



## Quick Reference Guide PLASTI-GRIP Terminals & Splices

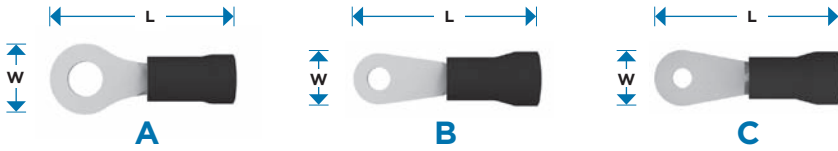
Pre-insulated PLASTI-GRIP solderless terminals and splices are designed specifically to answer the need for inexpensive, insulated electrical terminations. They can be used in almost every type of commercial application and accommodate wire sizes from 22 AWG through 2/0 AWG. Carefully engineered application tooling has been developed to ensure uniformly high quality terminations. Tool and terminal have been designed as a team to promote ease and speed of application and at the same time to provide precise crimping pressure for every wire size. The wire and the terminal barrel form a homogeneous mass of metal, providing a connection of maximum conductivity, tensile strength, and high resistance to corrosion. The quality performance, the facility of installation and the inherent simplicity make them ideal for many industrial applications. PLASTI-GRIP products are available as rings, spades, flanged spaded, slotted rings, splices and several other varieties. Wire ranges for the terminals and splices are 22 AWG through 2/0 and stud sizes from #2 through 1/2".

### KEY FEATURES AND BENEFITS

- Vinyl insulation sleeve provides good dielectric strength and supports the wire insulation so that no bare wire is exposed
- Most product is UL and CSA approved
- Most product rated to 105 degrees C, with an operating voltage of 600 V
- Insulation is 94V-0 rated
- Funneled wire entry on terminal prevents turned back wire strands and permits rapid wire insertion during high speed production
- Serrations in the crimp barrel provide maximum contact and tensile strength after crimping

### PRODUCT APPLICATIONS

- HVAC
- Instruments/Controls
- Lighting
- Switchgear
- Power Supplies
- Panel Boxes
- Transportation
- Motors



**MATERIAL**

Insulation: Vinyl, UL 94V-0  
 Terminal Body: Copper per ASTM B-152  
 Plating: Tin per ASTM B-545

**Ring Tongue Terminals**

Wire Size		Material Thickness		Studsize/ Pin Length Wire Pin		Standard Part Number	Width (W)		Length (L)		Color	Max. Wire Insulation Dia.		Also available in <sup>4</sup>		Remarks					
AWG	mm <sup>2</sup>	inch	mm	U.S.	mm		inch	mm	inch	mm		inch	mm	Tape & Reel	Small Pack						
22-16	0,26-1,65	.033	0,84	2	M2	34140	.218	5,54	.684	17,37	●	.140	3,56	✓	✓	A					
					5	M3	34141	.218	5,54	.684	17,37	●	.140	3,56	✓	✓	A				
						M3	34143	.281	7,14	.809	20,55	●	.140	3,56	✓	-	A				
				6	M3.5	32945	.218	5,54	.684	17,37	●	.125	3,18	✓	✓	A					
					6	M3.5	34142	.218	5,54	.684	17,37	●	.140	3,56	✓	-	A				
						M3.5	32947	.281	7,14	.809	20,55	●	.125	3,18	✓	✓	A				
				6	M3.5	34144	.281	7,14	.809	20,55	●	.140	3,56	✓	✓	A					
						34147	.281	7,14	.809	20,55	●	.140	3,56	✓	✓	A					
						32948	.281	7,14	.809	20,55	●	.125	3,18	✓	-	A					
				8	M4	34145	.281	7,14	.809	20,55	●	.140	3,56	✓	✓	A					
						32951	.312	7,92	.856	21,74	●	.125	3,18	✓	✓	A					
						34148	.312	7,92	.856	21,74	●	.140	3,56	✓	✓	A					
				10		34146	.281	7,14	.809	20,55	●	.140	3,56	✓	✓	A					
						35451	.281	7,14	.809	20,55	●	.170	4,32	✓	-	A					
						32952	.312	7,92	.856	21,74	●	.125	3,18	✓	✓	A					
				10		34149	.312	7,92	.856	21,74	●	.140	3,56	✓	-	A					
						.031	0,80	M5	130014	.315	8,00	.858	21,80	●	.140	3,56	✓	✓	A		
									.033	0,84	1/4	M6	32953	.469	11,91	1.090	27,69	●	.125	3,18	✓
M6	34150	.469	11,91	1.090	27,69	●	.140	3,56				✓	✓	A							
		.031	0,80	1/4	M6	130054	.469	11,91	1.095	27,81	●	.140	3,56	-	✓	A					
						.033	0,84	5/16	M8	34151	.469	11,91	1.090	27,69	●	.140	3,56	✓	✓	A	
										34152	.531	13,49	1.230	31,24	●	.140	3,56	✓	✓	A	
16-14	1,04-2,62	.033	0,84	6	M3.5	34158	.250	6,35	.715	18,16	●	.170	4,32	✓	✓	A					
					M3.5	34159	.343	8,71	.871	22,12	●	.170	4,32	✓	✓	A					
				8	M4	328527	.312	7,92	.825	20,96	●	.170	4,32	✓	✓	A					
						32959	.343	8,71	.871	22,12	●	.145	3,68	✓	✓	A					
						34160	.343	8,71	.871	22,12	●	.170	4,32	✓	✓	A					
				10		32960	.343	8,71	.871	22,12	●	.145	3,68	✓	✓	A					
						34161	.343	8,71	.871	22,12	●	.170	4,32	✓	✓	A					
						.031	0,80	M5	130102	.343	8,70	.878	22,30	●	.193	4,90	✓	✓	A		
				.033	0,84				1/4	M6	34162	.469	11,91	1.090	27,69	●	.170	4,32	✓	✓	A
						.031	0,80	M6		130126	.469	11,90	1.098	27,90	●	.193	4,90	✓	✓	A	
				.033	0,84				5/16	M8	34163	.469	11,91	1.090	27,69	●	.170	4,32	✓	✓	A
						34164	.531	13,49			1.248	31,70	●	.170	4,32	✓	-	A			
		.031	0,80	M10	160136	.657	16,70	1.244	31,60	●	.193	4,90	-	✓	A						
					12-10	2,62-6,64	.042	1,07	6	M3.5	34852	.281	7,14	.953	24,21	●	.250	6,35	✓	✓	A
										M4	34853	.375	9,53	1.098	27,89	●	.250	6,35	✓	✓	A
10						330518	.312	7,92	1.052	26,72	●	.230	5,84	✓	-	A					
						34854	.375	9,53	1.098	27,89	●	.250	6,35	✓	✓	A					
						.039	1,00	M5	160292	.374	9,50	1.098	27,90	●	.252	6,40	✓	✓	A		
1/4	M6	165035	.500	12,70	1.184				30,07	●	.267	6,78	-	✓	A						
		.042	1,07	1/4	M6	34855	.531	13,49	1.327	33,71	●	.250	6,35	✓	✓	A					
						5/16	M8	34856	.531	13,49	1.327	33,71	●	.250	6,35	✓	✓	A			
								M8	160296	.500	12,70	1.185	30,10	●	.248	6,30	-	✓	A		
		.042	1,07	3/8		34173	.593	15,06	1.421	36,09	●	.230	5,84	✓	✓	A					
						.039	1,00	M10	160300	.594	15,09	1.433	36,40	●	.248	6,30	-	✓	A		
									1/2	M12	34837	.750	19,05	1.594	40,49	●	.250	6,35	✓	✓	A
8	6,64-10,50	.043	1,09	8	M4	52041	.478	12,14	1.586	40,28	●	.360	9,14	✓	-	C					
						10	52263	.431	10,95	1.556	39,52	●	.360	9,14	✓	-	B				
						10	52263-1	.431	10,95	1.576	40,03	●	.330	8,38	✓	-	B				
					1/4	M6	52041-1	.478	12,14	1.586	40,28	●	.360	9,14	✓	-	C				

**Ring Tongue Terminals (continued)**

Wire Size		Material Thickness		Studsize/ Pin Length Wire Pin		Standard Part Number	Width (W)		Length (L)		Color	Max. Wire Insulation Dia.		Also available in <sup>4</sup>		Remarks
AWG	mm <sup>2</sup>	inch	mm	U.S.	mm		inch	mm	inch	mm		inch	mm	Tape & Reel	Small Pack	
8	6,64 - 10,50	.043	1,09	5/16	M8	52291	.587	14,91	1.696	43,08	●	.360	9,14	✓	-	C
				3/8		52291-1	.587	14,91	1.696	43,08	●	.360	9,14	✓	-	C
				1/2	M12	52262-1	.875	22,23	1.860	47,24	●	.330	8,38	-	-	A
6	10,5 - 16,8	.048	1,22	8	M4	52042-2	.500	12,70	1.869	47,47	●	.436	11,07	✓	-	C
				10		52265	.468	11,89	1.719	43,66	●	.436	11,07	✓	✓	B
				1/4	M6	52042-1	.500	12,70	1.869	47,47	●	.436	11,07	-	-	C
				5/16	M8	52264	.625	15,88	1.906	48,41	●	.450	11,43	✓	-	B
				3/8		52264-1	.625	15,88	1.906	48,41	●	.450	11,43	✓	-	B
4	16,8 - 26,7	.051	1,30	10		52043-2	.546	13,87	1.948	49,48	●	.450	11,43	✓	-	B
				1/4	M6	52043-3	.546	13,87	1.948	49,48	●	.450	11,43	✓	-	B
				5/16	M8	52266	.679	17,25	2.014	51,16	●	.515	13,08	✓	-	B
				3/8		52266-4	.679	17,25	2.014	51,16	●	.450	11,43	✓	-	B
2	26,7 - 42,4	.060	1,52	1/4	M6	52267-1	.675	17,15	2.071	52,60	●	.560	14,22	-	-	B
				1/4	M6	52267	.675	17,15	2.071	52,60	●	.632	16,05	-	-	B
				5/16	M8	52044-1	.711	18,06	2.089	53,06	●	.632	16,05	-	-	B
				3/8		52044-2	.711	18,06	2.089	53,06	●	.632	16,05	-	-	B



**Multiple Studsize Ring Tongue**

22-16	0,26 - 1,65	.033	0,84	6-10	M3.5 - M5	54774-1	.325	8,26	.969	24,61	●	.125	3,18	✓	-	
16-14	1,04 - 2,62	.033	0,84	6-10	M3.5 - M5	54775-1	.325	8,26	.969	24,61	●	.145	3,68	✓	-	



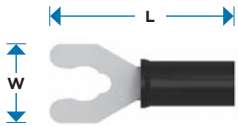
**Spades: Standard Spade**

22-16	0,26 - 1,65	.031	0,79	4	M2.5	165004	.218	5,54	.784	19,91	●	.160	4,06	-	✓					
				6	M3.5	327043	.250	6,35	.858	21,79	●	.140	3,56	✓	✓					
					M3.5	320665	.297	7,54	.765	19,43	●	.140	3,56	✓	✓					
					M4	34155	.375	9,53	.920	23,37	●	.140	3,56	✓	✓					
					M4	165008	.280	7,11	.831	21,11	●	.142	3,61	✓	✓					
16-14	1,04 - 2,62	.033	0,84	10		34156	.375	9,53	.920	23,37	●	.140	3,56	✓	✓					
				6	M3.5	322994	.297	7,54	.765	19,43	●	.145	3,68	✓	✓					
				6	M3.5	34165	.385	9,78	.920	23,37	●	.170	4,32	-	✓					
				8	M4	326741	.297	7,54	.765	19,43	●	.170	4,32	✓	✓					
				8	M4	34166	.385	9,78	.920	23,37	●	.170	4,32	✓	✓					
				8	M4	165012	.250	6,40	.788	20,00	●	.195	4,95	✓	✓					
				10		34167	.385	9,78	.920	23,37	●	.170	4,32	✓	✓					
						.035	0,90		M5	160171	.385	9,78	.933	23,70	●	.193	4,90	-	✓	
				12-10	2,62 - 6,64	.039	1,00		M4.5	165015	.315	8,00	1.238	31,45	●	.252	6,40	-	✓	
								10		34176	.406	10,31	1.095	27,81	●	.230	5,84	✓	✓	
	M5	165017	.530					13,46	1.307	33,19	●	.252	6,40	-	✓					
		.039	1,00	1/4	M6	165019	.530	13,46	1.307	33,19	●	.252	6,40	-	✓					



**Spades: Flanged Spade**

Wire Size		Material Thickness		Studsize/ Pin Length Wire Pin		Standard Part Number	Width (W)		Length (L)		Color	Max. Wire Insulation Dia.		Also available in <sup>4</sup>		Remarks
AWG	mm <sup>2</sup>	inch	mm	U.S.	mm		inch	mm	inch	mm		inch	mm	Tape & Reel	Small Pack	
22-16	0,26-1,65	.033	0,84	6	M3.5	322249	.296	7,52	.749	19,02	●	.140	3,56	✓	✓	
				8	M4	324169	.416	10,57	.842	21,39	●	.140	3,56	✓	✓	
				10		328516	.296	7,52	.749	19,02	●	.140	3,56	✓	✓	
16-14	1,04-2,62	.033	0,84	6	M3.5	324165	.294	7,47	.749	19,02	●	.170	4,32	✓	✓	
				8	M4	53874-1	.284	7,21	.749	19,02	●	.170	4,32	✓	-	
				8	M4	160212	.294	7,47	.749	19,02	●	.173	4,39	-	-	
		.031	0,79		M5	160213	.294	7,47	.749	19,02	●	.173	4,39	-	✓	
12-10	2,62-6,64	.042	1,07	6	M3.5	324581	.296	7,52	1.017	25,83	●	.230	5,84	✓	✓	
				8	M4	324172	.416	10,57	1.017	25,83	●	.230	5,84	✓	✓	
				10		52856	.416	10,57	1.017	25,83	●	.250	6,35	✓	✓	



**Short Spring Spade**

22-16	0,26-1,65	.033	0,84	4	M2.5	52947	.203	5,16	.811	20,60	●	.140	3,56	✓	✓	2
				5	M3	52948	.250	6,35	.811	20,60	●	.140	3,56	✓	✓	2
				6	M3.5	52949	.250	6,35	.811	20,60	●	.140	3,56	✓	✓	2
				6	M3.5	53240-1	.234	5,94	.811	20,60	●	.140	3,56	✓	-	2
				8	M4	53241-1	.244	6,20	.872	22,15	●	.140	3,56	✓	-	2
				10		53242-1	.294	7,47	.920	23,37	●	.140	3,56	✓	-	2
16-14	1,04-2,62	.033	0,84	6	M3.5	52955	.250	6,35	.811	20,60	●	.170	4,32	✓	✓	2
				8	M4	53244-1	.244	6,20	.872	22,15	●	.170	4,32	✓	✓	2
				10		52957	.406	10,31	.920	23,37	●	.170	4,32	✓	✓	2
12-10	2,62-6,64	.042	1,07	6	M3.5	52961	.250	6,35	.959	24,36	●	.200	5,08	✓	✓	2
				8	M4	53247-1	.312	7,92	1.052	26,72	●	.250	6,35	✓	✓	2
				10		52963-2	.406	10,31	1.100	27,94	●	.250	6,35	✓	-	2

**Long Spring Spade**

22-16	0,26-1,65	.033	0,84	6	M3.5	52453	.250		.945	24,00	●	.140	3,56	✓	✓	2
				8	M4	52454	.281		.991	25,17	●	.140	3,56	✓	✓	2
				10		52455	.343		1.017	25,83	●	.140	3,56	✓	✓	2
16-14	1,04-2,62	.033	0,84	6	M3.5	52463	.250		.945	24,00	●	.170	4,32	✓	-	2
				8	M4	52464	.281		.991	25,17	●	.170	4,32	✓	✓	2
				10		52465	.343		1.017	25,83	●	.170	4,32	✓	-	2
12-10	2,62-6,64	.042	1,07	8	M4	52474	.375		1.174	29,82	●	.200	5,08	✓	-	2
				10		52475	.375		1.219	30,96	●	.200	5,08	✓	-	2



**Butt Splices**

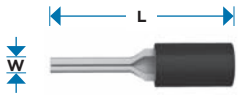
26-22	0,12-0,41	n.a.	n.a.			321026	n.a.	.620	15,75		●	.080	2,03	✓	✓	
22-16	0,26-1,65	n.a.	n.a.			34067	n.a.	1.065	27,05		●	.120	3,05	✓	✓	
						34070	n.a.	1.076	27,33		●	.140	3,56	✓	✓	
						34243	n.a.	1.065	27,05		●	.170	4,32	✓	✓	

**Butt Splices (continued)**

Wire Size		Material Thickness		Studs size/ Pin Length Wire Pin		Standard Part Number	Width (W)		Length (L)		Color	Max. Wire Insulation Dia.		Also available in <sup>4</sup>		Remarks
AWG	mm <sup>2</sup>	inch	mm	U.S.	mm		inch	mm	inch	mm		inch	mm	Tape & Reel	Small Pack	
22-16	0,26 - 1,65	n.a.	n.a.	n.a.	n.a.	34203	n.a.	1.065	27,05	●	.083 x .171	2,11 x 4,34	-	-	1	
16-14	1,04 - 2,62	n.a.	n.a.	n.a.	n.a.	34068	n.a.	1.065	27,05	●	.140	3,56	✓	✓		
		n.a.	n.a.	n.a.	n.a.	34071	n.a.	1.065	27,05	●	.170	4,32	✓	✓		
		n.a.	n.a.	n.a.	n.a.	35244	n.a.	1.065	27,05	●	.215	5,46	✓	✓		
		n.a.	n.a.	n.a.	n.a.	34204	n.a.	1.065	27,05	●	.135 x .245	3,43 x 6,22	✓	✓	1	
12-10	2,62 - 6,64	n.a.	n.a.	n.a.	n.a.	34069	n.a.	1.160	29,46	●	.200	5,08	-	-		
		n.a.	n.a.	n.a.	n.a.	34072	n.a.	1.160	29,46	●	.230	5,84	✓	✓		
		n.a.	n.a.	n.a.	n.a.	34945	n.a.	1.160	29,46	●	.250	6,35	-	-		

**Parallel Splices**

22-16	0,26 - 1,65	n.a.	n.a.	34131	n.a.	.760	19,30	●	.120	3,05	-	-	
		n.a.	n.a.	34132	n.a.	.760	19,30	●	.140	3,56	-	✓	
16-14	1,04 - 2,62	n.a.	n.a.	34133	n.a.	.760	19,30	●	.140	3,56	-	-	
		n.a.	n.a.	34134	n.a.	.760	19,30	●	.170	4,32	-	✓	
12-10	2,62 - 6,64	n.a.	n.a.	34135	n.a.	.843	21,41	●	.200	5,08	-	-	
		n.a.	n.a.	34136	n.a.	.870	22,10	●	.230	5,84	-	✓	



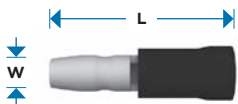
**Wire Pins (formed)**

22-16	0,26 - 1,65	n.a.	.264	6,71	165143	.071	1,80	.807	20,50	●	.146	3,71	-	✓	
			.390	9,91	165167	.071	1,80	.937	23,80	●	.146	3,71	-	✓	
16-14	1,04 - 2,62	n.a.	.264	6,71	165075	.071	1,80	.815	20,70	●	.193	4,90	-	✓	
			.390	9,91	165171	.071	1,80	.933	23,70	●	.193	4,90	-	✓	
12-10	2,62 - 6,64	n.a.	.390	9,91	165085	.102	2,60	1.150	29,21	●	.252	6,40	-	✓	



**Wire Pins (flat)**

22-16	0,26 - 1,65	n.a.	.319	8,10	131443	.116	2,95	.906	23,00	●	.142	3,60	-	✓	
16-14	1,04 - 2,62	n.a.	.319	8,10	131444	.116	2,95	.906	23,00	●	.193	4,90	-	✓	
12-10	2,62 - 6,64	n.a.	.331	8,40	131445	.165	4,20	1.157	29,40	●	.252	6,40	-	✓	



**Shur Plugs**

16-14	1,04 - 2,62	pin	n.a.	324227	.156	3,96	.800	20,32	●	.193	4,90	✓	✓	3
		pin	n.a.	324228	.180	4,57	.773	19,63	●	.193	4,90	-	✓	3

**Remarks**

- A, B, C code referring to shape of terminal, see on top of Ring Tongue Terminals chapter (page 2)
- 1 Oval expansion
- 2 Brass per ASTM B-36
- 3 Receptacles only available in PIDG version. Partnumbers 165399-1 and 165429-1 are preferred

- 4 ✓ Standard Part Number also available in Tape & Reel and/or Small Pack
  - Standard Part Number is not available in Tape & Reel and/or Small Pack
- For all applicable part numbers see specification 404-32020 at te.com**

**For all remarks and additional information see Customer Drawing on [www.te.com](http://www.te.com)**



## FREQUENTLY ASKED QUESTIONS

### Can wires be combined in PLASTI-GRIP terminals?

Yes they can as long total CMA (Circular MIL Area) and insulation diameter fall within specification.

### Are TE PLASTI-GRIP terminals MIL specified?

No, PLASTI-GRIP terminals are not Military qualified; Most PIDG and SOLISTRAND terminals are qualified to SAE AS7928.

### What to choose if you need higher temperature?

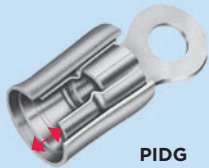
Use STRATO-THERM terminals (catalog 82011).

### Why can PLASTI-GRIP terminals handle 600 V and PIDG terminals just 300 V?

Because there's no additional metallic sleeve to support the crimp (see picture).

### Why is there no crimpheight given for PLASTI-GRIP terminals?

It is the geometry of the TE crimping tools which guarantees the perfect crimp on PLASTI-GRIP terminals.



PIDG



PLASTI-GRIP

## TOOLING

### Commercial tooling

Most terminals (AWG22-10) can be terminated with handtool 58433-3 (58423-1 + 354940-1) or 169400 + 169404.

For Butt-splices only 58433-3 and for Parallel-splices no commercial tooling available.

For wire sizes 8-2 no commercial tooling available.

### Premium tooling

AWG 22 - 16	47386 or 59824-1
AWG 16 - 14	47387 or 59824-1
AWG 12 - 10	59239-4 or 59824-1
AWG 8	59974-1 + 47820 or 59974-1 + 48752-1
AWG 6	59974-1 + 47821 or 59974-1 + 48753-1
AWG 4	59974-1 + 47822 or 59974-1 + 48754-1
AWG 2	59974-1 + 47823 or 59974-1 + 48755-1

### Butt Splices:

AWG 26 - 22	46121
AWG 22 - 16	45160
AWG 16 - 14	45575-1
AWG 12 - 10	59489

### Parallel Splices:

AWG 22 - 16	45449
AWG 16 - 14	45450
AWG 12 - 10	59270

### Service tool

AWG 22 - 10	169060-8
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<http://tooling.te.com/europe/handtools.asp>

<http://www.te.com>

## FOR MORE INFORMATION

### TE Technical Support Center

Internet:	te.com/help
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Mexico:	+52 (0) 55-1106-0800
Latin/S. America:	+54 (0) 11-4733-2200
Germany:	+49 (0) 6251-133-1999
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Netherlands:	+31 (0) 73-6246-999
China:	+86 (0) 400-820-6015

Part numbers in this brochure are RoHS Compliant\*, unless marked otherwise.

\*as defined [www.te.com/leadfree](http://www.te.com/leadfree)

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6-1773465-8 CIS WR 08/2013

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