y	N
	305 16 pt	Y	Y *	N	N	N
	405 8 pt	Y	Y	Y	Y	N
	405 16 pt	Y	Y	Y	Y	N
	Terminator I/O screwless**	Y	Y	Y	Y	N
	Terminator I/O screw	Y	Y	Y	Y	N
<p><i>*Note: Y for D3 Series; N for F3 series</i></p> <p><i>**Orient ferrule with crimp flat side facing outward from terminal block to prevent pop-out.</i></p>						



# Wiring Accessories – Crimping Tools

## Crimping Tools Overview

Our high-quality industrial crimping tools are designed to crimp a wide range of insulated and non-insulated crimping terminals, ferrules, and connectors. They feature ergonomic handles and

controlled-cycle ratcheting mechanisms to guarantee a uniform crimp every time. Choose from fixed or interchangeable die tools, or tool/die sets with multiple dies.

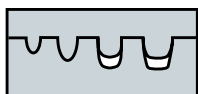


**BM-53x Crimping Tool**

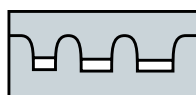


**BM-5345  
Crimping tool and die set**

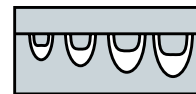
Fixed-Die Crimping Tools				
Part #	Description	Fig.	Pcs/ Pkg	Price Each
<b>BM-537</b>	Ferrule crimping tool: 22 to 12 AWG for ferrules 0.5-4 mm <sup>2</sup>	1	1	retired
<b>BM-539</b>	Ferrule crimping tool: 10 to 6 AWG for ferrules 6-16 mm <sup>2</sup>	2	1	\$76.00
<b>BM-533</b>	Ferrule crimping tool: 8 to 2 AWG for ferrules 10-35 mm <sup>2</sup>	3	1	retired
<b>BM-534</b>	Connector crimping tool: 22 to 10 AWG, for ring, spade, and disconnect terminals	4	1	retired
<b>BM-5345</b>	Crimping tool & Die set; includes crimping tool, case, and 5 die sets. (BM-537, BM-539, BM-535, BM-534 and BM-531 (Fig. 5) See below for descriptions.	N/A	1	retired



**Fig. 1 (BM-537)  
End Sleeve Terminals 22-12  
AWG (0.5-4 mm<sup>2</sup>)**



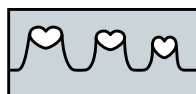
**Fig. 2 (BM-539)  
End Sleeve Terminals 10-6  
AWG (6-16mm<sup>2</sup>)**



**Fig. 3 (BM-535)  
Uninsulated Copper Terminals  
20-8 AWG (0.5-10 mm<sup>2</sup>)**



**Fig. 4 (BM-534)  
Insulated Terminals 22-10  
AWG (0.25-6 mm<sup>2</sup>)**



**Fig. 5 (BM-531)  
Barrel Open Terminals  
20-10 AWG (0.5-6 mm<sup>2</sup>)**

Interchangeable-Die Crimping Tools			
Part #	Description *	Pcs/ Pkg	Price Each
<b>DN-CT-HDL</b>	Crimping tool handle for DN-CT-Dx dies (dies NOT included) Approximate dimensions: 9.75 x 2.52 x 0.95 in (234 x 64 x 24 mm); 16.2 oz (460g)	1	\$59.00
<b>DN-CT-D1</b>	Die set for DN-CT-HDL; 26-22 & 12-10 AWG (0.1-0.4 & 4-6 mm <sup>2</sup> ) green & yellow insulated terminals	1	\$45.50
<b>DN-CT-D2</b>	Die set for DN-CT-HDL; 22-14 AWG (0.5-2.5 mm <sup>2</sup> ) red & blue insulated terminals	1	\$45.50
<b>DN-CT-D3</b>	Die set for DN-CT-HDL; 22-10 AWG (0.5-6 mm <sup>2</sup> ) non-insulated terminals	1	\$39.50
<b>DN-CT-D4</b>	Die set for DN-CT-HDL; 24-8 AWG (0.25-10 mm <sup>2</sup> ) wire ferrules	1	\$39.50
<b>DN-CT-D5</b>	Die set for DN-CT-HDL; 6-4 AWG (16-25 mm <sup>2</sup> ) wire ferrules	1	\$39.50
<b>DN-CT-D6</b>	Die set for DN-CT-HDL; 2-1/0 AWG (35-50 mm <sup>2</sup> ) wire ferrules	1	\$39.50
<b>DN-CT-D7</b>	Die set for DN-CT-HDL; 22-10 AWG (0.5-6 mm <sup>2</sup> ) open barrel non-insulated terminals	1	\$61.00
<b>DN-CT-D8</b>	Die set for DN-CT-HDL; 8-pin (RJ45) modular plugs	1	\$39.50
<b>DN-CT-D9</b>	Die set for DN-CT-HDL; 6-pin (RJ11/RJ12) modular plugs	1	\$39.50
<b>DN-CT-SET</b>	Crimping tool modular system; includes handle and three die sets (DN-CT-HDL + DN-CT-D2 + DN-CT-D4 + DN-CT-D5) The die pairs are held together for easy handling, and interchange without separate tools.	1	\$163.00

\* The DN-CT-xx series features a crimping tool with multiple interchangeable dies separately available. The die pairs are held together for easy handling, and can be interchanged without separate tools.



**DN-CT-HDL Crimping Tool**

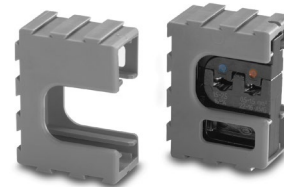


**DN-CT-SET  
Crimping Tool & Die Set**

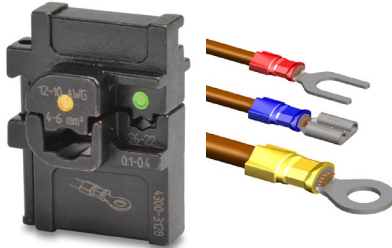
# Wiring Accessories – Crimping Tool

## DN-CT-Dx Interchangeable Crimping Dies (for DN-CT-xxx crimping tool only)

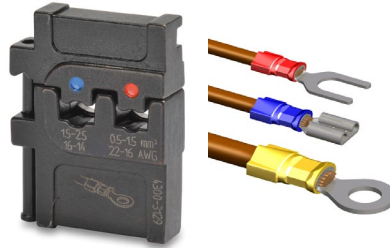
*These dies are held together for easy handling, and can be interchanged without additional tools. All DN-CT-Dx dies have been tested on leading brands of connectors to ensure quality connections. Dies come in modular holders that can be connected together when not in use.*



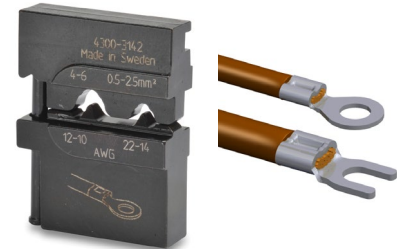
**DN-CT-Dx die & holder**



**DN-CT-D1** (4300-3128)  
Insulated Terminals & Connectors  
26–22 AWG & 12–10 AWG  
[Green & Yellow] (0.1–0.4 & 4–6 mm<sup>2</sup>)



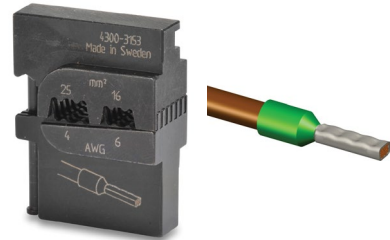
**DN-CT-D2** (4300-3129)  
Insulated Terminals & Connectors  
22–14 AWG  
[Red & Blue] (0.5–2.5 mm<sup>2</sup>)



**DN-CT-D3** (4300-3142)  
Non-Insulated Terminals & Connectors  
22–10 AWG (0.5–6 mm<sup>2</sup>)



**DN-CT-D4** (4300-3127)  
Wire Ferrules  
24–8 AWG (0.25–10 mm<sup>2</sup>)



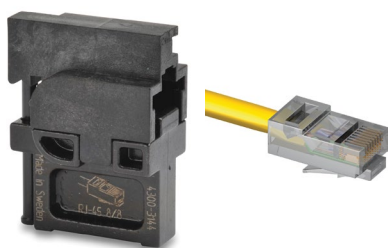
**DN-CT-D5** (4300-3153)  
Wire Ferrules  
6–4 AWG (16–25 mm<sup>2</sup>)



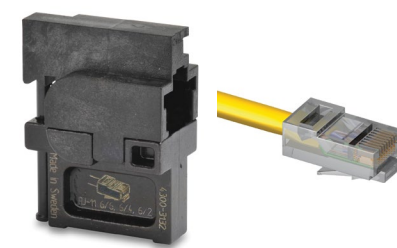
**DN-CT-D6** (4300-3154)  
Wire Ferrules  
2–1/0 AWG (35–50 mm<sup>2</sup>)



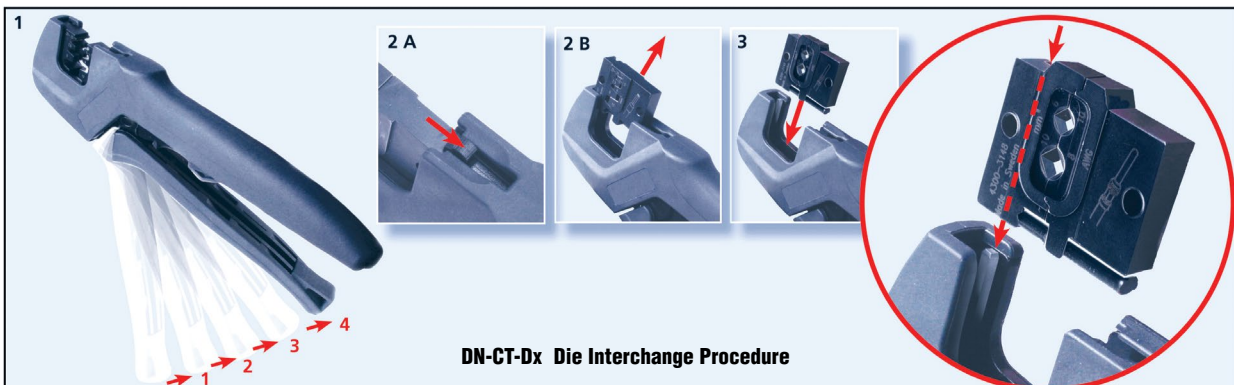
**DN-CT-D7** (4300-3146)  
Non-Insulated Open-Barrel Terminals  
22–10 AWG (0.5–6 mm<sup>2</sup>)



**DN-CT-D8** (4300-3144)  
8-pin Modular Plugs  
RJ45



**DN-CT-D9** (4300-3132)  
6-pin Modular Plugs  
RJ11/RJ12



**DN-CT-Dx Die Interchange Procedure**



# Wiring Accessories – Self-Adjusting Crimping Tools

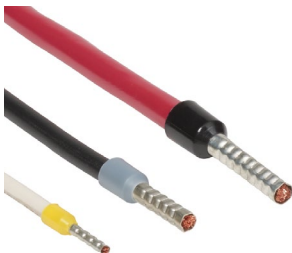
Lightweight, compact, comfortable and self-adjusting tool for crimping ferrules/wire end sleeves.



Square  
DN-FE-16S



Hexagonal  
DN-FE-16H



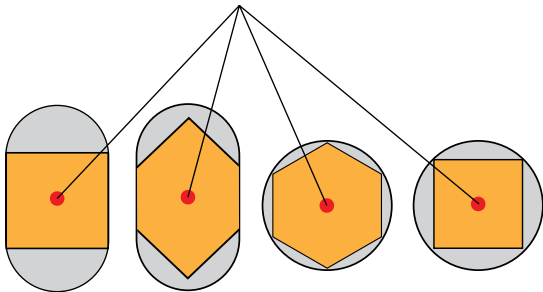
## Features

- Ratchet (with emergency release) to ensure crimps are completed according to specification
- Well balanced to avoid slipping out of the hand
- Non-slip grip pad for applying pressure against a surface
- Ergonomically shaped handles with hardness and surface textures selected for comfortable frequent use
- Low handle force for larger ferrule sizes
- Compact and light-weight design for easy access within confined spaces
- Hole for attaching a safety strap
- Square or Hexagonal crimp profile

Self-Adjusting Crimping Tools Specifications	
<b>Connectors</b>	Insulated and non-insulated ferrules/wire end sleeves
<b>Capacity</b>	0.14 - 10.0 mm <sup>2</sup> /AWG 26-8
<b>Crimp Length</b>	Up to 0.47 in [12mm]
<b>Lifespan</b>	Tested to 50,000 cycles
<b>Length</b>	6.93 in [176mm]
<b>Width</b>	1.02 in [26mm]
<b>Height</b>	2.44 in [62mm]
<b>Handle spread (closed)</b>	1.81 in [46mm]
<b>Handle spread (open)</b>	5.59 in [142mm]
<b>Weight</b>	Square: 0.80 lb [362g] Hexagonal: 0.81 lb [371g]

Self-Adjusting Crimping Tools		
Part #	Description	Price Each
DN-FE-16S	Wire crimping tool, self-adjusting, square profile, 26 to 8 AWG capacity. For use with insulated and non-insulated wire ferrules.	\$226.00
DN-FE-16H	Wire crimping tool, self-adjusting, hexagonal profile, 26 to 8 AWG capacity. For use with insulated and non-insulated wire ferrules.	\$226.00

The finished square and hexagonal crimps have the same cross-sectional area. Choosing between the square and hexagonal crimp tools depends on the shape of the hole where the wire will be inserted. Square crimps fit better in rectangular holes while hexagonal crimps fit better in round holes.



# Wiring Accessories – Cutting & Stripping Tools

## Wire Cutting and Stripping Tools

Wire Cutting and Stripping Tools			
Part #	Description	Pcs /Pkg	Price Each
<b>Self-Adjusting Cutting and Stripping Tool</b>			
<b>DN-WS</b>	Cutting and stripping tool with replaceable blades and jaw inserts; includes (1) DN-WSJ blade Approximate dimensions: 7.5 x 4.8 x 0.8 in (191 x 123 x 20 mm); Weight: 4.8 oz (136g)	1	\$56.00
<b>DN-WSJ</b>	DN-WS replacement straight-blade insert; for PVC insulations; 34-8 AWG (0.02-10 mm <sup>2</sup> )	1	\$20.50
<b>DN-WSMMC</b>	DN-WS 16 mm <sup>2</sup> blade insert; 12-5 AWG (4-16 mm <sup>2</sup> )	1	\$42.50
<b>DN-WSVBC</b>	DN-WS V-blade insert; for harder insulations such as PTFE & PVC; 28-12 AWG (0.1-4 mm <sup>2</sup> )	1	\$26.50
<b>DN-WSRJ</b>	DN-WS replacement jaw inserts	2	\$7.00
<b>Cable Stripping Tool</b>			
<b>DN-CST</b>	Cable stripping tool; cable diameters 0.1-0.43 in (2.5-11 mm) with insulation up to 0.04 in (1.0 mm) thick Approximate dimensions: 3.6 x 1.6 x 0.8 in (90.5 x 39.5 x 19 mm); Weight: 0.9 oz (28g)	1	\$25.00
<b>DN-CST-BLADE</b>	DN-CST replacement blade	1	\$8.50

### Self-Adjusting Cut and Strip Tool DN-WS

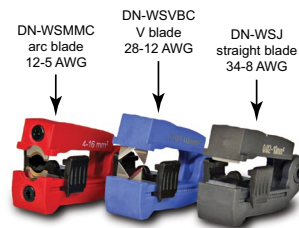
- Widest stripping capacity of any tool of its type
- Easily interchangeable stripping cassettes are available for stripping a wide range of most modern insulation types, from PVC to PTFE; color coded by stripping blade type
- No additional tools required to change stripping blade cassettes
- Precise adjustability allows stripping of various insulation thicknesses without damage to conductors
- Easy snag-free wire removal after stripping
- Ergonomic design with soft-grip handle
- Light weight and strong; molded in high-strength plastic with twice the strength of standard nylon; tested 150k cycles
- Cutting capacity:  
Stranded conductors to 8AWG (10 mm<sup>2</sup>)  
Solid conductors to 16 AWG (1.5 mm<sup>2</sup>)



DN-WS stripping blade replacement



DN-WS wire cutting



**DN-WSxxx**  
Blade inserts color coded by type



**DN-WSRJ**

**DN-WS** Cutting & Stripping Tool



### Cable Stripping Tool DN-CST

Small, simple, safe, and precise tool for removing insulation from copper and fiber optic audiovisual, data transmission, instrumentation, signal, and telephone cables.

- Precise: 9-position blade height adjustment wheel for fine adjustability and repeatability
- Easy to use: Squeeze the tool together to open the stripping cavity, insert cable, rotate once, and remove tool from cable. Separately pull scrap insulation off of cable.
- Safe: Smooth, rounded, pocketable, and lightweight design; no exposed blades
- Tough: Impact resistant nylon tested to over 50k cycles
- Economical: Replacement blades available
- Cable capacity: Ø 0.1-0.43 in (2.5-11 mm)
- Insulation thickness: Up to 0.04 in (1.0 mm)



**DN-CST**  
Precision Stripping Tool  
[squeeze, insert cable, rotate, & remove]

**DN-CST-BLADE**  
Replacement Blade



Precision Stripping Tool  
Easily replaceable blade