

## Color-Keyed® Connectors

### Color-Keyed® Special Lugs for Special Problems – Angled, Shaped and Flared the Way You Need Them



Thomas & Betts can solve your difficult wire bending and terminating problems in confined power distribution panels, switchgear and motor control enclosures.

We have the design and production capability to deliver exactly the type lug you need, shaped the way you need.

- Straight, 45° and 90° angle
- Stacking or non-stacking
- Narrow tongue or standard
- Tin, silver and nickel

Thomas & Betts offers an extensive line of copper Color-Keyed® lugs for #8 AWG through 1000 kcmil flex and code cables. The lug tongues are modified in several different configurations to meet your exact needs: 45° and 90° bend angles, narrow tongues to fit into circuit breakers, offset tongues to stack two cables and special stud hole drilling. These special configurations let you:

1. run cable directly to the bus bar with no bending.
2. terminate into very narrow spaces.
3. utilize minimal bus bar space.

The specially designed lugs help you “clean up” your cabling in crowded enclosures.

The photographs show some examples of how and where the lugs can be used.

#### Customized Color-Keyed® Connectors for Copper Cables

- Standard and special tongue angles, stacking and non-stacking, bolt holes sizes and centers, protective platings.
- Specially modified one and two hole copper Color-Keyed® compression lugs, Series 54100, 54200, 54850BE and 54930BE for flex and code copper stranded cables. Material high conductivity wrought copper.
- Minimum order quantity: Standard package quantity by cable size. Consult your Regional Sales Office for price and delivery. All customized lugs are made to order and non-cancelable.



# Color-Keyed® Connectors

Order Form (to be scanned or photocopied)

Catalogue No. \_\_\_\_\_ Qty. \_\_\_\_\_

## Design Controls and Requirements

All "MADE-UP" catalogue numbers start with a standard or basic catalogue number and are followed by the customer-required extra features: tongue shape, bolt hole size, distance between bolt holes, stacking, plating and inspection hole (peep hole). A code letter or a number has been assigned to each extra feature. See CODE TABLE.

Notes: 1) Lack of any of the extra features on the "MADE-UP" catalogue number means that the standard Cat. No. features are prevalent.  
 2) If either bolt hole size or distance between bolt holes needs to be changed from standard Cat. No., both code numbers will appear on the "MADE-UP" Cat. No. (See example below)

**CAT. NO. 54212UB0416BSP**

<b>54212</b>	<b>UB</b>	<b>04</b>	<b>16</b>	<b>B</b>
2 hole 4/0 cu. lug basic cat. no.	90° bend	1/4 in. bolt hole	1 in. hole spacing	bottom stack

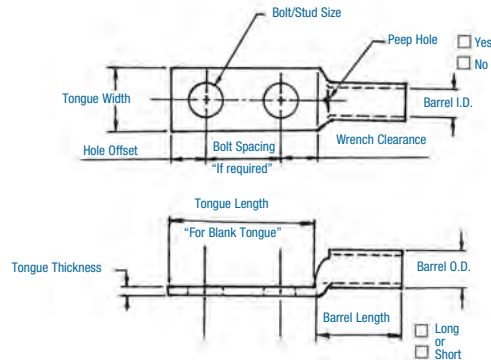
**CODE TABLE**

TONGUE SHAPE		BOLT HOLES		CODE	BOLT HOLE CENTERS		STACKING		FINISH (PLATING)		INSPECTION HOLE (LONG BARREL)		INSPECTION HOLE (SHORT BARREL)	
TYPE	CODE				CENTER TO CENTER	CODE	TYPE	CODE	TYPE 1	CODE	I.D.	CODE	I.D.	CODE
45°	UF	#8	0.173	02	1/2 in.	08	Top	T**	Silver Plate	SP	Peep Hole	PH	Blind End	BE
90°	UB	#10	0.204	03	5/8 in.	10	Bottom	B	Lead Plate	LP				
Blank	BT	1/4 in.	0.281	04	3/4 in.	12			Nickel Plate	NP				
(No Bolt Hole)		5/16 in.	0.344	05	1/8 in.	14			Plain Finish	PF				
		3/8 in.	0.406	06	1 in.	16			No Marking	NM				
		1/2 in.	0.531	08	1-1/8 in.	18								
		5/8 in.	0.656	10	1-1/4 in.	20								
		3/4 in.	0.812	12	1-3/8 in.	22								
		1/8 in.	0.937	14	1-1/2 in.	24								
		1 in.	1.062	16	1-5/8 in.	26								
					1-3/4 in.	28								
					*1-7/8 in.	30								
					*2 in.	32								

\* These Bolt centers not available for bolt holes larger than 13/16 in.

\*\* Not required for 45° & 90° Top Stacking.

Cable		Code	<input type="checkbox"/>
		Weld	<input type="checkbox"/>
<input type="checkbox"/> #8	<input type="checkbox"/> #6	<input type="checkbox"/> #4	
<input type="checkbox"/> #2	<input type="checkbox"/> #1	<input type="checkbox"/> 1/0	
<input type="checkbox"/> 2/0	<input type="checkbox"/> 3/0	<input type="checkbox"/> 4/0	
<input type="checkbox"/> 250 kcmil & up (Code Only)			



C o m p r e s s i o n

**Tongue Specifications – See Chart “A” for Dimensions**

C o m p r e s s i o n

Stud Sizes		
<input type="checkbox"/> #8	<input type="checkbox"/> #10	<input type="checkbox"/> 1/4 in.
<input type="checkbox"/> 5/16 in.	<input type="checkbox"/> 3/8 in.	<input type="checkbox"/> 1/2 in.
<input type="checkbox"/> 5/8 in.	<input type="checkbox"/> 3/4 in.	<input type="checkbox"/> 7/8 in.
<input type="checkbox"/> 1 in.		

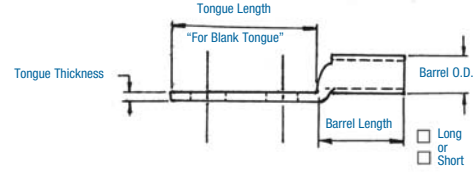
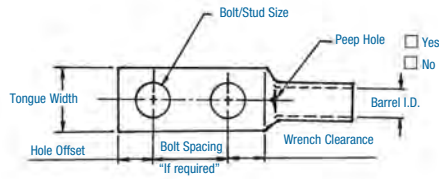


Chart A

NOMINAL BOLT HOLE	HOLE OFFSET	MIN. WRENCH CLEARANCE	TONGUE WIDTH Cable Size										
			#8 CODE #8 WELD	#6 CODE #6 WELD	#4 CODE	#2 CODE #4 WELD	#1 CODE #2 WELD	1/0 CODE #1 WELD	2/0 CODE 1/0 WELD	3/0 CODE 2/0 WELD	4/0 CODE 3/0 WELD	250 CODE	
#8	0.173	0.200	0.240	0.406	0.437	0.562	0.593	0.672	0.750	0.825	0.937	1.030	1.125
#10	0.204	0.218	0.250	0.406	0.437	0.562	0.593	0.672	0.750	0.825	0.937	1.030	1.125
1/4	0.281	0.250	0.312	0.469	0.500	0.562	0.593	0.672	0.750	0.825	0.937	1.030	1.125
5/16	0.344	0.375	0.406	0.562	0.562	0.562	0.675	0.672	0.750	0.825	0.937	1.030	1.125
3/8	0.406	0.375	0.440	0.578	0.578	0.594	0.675	0.672	0.750	0.825	0.937	1.030	1.125
1/2	0.531	0.500	0.562	-	-	-	0.750	0.750	0.750	0.825	0.937	1.030	1.125
5/8	0.656	0.812	0.875	-	-	-	-	-	-	-	0.937	1.030	1.125
3/4	0.812	0.750	0.770	-	-	-	-	-	-	-	-	-	-
*7/8	0.937	0.875	0.890	-	-	-	-	-	-	-	-	-	-
*1	1.062	0.937	1.000	-	-	-	-	-	-	-	-	-	-

\* These bolt holes are available in one hole lug only. Dimensions are in inches.

Chart B

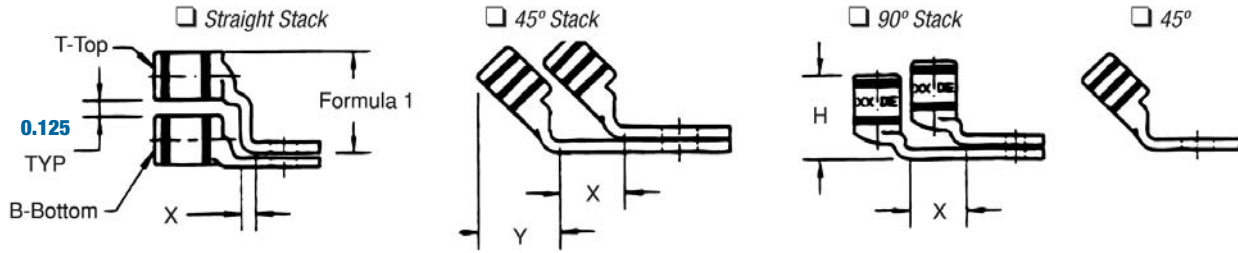
CABLE SIZE	TONGUE THICKNESS	STRAIGHT LUG BARREL LENGTH		BARREL		STACKED LUGS (see diagram on page 11)			DIM "Y"		DIM "H"	
		SHORT	LONG	O.D.	I.D.	DIM "X"			SHORT	LONG	SHORT	LONG
						STRAIGHT	45°	90°				
#8	0.080	0.635	0.935	0.260	0.180	0.158	0.478	0.394	0.595	0.808	0.779	1.079
#6	0.081	0.675	0.975	0.296	0.215	0.134	0.544	0.432	0.587	0.799	0.767	10.67
#4	0.099	0.685	0.985	0.365	0.266	0.175	0.622	0.502	0.637	0.849	0.838	1.138
#2	0.108	0.815	1.115	0.410	0.302	0.216	0.649	0.535	0.711	0.923	0.958	1.258
#1	0.106	0.825	1.275	0.467	0.361	0.212	0.731	0.592	0.710	1.028	0.956	1.406
1/0	0.125	0.975	1.325	0.520	0.396	0.250	0.789	0.646	0.794	1.042	1.075	1.425
2/0	0.125	0.965	1.315	0.571	0.446	0.250	0.859	0.696	0.829	1.077	1.125	1.475
3/0	0.125	1.085	1.435	0.632	0.507	0.250	0.946	0.757	0.900	1.148	1.225	1.575
4/0	0.137	1.255	1.705	0.701	0.564	0.274	1.031	0.826	1.015	1.333	1.387	1.837
250	0.137	1.375	1.925	0.766	0.629	0.274	1.123	0.891	1.085	1.474	1.487	2.037
300	0.153	1.900	2.675	0.850	0.660	0.459	1.226	0.975	1.180	1.726	1.924	2.679
350	0.177	2.090	2.896	0.926	0.720	0.531	1.333	1.103	1.267	1.830	2.096	2.896
400	0.173	2.460	2.980	0.960	0.757	0.519	1.370	1.085	1.551	1.913	2.484	2.984
500	0.218	2.670	3.610	1.100	0.852	0.654	1.514	1.225	1.629	2.266	2.669	3.619
600	0.244	2.900	3.490	1.200	0.926	0.732	1.630	1.325	1.762	2.147	2.897	3.497
700	0.228	2.784	-	1.255	0.997	0.684	1.662	1.375	1.780	-	3.011	-
750	0.270	3.050	3.925	1.330	1.030	0.810	1.745	1.455	1.827	2.434	3.050	3.925
800	0.266	3.213	-	1.375	1.079	0.800	1.728	1.625	1.952	2.787	3.213	4.554
900	0.313	3.450	4.550	1.500	1.145	0.940	1.900	1.650	2.065	-	1.387	-
1,000	0.297	3.356	4.500	1.550	1.203	0.890	2.070	1.675	2.031	2.787	1.487	4.506

Note: Stacking lugs are available for one bolt only. Consult your Regional Sales Office: Straight: 700 kcmil & up, 45°: 400 kcmil & up, 90°: 500 kcmil & up.

Dimensions are in inches.

## Color-Keyed® Connectors

### Tongue Specifications – See Chart “A” for Dimensions



Formula 1 = (0.125 + 2 (OD) + 0.037 - Tongue Thickness)

Chart C

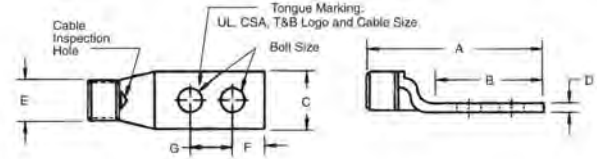
TONGUE WIDTH 0.030 / CODE CABLE SIZE											
BOLT HOLE SIZE	300 KCMIL 4/0 WELD	350 KCMIL	400 KCMIL	500 KCMIL 400 WELD	600 KCMIL 500 WELD	1325/24	700 KCMIL	750 KCMIL	800 KCMIL	900 KCMIL	1000 KCMIL
#8	-	-	-	-	-	-	-	-	-	-	-
#10	-	-	-	-	-	-	-	-	-	-	-
1/4	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
5/16	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
3/8	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
1/2	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
5/8	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
3/4	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
*7/8	-	-	-	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
*1	-	-	-	-	1.745	1.805	1.840	1.935	2.010	2.180	2.265

\* These bolt holes are available in one hole lug only.

Dimensions are in inches.

## Connectors for Copper Conductors

**Two-Hole Lugs – Standard Barrel Certified to 600V and Recommended up to 35 kV<sup>‡</sup>** *(Continued)*



**Material:** High-Conductivity Wrought Copper  
**Finish:** Electro Tin Plate



C o m p r e s s i o n

CAT. NO.	WIRE SIZE		Bolt Size	Dimensions in. (mm)							Die Code	Die Color
	Code	Flex Class G, H, I, K, M		A	B	C	D	E	F	G		
54212	4/0 AWG	3/0 AWG, 200 Navy 3/0 Weld 450/24 = 182 kcmil 703/0.0154	3/8	3.18 (80.8)	1.93 (49.0)	1.03 (26.2)	0.14 (3.6)	0.70 (17.8)	0.38 (9.7)	1.00 (25.4)	54	Purple
54270			1/2	4.25 (108.0)	3.00 (76.2)	1.03 (26.2)	0.14 (3.6)	0.70 (17.8)	0.50 (12.7)	1.75 (44.5)	54	Purple
256-30695-1247			1/4	3.06 (77.7)	1.44 (36.6)	1.03 (26.2)	0.16 (4.1)	0.70 (17.8)	0.38 (9.7)	0.63 (16.0)	54	Purple
256-30695-331			1/4	3.06 (77.7)	1.81 (46.0)	1.03 (26.2)	0.14 (3.6)	0.70 (17.8)	0.38 (9.7)	0.75 (19.1)	54	Purple
256-30695-1261			5/16	3.18 (80.8)	1.93 (49.0)	1.03 (26.2)	0.14 (3.6)	0.70 (17.8)	0.38 (9.7)	1.00 (25.4)	54	Purple
54213	250 kcmil	4/0 AWG 250 Navy	3/8	3.28 (83.3)	1.93 (49.0)	1.13 (28.7)	0.14 (3.6)	0.77 (19.6)	0.38 (9.7)	1.00 (25.4)	62	Yellow
54275			1/2	4.19 (106.4)	2.81 (71.4)	1.13 (28.7)	0.18 (4.6)	0.77 (19.6)	0.50 (12.7)	1.75 (44.5)	62	Yellow
256-30695-345	300 kcmil	4/0 AWG, 4/0 Weld 550/24 = 222 kcmil 133/0.0399 259/0.0286 637/0.018	3/8	3.25 (82.6)	1.69 (42.9)	1.25 (31.8)	0.15 (3.8)	0.79 (20.1)	0.38 (9.7)	0.88 (22.4)	62	Yellow
256-30695-835			3/8	4.25 (108.0)	2.80 (71.1)	1.25 (31.8)	0.15 (3.8)	0.79 (20.1)	0.38 (9.7)	1.00 (25.4)	62	Yellow
256-30695-452			3/8	3.13 (79.5)	1.88 (47.8)	1.25 (31.8)	0.16 (4.1)	0.79 (20.1)	0.38 (9.7)	0.88 (22.4)	62	Yellow
58265			1/2	3.94 (100.1)	2.81 (71.4)	0.94 (23.9)	0.14 (3.6)	0.79 (20.1)	0.50 (12.7)	1.75 (44.5)	62	Yellow
54214	300 kcmil	250 AWG 300 Navy 650/24 = 262 kcmil	3/8	3.45 (87.6)	1.93 (49.0)	1.25 (31.8)	0.15 (3.8)	0.85 (21.6)	0.38 (9.7)	1.00 (25.4)	66	White
54280			1/2	4.45 (113.0)	3.00 (76.2)	1.25 (31.8)	0.15 (3.8)	0.85 (21.6)	0.50 (12.7)	1.75 (44.5)	66	White
256-30695-332	350 kcmil	350 Navy	1/4	3.40 (86.4)	1.81 (46.0)	1.36 (34.5)	0.18 (4.6)	0.93 (23.6)	0.38 (9.7)	0.75 (19.1)	71	Red
256-30695-1240			5/16	4.18 (106.2)	2.63 (66.8)	1.36 (34.5)	0.18 (4.6)	0.93 (23.6)	0.38 (9.7)	1.75 (44.5)	71	Red
54215			3/8	3.51 (89.2)	1.93 (49.0)	1.36 (34.5)	0.18 (4.6)	0.93 (23.6)	0.38 (9.7)	1.00 (25.4)	71	Red
54282			1/2	4.60 (116.8)	3.00 (76.2)	1.36 (34.5)	0.18 (4.6)	0.93 (23.6)	0.50 (12.7)	1.75 (44.5)	71	Red
54216	400 kcmil	300 kcmil 313 kcmil 775/24	3/8	3.93 (99.8)	1.93 (49.0)	1.41 (35.8)	0.17 (4.3)	0.96 (24.4)	0.38 (9.7)	1.00 (25.4)	76	Blue
54283			3/8	3.88 (98.6)	1.93 (49.0)	1.41 (35.8)	0.17 (4.3)	0.96 (24.4)	0.38 (9.7)	1.75 (44.5)	76	Blue
256-30695-439	500 kcmil	400 Weld 925/24 = 373 kcmil 259/0.0393 427/0.0306	3/8	4.35 (110.5)	2.25 (57.2)	1.61 (40.9)	0.22 (5.6)	1.04 (26.4)	0.50 (12.7)	1.00 (25.4)	80	N/A
58277			1/2	5.06 (128.5)	3.00 (76.2)	1.61 (40.9)	0.22 (5.6)	1.04 (26.4)	0.50 (12.7)	1.75 (44.5)	80	N/A
256-30695-839			3/8	4.09 (103.9)	2.06 (52.3)	1.61 (40.9)	0.22 (5.6)	1.04 (26.4)	0.50 (12.7)	1.00 (25.4)	80	N/A
54218	500 kcmil	400 kcmil 500 Navy	3/8	3.96 (100.6)	1.93 (49.0)	1.61 (40.9)	0.22 (5.6)	1.10 (27.9)	0.38 (9.7)	1.00 (25.4)	87	Brown
54286			1/2	5.07 (128.8)	3.00 (76.2)	1.61 (40.9)	0.22 (5.6)	1.10 (27.9)	0.50 (12.7)	1.75 (44.5)	87	Brown
256-30695-188			1/2	4.06 (103.1)	2.31 (58.7)	1.63 (41.4)	0.22 (5.6)	1.10 (27.9)	0.50 (12.7)	1.25 (31.8)	87	Brown
54220	600 kcmil	-	3/8	4.13 (104.9)	1.93 (49.0)	1.75 (44.5)	0.24 (6.1)	1.20 (30.5)	0.38 (9.7)	1.00 (25.4)	94	Green
54289			1/2	5.23 (132.8)	3.00 (76.2)	1.75 (44.5)	0.24 (6.1)	1.20 (30.5)	0.50 (12.7)	1.75 (44.5)	94	Green
256-30695-1406	700 kcmil	550/535 1325/24 500 AWG	3/8	4.05 (102.9)	2.11 (53.6)	1.78 (45.2)	0.24 (6.1)	1.25 (31.8)	0.50 (12.7)	1.00 (25.4)	99	Pink
256-30695-842			3/8	4.30 (109.2)	2.06 (52.3)	1.80 (45.7)	0.28 (7.1)	1.25 (31.8)	0.50 (12.7)	1.00 (25.4)	99	Pink
256-30695-898			3/8	4.30 (109.2)	2.06 (52.3)	1.80 (45.7)	0.28 (7.1)	1.25 (31.8)	0.50 (12.7)	1.00 (25.4)	99	Pink
54291			1/2	5.18 (131.6)	3.00 (76.2)	1.84 (46.7)	0.23 (5.8)	1.25 (31.8)	0.50 (12.7)	1.75 (44.5)	99	Pink
58281			1/2	5.23 (132.8)	3.00 (76.2)	1.80 (45.7)	0.28 (7.1)	1.25 (31.8)	0.50 (12.7)	1.75 (44.5)	99	Pink
256-30695-237	750 kcmil	1325/24 = 535 kcmil	3/8	5.10 (129.5)	2.80 (71.1)	1.94 (49.3)	0.27 (6.9)	1.33 (33.8)	0.38 (9.7)	1.00 (25.4)	106	Black
54223			1/2	5.32 (135.1)	3.00 (76.2)	1.94 (49.3)	0.27 (6.9)	1.33 (33.8)	0.50 (12.7)	1.75 (44.5)	106	Black
256-30695-1376	800 kcmil	-	3/8	4.78 (121.4)	2.28 (57.9)	2.01 (51.1)	0.27 (6.9)	1.38 (35.1)	0.44 (11.2)	1.13 (28.7)	107	Orange
54224			1/2	5.50 (139.7)	3.00 (76.2)	2.01 (51.1)	0.27 (6.9)	1.38 (35.1)	0.50 (12.7)	1.75 (44.5)	107	Orange
256-30695-694	900 kcmil	1925/24 = 777 kcmil	3/8	4.65 (118.1)	2.06 (52.3)	2.18 (55.4)	0.31 (7.9)	1.50 (38.1)	0.50 (12.7)	1.00 (25.4)	115	Yellow
54226			1/2	5.59 (142.0)	3.00 (76.2)	2.18 (55.4)	0.31 (7.9)	1.50 (38.1)	0.50 (12.7)	1.75 (44.5)	115	Yellow
256-30695-846			3/8	4.60 (116.8)	2.06 (52.3)	2.12 (53.9)	0.31 (7.9)	1.50 (38.1)	0.50 (12.7)	1.00 (25.4)	115	Yellow
256-30695-844			5/8	5.00 (127.0)	2.63 (66.8)	2.18 (55.4)	0.31 (7.9)	1.50 (38.1)	0.56 (14.2)	1.50 (38.1)	115	Yellow
54228	1000 kcmil	1000 Navy	1/2	5.45 (138.4)	3.00 (76.2)	2.27 (57.7)	0.30 (7.6)	1.55 (39.4)	0.50 (12.7)	1.75 (44.5)	125	N/A

Call your Regional Sales Office for sizes not listed.

Tooling: pp. 116-145 Die Selector Chart: pp. 146-153

‡ For installations from 16 kV up to 35 kV, consult shielded cable manufacturers for stress relief and insulation requirements.