Overview

Special Lugs for Special Problems — Angled, Shaped and Trimmed 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, 15°, 30°, 45°, 60° and 90° angle
- Stacking or non-stacking
- Narrow tongue or standard
- Tin, silver, lead, nickel

Thomas & Betts offers an extensive line of copper Blackburn® lugs featuring the Color-Keyed® system 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 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 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-cancelable.

Thomas&Betts

United States
Tel: 901.252.8000
800.816.7809
Fax: 901.252.1354

Technical Services
Tel: 888.862.3289

www.tnb.com

Overview

Order Form

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. 54212 UB 04 16 B SP

54212	UB	04	16	B	SP
2-hole 4/0 AWG copper lug basic CAT. NO.	90° tongue	¼" bolt hole	1" hole spacing	bottom stack	silver plating

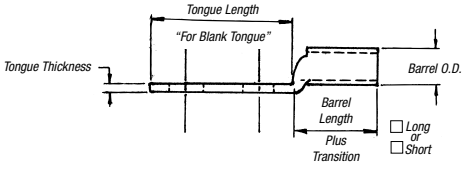
Code Table

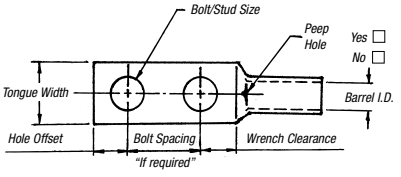
TONGUE SHAPE		BOLT HOLES			BOLT HOLE CENTERS		STACKING		FINISH (PLATING)		INSPECTION HOLE (LONG BARREL)		INSPECTION HOLE (SHORT BARREL)	
TYPE	CODE	SIZE	.020	CODE	DISTANCE .015	CODE	TYPE	CODE	TYPE 1	CODE	I.D.	CODE	I.D.	CODE
15°	UI	#8	.173	02	½"	08	Top	T**	Silver Plate	SP	Peep Hole	PH	Blind End	BE
30°	UT	#10	.204	03	⅝"	10	Bottom	B	Lead Plate	LP				
45°	UF	¼"	.281	04	¾"	12			Nickel Plate	NP				
60°	US	5⁄16"	.344	05	⅞"	14			Plain Finish	PF				
90°	UB	⅜"	.406	06	1"	16			No Marking	NM				
Blank	BT	½"	.531	08	1⅛"	18			Not QTP if					
(No Bolt Hole)		⅝"	.656	10	1¼"	20			suffix other					
		¾"	.812	12	1⅜"	22			than - PF or					
		⅞"	.937	14	1½"	24			standard					
		1"	1.062	16	1⅝"	26			tin plate					
					1¾"	28								
					1⅞"*	30								
					2"*	32								

** These bolt centers not available for bolt holes larger than 13⁄16".*

*** Not required for 45° & 90° top stacking.*

Cable	Code ❑ Weld ❑	
❑ #8	❑ #6	❑ #4
❑ #2	❑ #1	❑ 1/0
❑ 2/0	❑ 3/0	❑ 4/0
❑ 250 kcmil & up (Code Only)		

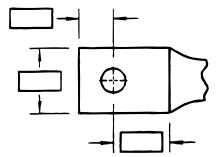




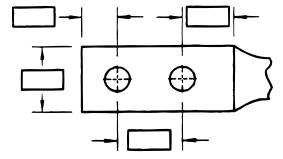
Tongue Specifications— See Chart "A" For Dimensions

Stud Sizes

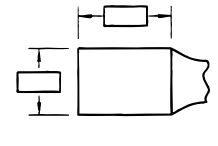
- ❑ #8
- ❑ #10
- ❑ ¼"
- ❑ 5⁄16"
- ❑ ⅜"
- ❑ ½"
- ❑ ⅝"
- ❑ ¾"
- ❑ ⅞"
- ❑ 1"



❑ *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	#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	.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
¼	.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
⅜	.406	.375	.440	.578	.578	.594	.675	.672	.750	.825	.937	1.030	1.125
½	.531	.500	.562	—	—	—	.750	.750	.750	.825	.937	1.030	1.125
⅝	.656	.625	.875	—	—	—	—	—	—	—	.937	1.030	1.125
¾	.812	.750	.770	—	—	—	—	—	—	—	—	—	—
⅞*	.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	.779	1.079
#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	.520	.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	—
1,000	.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

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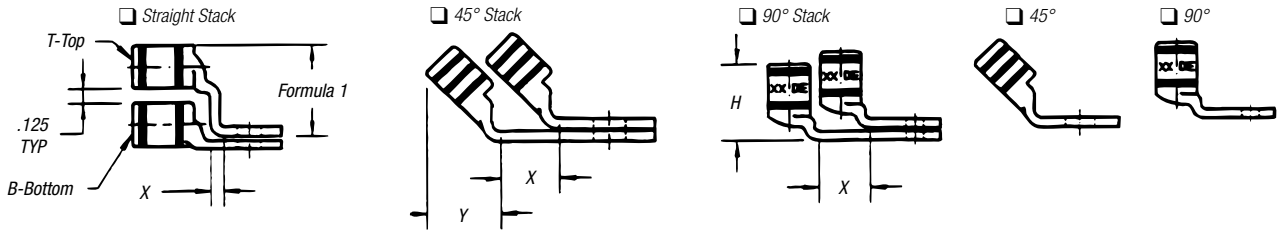
Overview



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

Chart C

	TONGUE WIDTH .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	—	—	—	—	—	—	—	—	—	—	—
¼	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
⅜	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
½	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
⅝	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
¾	1.250	1.355	1.410	1.605	1.745	1.805	1.840	1.935	2.010	2.180	2.265
⅞*	—	—	—	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 available in one-hole lug only.*

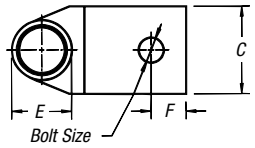
Compression Connectors for Copper Conductor

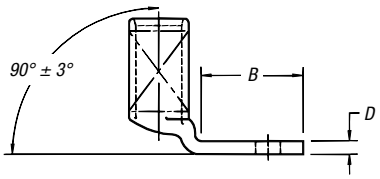
One-Hole Lugs — 90° Long Barrel 600V to 35kV

Material: High-Conductivity Wrought Copper

Finish: Electro Tin Plate

Peep Holes Available!
Add suffix -PH





CAT. NO.	WIRE SIZE CODE	WIRE SIZE FLEX CLASS G, H, I, K, M†	BOLT SIZE	DIMENSIONS (IN.) B	C	D	E	F	DIE CODE	DIE COLOR
54929BEUB	#8 AWG	23 Navy, #8 Flex	#10	.65	.42	.08	.26	¼	21	RED
54930BEUB		37/24 = 14.9 kcmil	¼	.65	.42	.08	.26	¼	21	
54904BEUB	#6 AWG	61/24 = 24.6 kcmil	#10	.65	.44	.08	.30	¼	24	BLUE
54905BEUB		#6 Flex, 30 Navy	¼	.65	.44	.08	.30	¼	24	
54908BEUB	#4 AWG	40–50 Navy, #4 Weld	#10	.65	.52	.10	.37	/4	29	GRAY
54906BEUB		#5, 91/24 = 36.7 kcmil	¼	.65	.52	.10	.37	¼	29	
54933BEUB	#2–3 AWG	125/24 = 50.4 kcmil	#10	.65	.59	.11	.41	¼	33	BROWN
54942BEUB		60 Navy, #3 Weld	5/16	.88	.59	.11	.41	⅜	33	
54945BEUB	#1 AWG	75 Navy, #2 Weld	#10	.65	.68	.11	.47	¼	37	GREEN
54947BEUB		150/24 = 60.5 kcmil	5/16	.88	.68	.11	.47	⅜	37	
54946BEUB	1/0 AWG	100 Navy 225/24 = 90.8 kcmil #1 Weld	#10	.65	.75	.13	.52	¼	42	PINK
54949BEUB			5/16	.88	.75	.13	.52	⅜	42	
54909BEUB			⅜	.93	.75	.13	.52	⅜	42	
54950BEUB			½	1.25	.75	.13	.52	½	42	
54910BEUB	2/0 AWG	125 Navy, 1/0 Weld	⅜	.93	.83	.13	.57	⅜	45	BLACK
54951BEUB		275/24 = 111 kcmil	½	1.25	.83	.13	.57	½	45	
54965BEUB	3/0 AWG	325/24 = 131 kcmil, 150 Navy, 2/0 Weld	½	1.25	.92	.13	.63	½	50	ORANGE
54970BEUB04	4/0 AWG	200 Navy	¼	1.00	1.03	.14	.70	¼	54	PURPLE
54970BEUB06		450/24 = 182 kcmil	⅜	1.13	1.03	.14	.70	⅜	54	
54970BEUB		3/0 Weld	½	1.25	1.03	.14	.70	½	54	
54913BEUB	250 kcmil	550/24 = 222 kcmil, 250 Navy, 4/0 Weld	½	1.25	1.13	.14	.77	½	62	YELLOW
54914BEUB	300 kcmil	300 Navy, 250 Weld, 262, 650/24	½	1.25	1.25	.15	.85	½	66	WHITE
54915BEUB	350 kcmil		½	1.25	1.36	.18	.93	½	71	RED
54916BEUB	400 kcmil	400 Navy, 300 Weld	½	1.25	1.41	.17	.96	½	76	BLUE
54917BEUB		775/24 = 313 kcmil, 350, 259 Str.	⅝	1.58	1.41	.17	.96	⅝	76	
54918BEUB	500 kcmil	925/24 = 373 kcmil	½	1.25	1.61	.22	1.10	½	87	BROWN
54919BEUB		400 Weld, 350, 3458 Str.	⅝	1.58	1.61	.22	1.10	⅝	87	
54921BEUB	600 kcmil	450 I, K	½	1.25	1.75	.24	1.20	½	94	GREEN
54920BEUB		1100/24 = 444 kcmil	⅝	1.58	1.75	.24	1.20	⅝	94	
54922BEUB	750 kcmil	1325/24 = 535 kcmil	½	1.25	1.94	.27	1.33	½	106	BLACK
54923BEUB		500 Weld	⅝	1.58	1.94	.27	1.33	⅝	106	
58984BEUB		1600/24 = 646 kcmil	⅝	1.58	1.94	.27	1.33	⅝	106	
58926BEUB	900 kcmil	1925/24 = 777 kcmil	⅝	1.58	2.17	.31	1.50	⅝	115	YELLOW
54928BEUB	1000 kcmil		⅝	1.58	2.27	.30	1.55	⅝	125	N/A
54928BEUB12			⅞	1.83	2.37	.30	1.55	⅞	125	

† *Contact Technical Services for specific stranding listings*

Tooling: ***pp. F-80–F-100*** *Die Selector Chart:* ***pp. F-101–F-104***