

Southwire VFD Cable Gland



Images not to scale.

CONSTRUCTION:

1. **Cap:** Nickel plated brass gland cap sized for body .
2. **Seal:** Chloroprene rubber (CR) fitting providing an ingress protection rating of IP 68 (5 bar, 30 seconds).
3. **Clamping insert:** Polyamide 6 (PA6) formed insert.
4. **Pressure Ring** Nickel plated brass ring ensures the contact spring contacts the cable shield securely.
5. **Contact Spring:** Copper alloy provides a low impedance at high frequency connection to the shield.
6. **Body:** Nickel plated brass gland body,
7. **O-Ring:** Nitrile rubber (NBR)
8. **Lock Nut (included):** Nickel plated brass, hexagonal, with teeth to cut into painted surface of enclosures for optimal EMC bonding. Glands available in metric or NPT thread sizes.

APPLICATIONS AND FEATURES:

Southwire's Variable Frequency Drive (VFD) Cable Gland provides the means to properly terminate a VFD cable's overall shield. The gland can be used on Southwire's copper tape shield VFD cables and copper braid/aluminum foil shield VFD cables. Drive manufacturers stress the importance of proper shield termination to help prevent premature motor failure due to bearing fluting as well as operational issues associated with communication and control equipment located in close proximity to uncontrolled common mode currents. The VFD EMC Cable Gland provides a low impedance path at high frequency for common mode current created by the drive to the inverter via the shield and minimizes potential problems.

Proper termination requires cable termination at both the drive and the motor end of the cable. Southwire's VFD Cable Gland may be used on both copper tape and copper braid shields. Each gland includes a properly sized lock nut. Consult installation instructions for further details. Southwire also offers VFD Cable Termination kits ([SPEC 85451](#)) as another cable termination option.

Operating Temperature: -20°C to 100°C continuous, -40°C to 150°C intermittent

Ingress Protection Rating: IP 68 (5 bar, 30 seconds)

Flammability: Meets UL 94 V-2 flame test requirements

Approvals: -UL 514B; UL 50E Type 4X; CSA 22.2 No. 18.3-12; CSA 22.2 No.94.2-1S; DIN EN 62444

Thread Type: Metric (EN 60423); NPT (ANSI B1.20.1)

Southwire recommends using the following Southwire Tools during termination kit installation:

- [PP6 6-1/25" Pump Pliers](#) (stock #589938)
- [DCP8 Diagonal Cutters](#) (stock #58993301)
- [LNP7 Long Nose Pliers](#) (stock #58992701)
- [ES001 Electricians Scissors](#) (stock #58283501)
- [UTILAR Utility Knife](#) (stock #65029201)



These and more Southwire tools can be found at: www.southwiretools.com

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Table 1 – VFD Cable Gland Information (imperial units)

Stock Code	Quantity per Bag	Outer Thread	Gland									Lock Nut				Listing		
			Clamping Range OD	Overall Shield OD	Outer Thread Length (TL)	Spanner Body (A) & Cap (B) Width	Outer Diameter (C)	Max Height (H)	Recommended Cap Torque	Thread Outer Diameter	Clearance Hole Diameter	Recommended Nut Torque	Spanner Width (E)	Outer Diameter (D)	Height			
			Min - Max inch	Min - Max inch	Nom inch	Nom inch	Nom inch	Nom inch	Nom ft-lbs.	Max inch	Max inch	Nom ft-lbs.	Nom inch	Nom inch	Nom inch			
67590140	10	M12 x 1.5	0.118 - 0.256	0.079 - 0.197	0.236	0.551	0.610	1.181	3.7	0.472	0.480	3.7	0.591	0.650	0.130	UL [®] c US		
67590240	10	M16 x 1.5	0.197 - 0.394	0.138 - 0.315	0.236	0.787	0.866	1.378	4.4	0.630	0.638	4.4	0.748	0.827	0.138			
67590340	10	M20 x 1.5	0.295 - 0.551	0.217 - 0.453	0.236	0.945	1.055	1.634	4.4	0.787	0.992	4.4	0.945	1.043	0.146			
67590440	10	M20S x 1.5	0.236 - 0.472	0.177 - 0.394	0.315	0.866	0.965	1.319	7.4	0.787	0.795	4.4	0.945	1.043	0.146			
67590540	10	M25 x 1.5	0.394 - 0.709	0.276 - 0.551	0.315	1.181	1.299	1.713	11.1	0.984	0.992	4.4	1.181	1.299	0.146			
67590640	10	M32 x 1.5	0.63 - 0.984	0.472 - 0.787	0.354	1.575	1.752	2.165	16.3	1.260	1.268	4.4	1.417	1.555	0.157			
67590740	5	M40 x 1.5	0.866 - 1.26	0.709 - 1.063	0.354	1.969	2.185	2.461	31.1	1.575	1.583	8.9	1.811	2.008	0.181		UL [®] c US	
67590840	5	M50 x 1.5	1.181 - 1.496	1.024 - 1.339	0.354	2.283	2.520	2.913	31.1	1.969	1.980	13.3	2.362	2.598	0.220			
67590940	5	M63 x 1.5	1.339 - 1.732	1.181 - 1.575	0.551	2.520	2.953	2.362	31.8	2.480	2.492	18.5	2.756	3.031	0.264			
67591040	5	M63L x 1.5	1.457 - 2.087	1.299 - 1.929	0.394	2.953	3.268	2.953	74.0	2.480	2.492	18.5	2.756	3.031	0.264			
65240640	1	M75 x 1.5	1.811 - 2.441	1.654 - 2.283	0.354	3.150	3.504	2.087	••	2.953	2.961	22.1	3.150	3.528	0.276			
NPT	#	Size	inch	inch	inch	inch	inch	inch	ft-lbs.	inch	inch	ft-lbs.	inch	inch	inch			UL [®] c US
67591140	10	1/4"	0.118 - 0.256	0.079 - 0.197	0.453	0.55/0.59	0.650	1.181	3.7	0.539	0.437	2.2	0.669	0.740	0.217			
67591240	10	3/8"	0.197 - 0.394	0.138 - 0.315	0.453	0.787	0.866	1.378	4.4	0.675	0.689	2.2	0.866	0.945	0.224			
67591340	10	1.2" S	0.236 - 0.472	0.177 - 0.394	0.591	0.866	0.965	1.555	4.4	0.840	0.846	2.2	0.945	1.043	0.264			
67591440	10	1/2"	0.295 - 0.551	0.217 - 0.453	0.591	0.945	1.055	1.634	7.4	0.840	0.846	3.0	0.945	1.043	0.264			
67591540	10	3/4"	0.394 - 0.709	0.276 - 0.551	0.591	1.181	1.299	1.713	11.1	1.050	1.063	4.1	1.181	1.299	0.256			
67591640	10	1"	0.63 - 0.984	0.472 - 0.787	0.787	1.575	1.752	2.126	16.3	1.315	1.339	5.9	1.575	1.752	0.299			
67591740	5	1 1/4"	0.866 - 1.26	0.709 - 1.063	0.787	1.969	2.185	2.480	31.1	1.660	1.673	7.4	1.969	2.185	0.299			
67591840	5	1 1/2"	1.181 - 1.496	1.024 - 1.339	0.866	2.283	2.520	2.874	31.1	1.900	1.909	7.4	2.283	2.520	0.343			
67591940	5	2"	1.339 - 1.732	1.181 - 1.575	0.866	2.520	2.953	2.874	31.8	2.375	2.626	18.5	2.756	3.071	0.425			
65240740	1	2 1/2"	1.811 - 2.441	1.654 - 2.283	0.827	3.150	3.150	3.504	••	2.875	2.894	22.1	3.150	3.504	0.394			

- Spanner cap width is 0.550 inches Spanner body width is 0.590 inches.
- Three seal gland. Torque for installing with one, two or three seals is 110, 129, or 136 ft-lbs. respectively.



Table 2 – VFD Cable Gland Information (metric units)

Stock Code	Quantity	Quantity per Bag	Gland									Lock Nut				Listing		
			Clamping Range OD	Overall Shield OD	Outer Thread Length (TL)	Spanner Body (A) & Cap (B) Width	Outer Diameter (C)	Max Height (H)	Recommended Cap Torque	Thread Outer Diameter	Clearance Hole Diameter	Recommended Nut Torque	Spanner Width (E)	Outer Diameter (D)	Height			
			Min - Max mm	Min - Max mm	Nom mm	Nom mm	Nom mm	Nom mm	Nom Nm	Max mm	Max mm	Nom Nm	Nom mm	Nom mm	Nom mm			
67590140	10	M12 x 1.5	3 - 6.5	2 - 5	6.0	14	15.5	30.0	5.0	12.0	12.2	5.0	15.0	16.5	3.3	UL [®] c US		
67590240	10	M16 x 1.5	5 - 10	3.5 - 8	6.0	20	22.0	35.0	6.0	16.0	16.2	6.0	19.0	21.0	3.5			
67590340	10	M20 x 1.5	7.5 - 14	5.5 - 11.5	6.0	24	26.8	41.5	6.0	20.0	25.2	6.0	24.0	26.5	3.7			
67590440	10	M20S x 1.5	6 - 12	4.5 - 10	8.0	22	24.5	33.5	10.0	20.0	20.2	6.0	24.0	26.5	3.7			
67590540	10	M25 x 1.5	10 - 18	7 - 14	8.0	30	33.0	43.5	15.0	25.0	25.2	6.0	30.0	33.0	3.7			
67590640	10	M32 x 1.5	16 - 25	12 - 20	9.0	40	44.5	55.0	22.0	32.0	32.2	6.0	36.0	39.5	4.0			
67590740	5	M40 x 1.5	22 - 32	18 - 27	9.0	50	55.5	62.5	42.0	40.0	40.2	12.0	46.0	51.0	4.6		UL [®] c US	
67590840	5	M50 x 1.5	30 - 38	26 - 34	9.0	58	64.0	74.0	42.0	50.0	50.3	18.0	60.0	66.0	5.6			
67590940	5	M63 x 1.5	34 - 44	30 - 40	14.0	64	75.0	60.0	43.0	63.0	63.3	25.0	70.0	77.0	6.7			
67591040	5	M63L x 1.5	37 - 53	33 - 49	10.0	75	83.0	75.0	100	63.0	63.3	25.0	70.0	77.0	6.7			
65240640	1	M75 x 1.5	46 - 62	42 - 58	9.0	80	89.0	53.0	••	75.0	75.2	30.0	80.0	89.6	7.0			
NPT	#	Size	mm	mm	mm	mm	mm	mm	Nm	mm	mm	Nm	mm	mm	mm			UL [®] c US
67591140	10	1/4"	3 - 6.5	2 - 5	11.5	14/15•	16.5	30.0	5.0	13.70	11.1	3.0	17.0	18.8	5.5			
67591240	10	3/8"	5 - 10	3.5 - 8	11.5	20	22.0	35.0	6.0	17.15	17.5	3.0	22.0	24.0	5.7			
67591340	10	1.2" S	6 - 12	4.5 - 10	15.0	22	24.5	39.5	6.0	21.34	21.5	3.0	24.0	26.5	6.7			
67591440	10	1/2"	7.5 - 14	5.5 - 11.5	15.0	24	26.8	41.5	10.0	21.34	21.5	4.0	24.0	26.5	6.7			
67591540	10	3/4"	10 - 18	7 - 14	15.0	30	33.0	43.5	15.0	26.67	27.0	5.5	30.0	33.0	6.5			
67591640	10	1"	16 - 25	12 - 20	20.0	40	44.5	54.0	22.0	33.40	34.0	8.0	40.0	44.5	7.6			
67591740	5	1 1/4"	22 - 32	18 - 27	20.0	50	55.5	63.0	42.0	42.16	42.5	10.0	50.0	55.5	7.6			
67591840	5	1 1/2"	30 - 38	26 - 34	22.0	58	64.0	73.0	42.0	48.26	48.5	10.0	58.0	64.0	8.7			
67591940	5	2"	34 - 44	30 - 40	22.0	64	75.0	73.0	43.0	60.33	66.7	25.0	70.0	78.0	10.8			
65240740	1	2 1/2"	46 - 62	42 - 58	21.0	80	80.0	89.0	••	73.03	73.5	30.0	80.0	89.0	10.0			

- Spanner cap width is 14mm; Spanner Body Width is 15 mm.
- Three seal gland. Torque for installing with one, two or three seals is 150, 175, or 185 Nm respectively

