

OPTIMIZED
FOR USE WITH

turboflex
THE ULTRA FLEXIBLE RUGGED POWER CABLE

PWRLINE HV™

High-current power feeder system and
current return network for metal and
composite fuselage aircraft applications



Unique power feeder system eliminates power line routing and termination issues

For aircraft electrical applications that require discrete routing of 3-phase and DC power lines, Glenair has developed the PwrLine HV. PwrLine HV replaces conventional terminal strips and terminal lugs with a solution that eliminates the issues associated with routing large gauge cables. The PwrLine HV uses a crimp contact system that can accommodate tolerancing variations that routinely occur with large cables. Routing power feeders through the 3-D spatial environment routinely creates installation and terminal lug orientation issues. PwrLine eliminates these problems with its unique rotatable pin / socket architecture and unique in-line insulation packaging.

PwrLine HV is a complete power feeder and current return network system that includes contacts, cables, holding fixtures, mountable connector packages, as well as high-voltage terminal blocks and lugs for reduction of partial discharge and corona. Lightweight, high-durability Duraelectric terminal blocks, hoods, and cable jackets deliver outstanding environmental and insulation performance.



PwrLine HV: a complete power feeder
ecosystem with matched, compatible
components

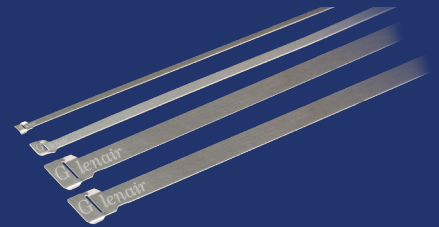
HIGH-CURRENT / HIGH-VOLTAGE PwrLine HV Power Feeder System



For aircraft electrical power distribution systems

PWRLINE HV POWER FEEDER SYSTEM COMPONENTS

- Resolves cable lug misalignment issues
- Eliminates twisted cable (rotational) problems during assembly
- Integrated / compatible power line feeder system used in combination with PowerLoad and other power distribution system connectors



PwrLine HV power feeder system uses Band-Master ATS® termination bands

PWRLINE HV SPLICE KIT TERMINATION / ASSEMBLY PROCEDURE



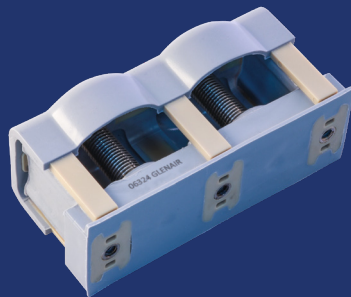
PwrLine HV one-position splice kit contacts



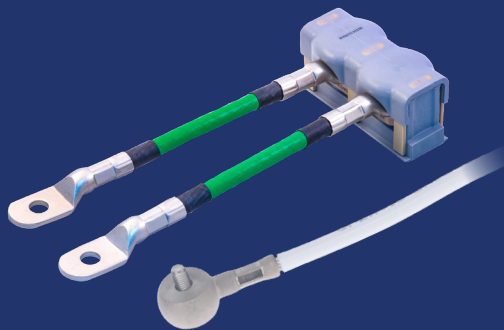
Mated contacts, terminated with Band-Master ATS band...



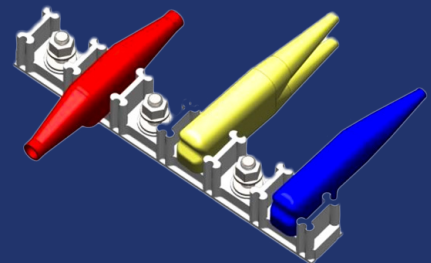
...and environmentally protected with cold-action AutoShrink sleeve



Multiple designs of high-voltage terminal blocks with accommodation for PwrLine HV lugs and/or standard lugs



Conventional and PwrLine HV terminal lugs



Color-coded terminal lug hoods made from high-performance Duraelectric material

HIGH-CURRENT / HIGH-VOLTAGE PwrLine HV Power Feeder System



971-200 High-Power Pin with Socket Crimp Contacts



HOW TO ORDER					
Sample Part Number	971-200	S	2	-4	
Basic Part Number	971-200 High-Power Pin with Socket Crimp Contacts				
Contact	S = Socket P = Pin				
Contact Size	See Table I				
Reduced Wire Size	See Table II (Omit For Standard 1:1 Wire Sizing)				

DIMENSIONS						
ACCOMMODATES SLIM STANDARD OR MICRO SLIM BAND S = SOCKET				P = PIN		
Contact Size	ø A ±.002	ø B ±.003	ø C ±.005	ø D ±.003	E ±.005	Band
8	.141 (3.58)	.253 (6.43)	.305 (7.75)	.263 (6.68)	.547 (13.89)	601-601
6	.178 (4.52)	.310 (7.87)	.342 (8.69)	.312 (7.92)	.797 (20.24)	
4	.225 (5.72)	.332 (8.43)	.416 (10.57)	.375 (9.53)	.547 (13.89)	
2	.283 (7.19)	.421 (10.69)	.505 (12.83)	.462 (11.73)	.610 (15.49)	
0	.357 (9.07)	.514 (13.06)	.609 (15.47)	.563 (14.30)	.669 (16.99)	
00	.406 (10.31)	.570 (14.48)	.688 (17.48)	.610 (15.49)	.797 (20.24)	601-571
0000	.500 (12.70)	.660 (16.76)	.781 (19.84)	.751 (19.08)	.797 (20.24)	

NOTES

- Assembly identified via tag & bag with manufacturer's name and P/N, space permitting.
- Use crimp tool 859-025 (M22520/23-01), die and locator per table
- Use termination kit 680-177 (non EMI) or 680-179 (EMI).

MATERIAL/FINISH:

- Contact body -high conductivity copper/nickel

TABLE II					
Contact Size	Wire Size	Crimp Die		Crimp Locator	
		Glenair	MIL-SPEC	Glenair	MIL-SPEC
8	10	859-026	M22520/23-02	859-173	N/A
8	8			859-029	M22520/23-09
6	8			N/A	M22520/23-10
6	6				
4	6	859-177	M22520/23-03	859-030	M22520/23-11
4	4				
2	4				
2	2	859-027	M22520/23-04	859-170	N/A
0	2	859-169 or 859-270	N/A		
0	2	859-270		859-271	
0	0	859-028	M22520/23-05	859-031	M22520/23-13
00	0			859-231	M22520/23-15
00	00				
0000	00	859-230	M22520/23-06	859-233	M22520/23-16
0000	0000	859-232	M22520/23-07		

HIGH-CURRENT / HIGH-VOLTAGE PwrLine HV Power Feeder System



971-201 High-Power Pin with Socket Threaded Contacts

HOW TO ORDER				
Sample Part Number	971-201	S	-4	K
Basic Part Number	971-201 High-Power Pin with Socket Threaded Contacts			
Contact	S = Socket P = Pin			
Contact Size	See Table I			
Reduced Wire Size	See Table II (Omit For Standard 1:1 Wire Sizing)			

TABLE I							
S = SOCKET				P = PIN			
Contact Size	Ø A ±.001	Ø B ±.001	C Hex	D ±.005	Ø E ±.001	F Thread Class 2B	Band
8	.142 (3.61)	.253 (6.43)	.312 (7.92)	.625 (15.88)	.281 (7.14)	6-32 UNC	601-601
6	.178 (4.52)	.310 (7.87)	.375 (9.53)	.625 (15.88)	.343 (8.71)	8-36 UNF	601-601
4	.225 (5.72)	.332 (8.43)	.406 (10.31)	.625 (15.88)	.386 (9.80)	10-32 UNF	601-601
2	.283 (7.19)	.421 (10.69)	.500 (12.70)	.688 (17.48)	.474 (12.04)	1/4-28 UNF	601-601
0	.357 (9.07)	.514 (13.06)	.594 (15.09)	.673 (17.09)	.563 (14.30)	5/16-24 UNF	601-601
00	.406 (10.31)	.570 (14.48)	.688 (17.48)	.938 (23.83)	.656 (16.66)	3/8-24 UNF	601-571
0000	.500 (12.70)	.660 (16.76)	.843 (21.41)	1.060 (26.92)	.812 (20.62)	7/16-20 UNF	601-571

NOTES

- Assembly identified via tag and bag with manufacturer's name and P/N, space permitting.

MATERIAL/FINISH

- Contact body -high conductivity copper/nickel
- Band and thread insert - CRES/passivate

TABLE II					
Contact Size	Wire Size	Crimp Die		Crimp Locator	
		Glenair	MIL-SPEC	Glenair	MIL-SPEC
8	10	859-026	M22520/23-02	859-173	N/A
8	8			859-029	M22520/23-09
6	8			N/A	M22520/23-10
6	6				
4	6	859-177	M22520/23-03	859-030	M22520/23-11
4	4				
2	4	859-027	M22520/23-04	859-170	N/A
2	2	859-169 or 859-270	N/A		
0	2	859-270			
0	0	859-028	M22520/23-05	859-031	M22520/23-13
00	0			859-231	M22520/23-15
00	00			859-230	
0000	00	859-233	M22520/23-16		
0000	0000			859-232	M22520/23-07

HIGH-CURRENT / HIGH-VOLTAGE PwrLine HV Power Feeder System



971-250 High-Power Busbar Splitter

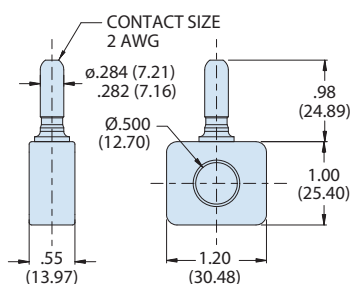
HOW TO ORDER		
Sample Part Number	971-250	-1
Basic Part Number	971-250 High-Power Busbar Splitter	
Dash Number	See Drawings	

MATERIAL/FINISH:

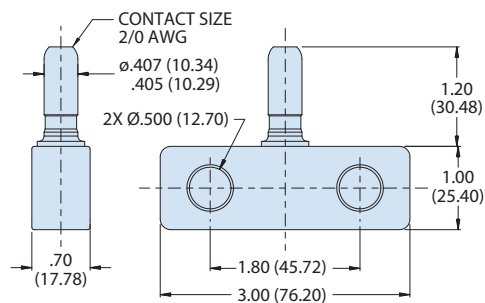
- Assembly identified via tag and bag with manufacturer's name and P/N, space permitting.
- Designed to mate with 971-200 socket contacts.

MATERIAL/FINISH:

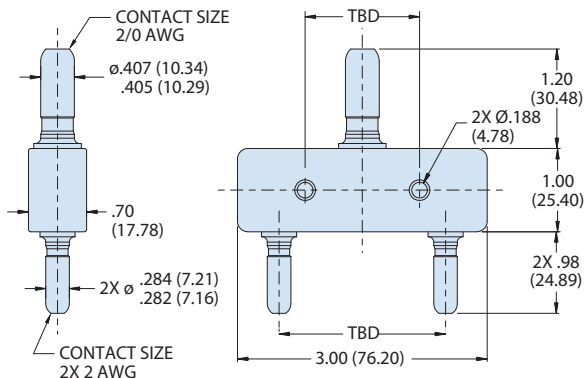
- High conductivity copper/nickel



DASH NO. 1



DASH NO. 2



DASH NO. 3

HIGH-CURRENT / HIGH-VOLTAGE PwrLine HV Power Feeder System



971-251 High-Power Tee Transition

HOW TO ORDER				
Sample Part Number	971-251	-8	K	T
Basic Part Number	971-251 High-Power Tee Transition			
Contact Pin Size	See Table I			
Band	K = Pre-Coiled Band (Omit for None)			
Shrink Boot	T = Autoshrink Boot (Omit for None)			

NOTES

- Assembly identified via tag and bag. Bag in suitable quantities with manufacturer's name and P/N.
- Designed for use with 971-200 PwrLine HV socket contacts.
- For replacement autoshrink and band installation kit, see 680-181.

MATERIAL/FINISH

- Pins - high conductivity copper/nickel
- Body - duraelectric, white/N.A.
- Band(s) - CRES/passivate
- Autoshrink boot - see individual drawings

TABLE I										
Contact Size	Ø A ±.002	Ø B	Ø C	D Max	E Max	F Max	G Max	H	Autoshrink Part Number	Band
8	.141 (3.58)	.340 (8.64)	.500 (12.70)	.938 (23.83)	2.125 (53.98)	1.125 (28.58)	.500 (12.70)	.281 (7.14)	777-100S901-2.50	601-601
4	.225 (5.72)	.438 (11.13)	.625 (15.88)	1.125 (28.58)	2.438 (61.93)	1.250 (31.75)	.562 (14.27)	.344 (8.74)	777-100S902-2.75	601-601
2	.283 (7.19)	.562 (14.27)	.750 (19.05)	1.250 (31.75)	3.125 (79.38)	1.562 (39.67)	.625 (15.88)	.406 (10.31)	777-100S902-3.00	601-601
0	.357 (9.07)	.625 (15.88)	.875 (22.23)	1.375 (34.93)	3.562 (90.47)	1.812 (46.02)	.688 (17.48)	.469 (11.91)	777-100S903-3.50	601-601
00	.406 (10.31)	.688 (17.48)	.938 (23.83)	1.438 (36.53)	3.750 (95.25)	1.875 (47.63)	.719 (18.26)	.500 (12.70)	777-100S903-3.75	601-571
0000	.500 (12.70)	.812 (20.62)	1.062 (26.97)	1.562 (39.67)	3.938 (100.03)	2.000 (50.80)	.781 (19.84)	.562 (14.27)	777-100S904-4.00	601-571

680-177 Non-EMI Assembly Kit

HOW TO ORDER

Sample Part Number	680-177	-8	-2
Basic Part Number	680-177 Non-EMI Assembly Kit		
Contact Size	See Table I		
Autoshrink Insulation Layers	1 = Single Layer 2 = Two Layers		

NOTES

- Assembly identified via tag and bag with manufacturer's name and P/N, space permitting.
- Termination kit is designed for use with 971-200 HV PwrLine contacts.
- For assembly procedure see GAP-205.
- For EMI shielded applications, see 680-179.

MATERIAL/FINISH

- Autoshrink tubing - duraelectric (.062 Wall), grey/N.A.
- Band - CRES/passivate
- Tape - glass cloth, flame retardant/N.A.

TABLE I

(1) GLASS CLOTH TAPE, FLAME RETARDANT SUPPLIED WITH ASSEMBLY			
(1) PRE-COILED BAND SUPPLIED WITH ASSEMBLY			
AUTOSHRINK INSULATION AS SUPPLIED			
FIRST LAYER AUTOSHRINK INSULATION RECOVERED			
SECOND LAYER AUTOSHRINK INSULATION RECOVERED			
Contact Size	Autoshrink Part Number		Band
	First Layer	Second Layer	
8	777-035-0156-5-8	777-004-01-6-8	601-601
6	777-035-0156-5-8	777-004-01-6-8	
4	777-004-01-5-8	777-004-02-6-8	
2	777-004-01-5-8	777-004-02-6-8	
0	777-004-02-5-8	777-004-02-6-8	
00	777-004-02-5-8	777-004-03-6-8	601-571
0000	777-004-02-5-8	777-004-03-6-8	

HIGH-CURRENT / HIGH-VOLTAGE PwrLine HV Power Feeder System



680-179 EMI Assembly Kit

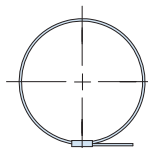
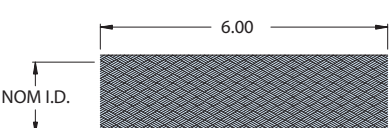
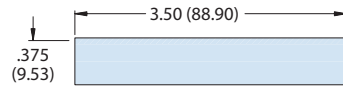
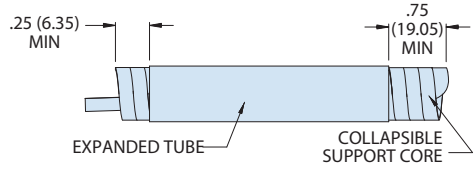
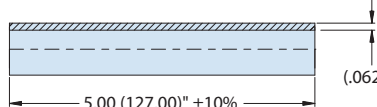
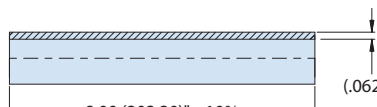
HOW TO ORDER

Sample Part Number	680-179	-8	-L
Basic Part Number	680-179 EMI Assembly Kit		
Contact Size	See Table I		
Braid Material	L = Armorlite (103-051)		

NOTES

- Assembly identified via tag and bag with manufacturer's name and P/N, space permitting.
- Termination kit is designed for use with 971-200 HV PwrLine contacts.
- For assembly procedure see GAP-205.
- For non-EMI shielded applications, see 680-177.

TABLE I

 (3) PRE-COILED BANDS SUPPLIED WITH ASSEMBLY				
 (2) 680-173-XX EMI BANDING A DAPTER				
 (1) BRAID				
 (3) GLASS CLOTH TAPE, FLAME RETARDANT SUPPLIED WITH ASSEMBLY				
 EXPANDED TUBE COLLAPSIBLE SUPPORT CORE AUTOSHRINK INSULATION AS SUPPLIED				
 FIRST LAYER AUTOSHRINK INSULATION RECOVERED				
 SECOND LAYER AUTOSHRINK INSULATION RECOVERED				
Contact Size	Autoshrink Part Number		Band	Braid Nom I.D.
	First Layer	Second Layer		
8	777-035-0156-5-8	777-004-01-8-8	601-601	.500 (12.70)
6	777-035-0156-5-8	777-004-01-8-8		
4	777-004-01-5-8	777-004-02-8-8		.625 (15.88)
2	777-004-01-5-8	777-004-02-8-8		
0	777-004-02-5-8	777-004-02-8-8	601-571	.750 (19.05)
00	777-004-02-5-8	777-004-03-8-8		
0000	777-004-02-5-8	777-004-03-8-8		1.000 (25.40)

680-181 Installation Kit

HOW TO ORDER

Sample Part Number	680-181	-8	G
Basic Part Number	680-181 Installation Kit		
Contact Size	See Table I		
Autoshrink Boot Color	G = Green W = White		

NOTES

- Assembly identified via tag and bag with manufacturer's name and P/N, space permitting.
- Installation kit is designed for use with PwrLine HV and ground return transitions.
- For assembly procedure see GAP-XXX.

MATERIAL/FINISH

- Autoshrink tubing - duraelectric/ N.A.
- Band - CRES/passivate
- Tape - glass cloth, flame retardant/N.A.

TABLE I

TABLE I

A rectangular light blue tape with a width dimension of 3.00 and a thickness dimension of .375.

(1) GLASS CLOTH TAPE, FLAME
RETARDANT SUPPLIED WITH ASSEMBLY

A circular cross-section of a pre-coiled band with a central crosshair and a small tab at the bottom.

(1) PRE-COILED BAND
SUPPLIED WITH ASSEMBLY

A cross-section of a collapsed tube with a corrugated outer wall and a solid inner core. Labels point to the 'EXPANDED TUBE' and 'COLLAPSIBLE SUPPORT CORE'.

AUTOSHRINK AS SUPPLIED

A cross-section of the same tube after it has expanded to its full size, showing a smooth outer wall and a solid inner core.

AUTOSHRINK RECOVERED

Contact Size	Autoshrink Part Number	Band
8	777-100Sx01-2.50	601-601
4	777-100Sx02-2.75	
2	777-100Sx02-3.00	
0	777-100Sx03-3.50	
00	777-100Sx03-3.75	601-571
0000	777-100Sx04-4.00	