

# 400 Hz 3 Phase MIL-PRF-27F Power Transformers

- Military Designation No. TF5S03ZZ (Sizes 1 through 6)
- Military Designation No. TF5S03YY (Sizes 7 through 10)
- Designed to meet the light weight and high temperature requirements of airborne, shipboard, and military electronics
- DELTA or WYE selectable outputs
- 4 Different inputs available
- 90 VA to 1000 VA



## Specifications

### Input Primary:

WYE: 115V L-Com Standard  
 WYE: 200 V L-L Standard  
 DELTA: 115 V L-L Suffix A\*  
 DELTA: 200 V L-L Suffix B\*

NOTE: For Delta input, consult factory for QPL number.

### Input Frequency:

400 Hz ± 20 Hz, 3 phase.

\*NOTE: To order a DELTA input voltage, add the suffix A or B (as applicable) to the model number, e.g., 4D28-270A or 4D28-270B.

### Regulation:

10% or less no load to full load.

### Secondary Voltage Tolerance:

Within 5% when measured at full load and listed input.

### Dielectric Withstanding Voltage:

1500 V rms.

### Efficiency:

Ranges from 90% to 95% typical.

### Operating Ambient Temperature:

80° C maximum.

### Construction:

To MIL-PRF-27F\* Grade 5, Class S.

### Environment:

Encapsulated to meet MIL-STD 810, including vibration, shock, sand, dust, humidity, saltspray, fungus, sunshine, rain, explosion. NOTE: For high altitude operation, encapsulate terminals.

### Output Secondary:

See output voltage and current of specific models listed.

Other outputs and/or inputs available upon request

\* Superseded MIL-T-27

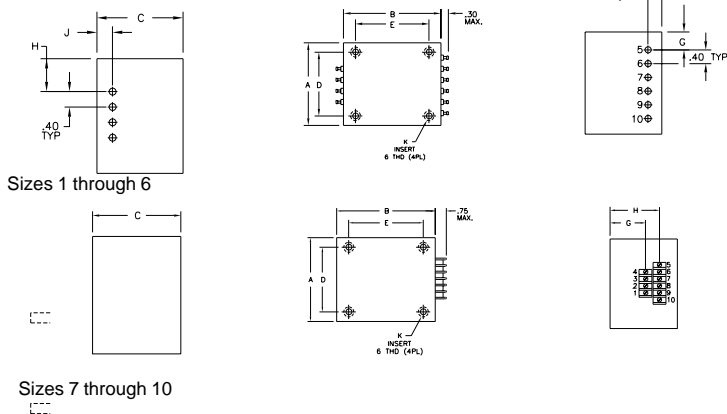
## Dimensions

Size	A	B	C	D	E	F	G	H	J	K
1	2.90	2.40	1.45	2.50	2.00	.20	.45	.85	.20	6-32
2	2.90	2.70	1.55	2.50	2.30	.20	.45	.85	.20	6-32
3	3.65	2.80	1.70	3.15	2.30	.25	.82	1.22	.20	8-32
4	3.65	3.00	1.70	3.15	2.50	.25	.82	1.22	.20	8-32
5	3.65	3.00	1.95	3.15	2.50	.25	.82	1.22	.20	8-32
6	4.95	3.20	1.90	4.45	2.70	.25	1.47	1.87	.20	8-32
7	5.31	4.50	2.00	4.31	3.50	.50	.62	1.37	-	10-32
8	5.62	4.20	2.31	4.62	3.20	.50	.78	1.37	-	10-32
9	5.31	4.75	2.31	4.31	3.75	.50	.78	1.53	-	10-32
10	6.12	4.75	2.31	5.12	3.75	.50	.78	1.53	-	10-32

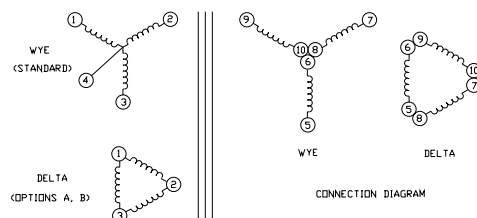
Load current more than 20 amps: Dimension H = 1.56  
 Dimension Tolerance: D, E ±.02 all others ±.04

NOTE: Sizes 7 -10 only:  
 Up to 20 A - No. 6 terminal screws  
 Above 20 A - No. 8 terminal screws

## Mechanical Drawings



## Circuit Diagram



Input Connection:	Output Connection:
WYE L-Com: 1, 2, 3, Line 4 Com.	WYE L-Com: connect 6-8-10 Load 5-6, 7-6, 9-6
WYE L-L: 1, 2, 3 (Pin 4 not used)	WYE L-L: connect 6-8-10 Load 5, 7, 9
DELTA L-L: 1, 2, 3 (Pin 4 absent)	DELTA L-L: connect 6-9, 10-7, 8-5 Load 5, 7, 9



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## 400 Hz 3 Phase MIL-PRF-27F Power Transformers

DELTA: L to L (3 wire)      WYE: L to L (3 wire)  
 WYE: L to COM. (4 wire)

Model Number	Std. Input QPL Number*	Volts RMS	Load Current AMPS	Volts RMS	Load Current AMPS	Size	Weight Lbs. (Typ.)
4D5-90	M27/344-01	5	6.00	8.66	3.47	1	1.3
4D5-120	M27/345-01	5	8.00	8.66	4.62	2	1.6
4D5-150	M27/346-01	5	10.00	8.66	5.78	3	2.3
4D5-200	M27/347-01	5	13.34	8.66	7.70	4	2.4
4D5-300	**	5	20.00	8.66	11.55	7	6.1
4D5-450	**	5	30.00	8.66	17.32	8	6.8
4D12-90	M27/344-02	12	2.50	20.8	1.45	1	1.3
4D12-120	M27/345-02	12	3.34	20.8	1.93	2	1.6
4D12-150	M27/346-02	12	4.17	20.8	2.41	3	2.3
4D12-200	M27/347-02	12	5.56	20.8	3.21	4	2.4
4D12-270	M27/348-01	12	7.50	20.8	4.33	5	2.8
4D12-375	M27/349-01	12	10.42	20.8	6.02	6	3.8
4D12-500	**	12	13.88	20.8	8.01	7	6.1
4D12-650	**	12	18.05	20.8	10.42	8	6.8
4D12-800	**	12	22.22	20.8	12.82	9	7.6
4D12-1000	**	12	27.78	20.8	16.02	10	8.1
4D15-90	M27/344-03	15	2.00	26.0	1.16	1	1.3
4D15-120	M27/345-03	15	2.67	26.0	1.54	2	1.6
4D15-150	M27/346-03	15	3.34	26.0	1.93	3	2.3
4D15-200	M27/347-03	15	4.45	26.0	2.57	4	2.4
4D15-270	M27/348-02	15	6.00	26.0	3.47	5	2.8
4D15-375	M27/349-02	15	8.34	26.0	4.82	6	3.8
4D15-500	**	15	11.11	26.0	6.41	7	6.1
4D15-650	**	15	14.44	26.0	8.33	8	6.8
4D15-800	**	15	17.78	26.0	10.25	9	7.6
4D15-1000	**	15	22.23	26.0	12.82	10	8.1
4D20-90	M27/344-04	20	1.50	34.6	.87	1	1.3
4D20-120	M27/345-04	20	2.00	34.6	1.16	2	1.6
4D20-150	M27/346-04	20	2.50	34.6	1.45	3	2.3
4D20-200	M27/347-04	20	3.34	34.6	1.93	4	2.4
4D20-270	M27/348-03	20	4.50	34.6	2.60	5	2.8
4D20-375	M27/349-03	20	6.25	34.6	3.61	6	3.8
4D20-500	**	20	8.33	34.6	4.81	7	6.1
4D20-650	**	20	10.83	34.6	6.26	8	6.8
4D20-800	**	20	13.33	34.6	7.70	9	7.6
4D20-1000	**	20	16.67	34.6	9.63	10	8.1
4D28-90	M27/344-05	28	1.08	48.5	.62	1	1.3
4D28-120	M27/345-05	28	1.43	48.5	.83	2	1.6
4D28-150	M27/346-05	28	1.79	48.5	1.03	3	2.3
4D28-200	M27/347-05	28	2.38	48.5	1.38	4	2.4
4D28-270	M27/348-04	28	3.22	48.5	1.86	5	2.8
4D28-375	M27/349-04	28	4.47	48.5	2.58	6	3.8
4D28-500	**	28	5.95	48.5	3.43	7	6.1
4D28-650	**	28	7.74	48.5	4.46	8	6.8
4D28-800	**	28	9.52	48.5	5.50	9	7.6
4D28-1000	**	28	11.91	48.5	6.87	10	8.1
4D48-90	M27/344-06	48	.63	83.1	.36	1	1.3
4D48-120	M27/345-06	48	.84	83.1	.49	2	1.6
4D48-150	M27/346-06	48	1.05	83.1	.61	3	2.3
4D48-200	M27/347-06	48	1.39	83.1	.81	4	2.4
4D48-270	M27/348-05	48	1.88	83.1	1.09	5	2.8
4D48-375	M27/349-05	48	2.61	83.1	1.51	6	3.8
4D48-500	**	48	3.47	83.1	2.00	7	6.1
4D48-650	**	48	4.51	83.1	2.60	8	6.8
4D48-800	**	48	5.56	83.1	3.20	9	7.6
4D48-1000	**	48	6.95	83.1	4.01	10	8.1
4D115-90	M27/344-07	115	.26	200.0	.15	1	1.3
4D115-120	M27/345-07	115	.35	200.0	.20	2	1.6
4D115-150	M27/346-07	115	.44	200.0	.25	3	2.3
4D115-200	M27/347-07	115	.58	200.0	.34	4	2.4
4D115-270	M27/348-06	115	.79	200.0	.45	5	2.8
4D115-375	M27/349-06	115	1.09	200.0	.63	6	3.8
4D115-500	**	115	1.45	200.0	.83	7	6.1
4D115-650	**	115	1.88	200.0	1.08	8	6.8
4D115-800	**	115	2.32	200.0	1.33	9	7.6
4D115-1000	**	115	2.90	200.0	1.66	10	8.1

\* For suffix "A" and "B" DELTA numbers call factory.

\*\* QPL Testing underway



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