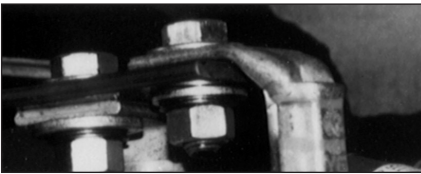
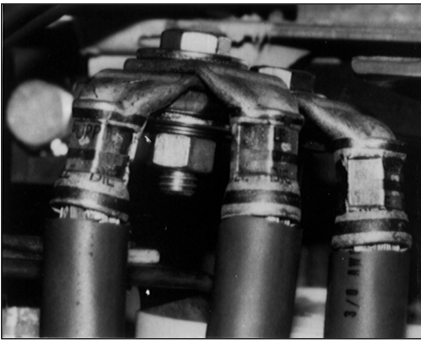
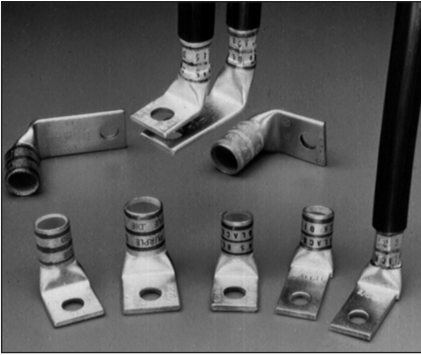


# Color-Keyed®

## Color-Keyed® Connectors



### **Color-Keyed® Special Lugs for Special Problems – Angled, Shaped and Trimmed the Way You Often 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, lead, 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, and
- (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 factory for price and delivery. All customized lugs are made to order. A.R.O. Non-cancellable.

# Color-Keyed®

## Color-Keyed® Connectors

### Order From

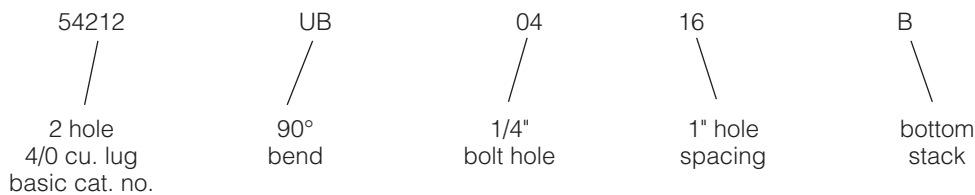
Catalog No. \_\_\_\_\_ Qty. \_\_\_\_\_  
 (For 54100, 54200, 54800 & 54900 Series Copper Lugs Only)

### Design Controls and Requirements

All "MADE-UP" catalog numbers start with a standard or basic catalog 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" catalog 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



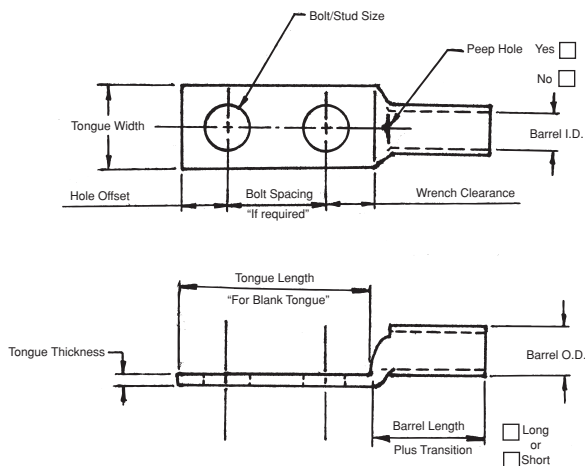
### CODE TABLE

Tongue Shape		Bolt Holes		Bolt Hole Centers		Stacking		Finish (Plating)		Inspection Hole (Long Barrel)		Inspection Hole (Short Barrel)		
Type	Code	Size .020	Code	Distance .015	Code	Type	Code	Type 1	Code	I.D.	Code	I.D.	Code	
45°	UF	#8	.173	02	1/2"	08	Top	T**	Silver Plate	SP	Peep Hole	PH	Blind End	BE
90°	UB	#10	.204	03	5/8"	10	Bottom	B	Lead Plate	LP				
Blank	BT	1/4"	.281	04	3/4"	12			Nickel Plate	NP				
(No Bolt Hole)		5/16"	.344	05	7/8"	14			Plain Finish	PF				
		3/8"	.406	06	1"	16			Not QTP if suffix other					
		1/2"	.531	08	1 1/8"	18			than - PF or standard					
		5/8"	.656	10	1 1/4"	20			tin plate					
		3/4"	.812	12	1 3/8"	22								
		7/8"	.937	14	1 1/2"	24								
		1"	1.062	16	1 5/8"	26								
					1 3/4"	28								
					*1 7/8"	30								
					*2"	32								

\* These bolt centers not available for bolt holes larger than 1 3/16".

\*\* 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"/> #2	<input type="checkbox"/> #1
<input type="checkbox"/> 2/0	<input type="checkbox"/> 3/0
<input type="checkbox"/> 4/0	<input type="checkbox"/> 250 kcmil & up (Code Only)



**Thomas & Betts**

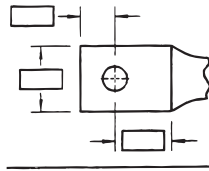
# Color-Keyed®

## Color-Keyed® Connectors

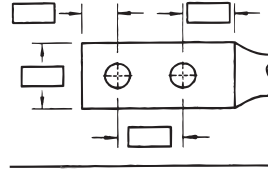
### Tongue Specifications – See Chart “A” For Dimensions

#### Stud Sizes

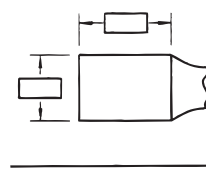
- #8       1/2
- #10     5/8
- 1/4       3/4
- 5/16     7/8
- 3/8       1



Single Hole



Double Hole



Blank

### Chart A

Nominal Bolt Hole Size .015	Hole Offset .030	Wrench Clearance Min.	Tongue Width Cable Size										
			#8 Code #8 Weld	#6 Code #6 Weld	#4 Code #4 Weld	#2 Code #2 Weld	#1 Code #1 Weld	1/0 Code 1/0 Weld	2/0 Code 2/0 Weld	3/0 Code 3/0 Weld	4/0 Code 4/0 Weld	250 Code	
#8	.173	.200	.240	.406	.437	.562	.593	.672	.750	.825	.937	1.030	1.125
#10	.204	.218	.250	.406	.437	.562	.593	.672	.750	.825	.937	1.030	1.125
1/4	.281	.250	.312	.469	.500	.562	.593	.672	.750	.825	.937	1.030	1.125
5/16	.344	.375	.406	.562	.562	.562	.675	.672	.750	.825	.937	1.030	1.125
3/8	.406	.375	.440	.578	.578	.594	.675	.672	.750	.825	.937	1.030	1.125
1/2	.531	.500	.562	-	-	-	.750	.750	.750	.825	.937	1.030	1.125
5/8	.656	.812	.875	-	-	-	-	-	-	-	.937	1.030	1.125
3/4	.812	.750	.770	-	-	-	-	-	-	-	-	-	-
*7/8	.937	.875	.890	-	-	-	-	-	-	-	-	-	-
*1	1.062	.937	1.000	-	-	-	-	-	-	-	-	-	-

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

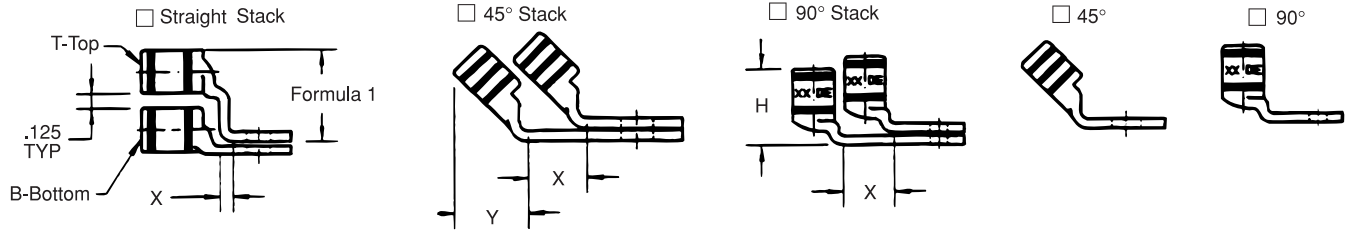
### Chart B

Cable Size	Tongue Thickness	Straight Lug Barrel Length Plus Transition		Barrel		Dim "X" Stacked Lugs			Dim "Y"		Dim "H"	
		Short	Long	O.D.	I.D.	Straight	45°	90°	Short	Long	Short	Long
		#8	.080	.635	.935	.260	.180	.158	.478	.394	.595	.808
#6	.081	.675	.975	.296	.215	.134	.544	.432	.587	.799	.767	1.067
#4	.099	.685	.985	.365	.266	.175	.622	.502	.637	.849	.838	1.138
#2	.108	.815	1.115	.410	.302	.216	.649	.535	.711	.923	.958	1.258
#1	.106	.825	1.275	.467	.361	.212	.731	.592	.710	1.028	.956	1.406
1/0	.125	.975	1.325	.571	.396	.250	.789	.646	.794	1.042	1.075	1.425
2/0	.125	.965	1.315	.571	.446	.250	.859	.696	.829	1.077	1.125	1.475
3/0	.125	1.085	1.435	.632	.507	.250	.946	.757	.900	1.148	1.225	1.575
4/0	.137	1.255	1.705	.701	.564	.274	1.031	.826	1.015	1.333	1.387	1.837
250	.137	1.375	1.925	.766	.629	.274	1.123	.891	1.085	1.474	1.487	2.037
300	.153	1.900	2.675	.850	.660	.459	1.226	.975	1.180	1.726	1.924	2.679
350	.177	2.090	2.896	.926	.720	.531	1.333	1.103	1.267	1.830	2.096	2.896
400	.173	2.460	2.980	.960	.757	.519	1.370	1.085	1.551	1.913	2.484	2.984
500	.218	2.670	3.610	1.100	.852	.654	1.514	1.225	1.629	2.266	2.669	3.619
600	.244	2.900	3.490	1.200	.926	.732	1.630	1.325	1.762	2.147	2.897	3.497
700	.228	2.784	-	1.255	.997	.684	1.662	1.375	1.780	-	3.011	-
750	.270	3.050	3.925	1.330	1.030	.810	1.745	1.455	1.827	2.434	3.050	3.925
800	.266	3.213	-	1.375	1.079	.800	1.728	1.625	1.952	2.787	3.213	4.554
900	.313	3.450	4.550	1.500	1.145	.940	1.900	1.650	2.065	-	1.387	-
1000	.297	3.356	4.500	1.550	1.203	.890	2.070	1.675	2.031	2.787	1.487	4.506

Note: Stacking lugs are available for one bolt only.  
 Consult Factory: Straight: 700 kcmil & up  
 45°: 400 kcmil & up  
 90°: 500 kcmil & up

# Color-Keyed®

## Color-Keyed® Connectors



Formula 1 = (.125 + 2 (OD) + .037 – Tongue Thickness)

### Chart C

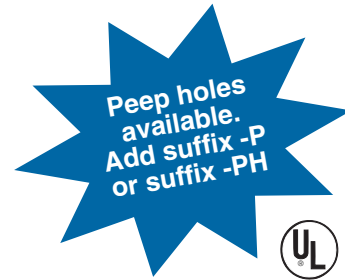
Bolt Hole Size	Tongue Width .030 Code Cable Size										
	300 kcmil 4/0 Weld	350 kcmil	400 kcmil	500 kcmil 4/0 Weld	600 kcmil 5/0 Weld	1325/24	700 kcmil	750 kcmil	800 kcmil	900 kcmil	1000 kcmil
#8	–	–	–	–	–	–	–	–	–	–	–
#10	–	–	–	–	–	–	–	–	–	–	–
1/4	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	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

# Color-Keyed®

## Connectors for Copper Conductor

### One Hole Lugs - 45° Long Barrel 600V to 35KV

Material: High Conductivity Wrought Copper  
Finish: Electro Tin Plate



Cat. No.	Wire Size		Bolt Size	Dimensions (in.)					Die Code	Die Color
	Code	Flex		B	C	D	E	F		
54929BEUF 54930BEUF	#8 AWG	37/24 = 14.9 kcmil	#10 1/4	.65 .65	.42 .42	.08 .08	.26 .26	1/4 1/4	21 21	RED RED
54904BEUF 54905BEUF	#6 AWG	61/24 = 24.6 kcmil	#10 1/4	.65 .65	.44 .44	.08 .08	.30 .30	1/4 1/4	24 24	BLUE BLUE
54908BEUF 54906BEUF	#4 AWG	91/24 = 36.7 kcmil	#10 1/4	.65 .65	.52 .52	.10 .10	.37 .37	1/4 1/4	29 29	GREY GREY
54933BEUF 54942BEUF	#2-3 AWG	125/24 = 50.4 kcmil	#10 5/16	.65 .88	.59 .59	.11 .11	.41 .41	1/4 3/8	33 33	BROWN BROWN
54945BEUF 54947BEUF	#1 AWG	150/24 = 60.5 kcmil	#10 5/16	.65 .88	.68 .68	.11 .11	.47 .47	1/4 3/8	37 37	GREEN GREEN
54946BEUF 54949BEUF 54909BEUF 54950BEUF	1/0 AWG	225/24 = 90.8 kcmil	#10 5/16 3/8 1/2	.65 .88 .93 1.25	.75 .75 .75 .75	.13 .13 .13 .13	.52 .52 .52 .52	1/4 3/8 3/8 1/2	42 42 42 42	PINK PINK PINK PINK
54910BEUF 54951BEUF	2/0 AWG	275/24 = 111 kcmil	3/8 1/2	.93 1.25	.83 .83	.13 .13	.57 .57	3/8 1/2	45 45	BLACK BLACK
54965BEUF	3/0 AWG	325/24 = 131 kcmil	1/2	1.25	.92	.13	.63	1/2	50	ORANGE
54970BEUF04 54970BEUF06 54970BE	4/0 AWG	450/24 = 182 kcmil 3/0 Weld	1/4 3/8 1/2	1.00 1.13 1.25	1.03 1.03 1.03	.14 .14 .14	.70 .70 .70	1/4 3/8 1/2	54 54 54	PURPLE PURPLE PURPLE
54913BEUF	250 kcmil	550/24 = 222 kcmil, 4/0 Weld	1/2	1.25	1.13	.14	.77	1/2	62	YELLOW
54914BEUF	300 kcmil		1/2	1.25	1.25	.15	.85	1/2	66	WHITE
54915BEUF	350 kcmil	650/24 = 262 kcmil	1/2	1.25	1.36	.18	.93	1/2	71	RED
54916BEUF 54917BEUF	400 kcmil	775/24 = 313 kcmil	1/2 5/8	1.25 1.58	1.41 1.41	.17 .17	.96 .96	1/2 5/8	76 76	BLUE BLUE
54918BEUF 54919BEUF	500 kcmil	925/24 = 373 kcmil	1/2 5/8	1.25 1.58	1.61 1.61	.22 .22	1.10 1.10	1/2 5/8	87 87	BROWN BROWN
54921BEUF 54920BEUF	600 kcmil	1100/24 = 444 kcmil	1/2 5/8	1.25 1.58	1.75 1.75	.24 .24	1.20 1.20	1/2 5/8	94 94	GREEN GREEN
54922BEUF 54923BEUF	750 kcmil	1325/24 = 535 kcmil	1/2 5/8	1.25 1.58	1.94 1.94	.27 .27	1.33 1.33	1/2 5/8	106 106	BLACK BLACK
54984BEUF		1600/24 = 646 kcmil	5/8	1.58	1.94	.27	1.33	5/8	106	BLACK
58926BEUF	900 kcmil	1925/24 = 777 kcmil	5/8	1.58	2.17	.31	1.50	5/8	115	YELLOW
54928BEUF 54928BEUF12	1000 kcmil		5/8 7/8	1.58 1.83	2.27 2.37	.30 .30	1.55 1.55	5/8 7/8	125 125	N/A N/A

Tooling: Pg. 79-100  
Die Selector Chart: Pg. 105-109

