

FILTER INDUCTORS

APPLICATION FEATURES

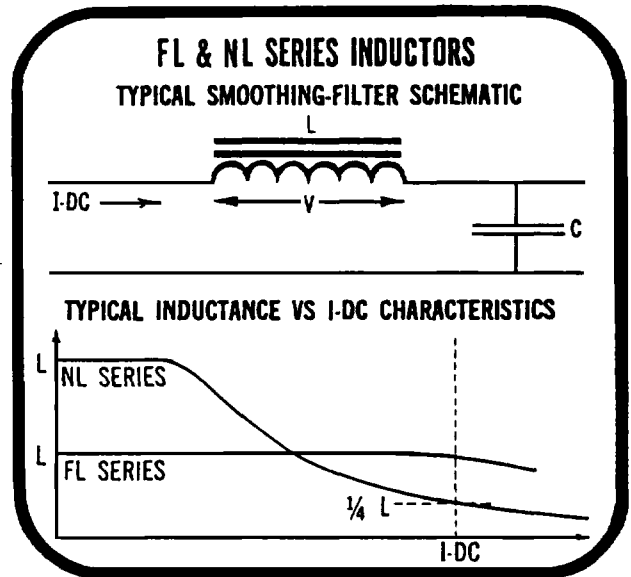
Miniature inductors, primarily for use in DC power-supply smoothing-filter applications, are offered in two series (1) the linear FL SERIES and (2) the "swinging" NL SERIES.

The FL SERIES inductors are especially suited for requirements where the DC will be 50 to 100% of I-DC rated. They will provide the most inductance in this range.

The NL SERIES inductors are generally more suitable where the DC will vary between 10 to 100% of I-DC rated. The inductance at rated I-DC is approximately 1/4 of the value at I-DC = 0.

Both SERIES are listed by size in the tables of specifications. The V, I-DC, and R are the same for similar part numbers, only the inductance values and characteristics are different.

All parts are available in any of the MCE Miniature Line package options (OA, OB, EA, CA, etc.).



SIZE 25

FL SERIES		V-RMS VOLTS 60 CPS	I-DC MA	R OHMS ±20%	NL SERIES	
ELEC. PART NO.	L ±25% HENRIES				L MIN. HENRIES	ELEC. PART NO.
25FL20	.00083	.240	2040	.09	.0017	25NL20
25FL21	.0013	.310	1620	.15	.0027	25NL21
25FL22	.0021	.385	1280	.23	.0044	25NL22
25FL23	.0033	.485	1020	.36	.0069	25NL23
25FL24	.0053	.600	808	.59	.011	25NL24
25FL25	.0083	.800	641	.91	.017	25NL25
25FL26	.013	1.00	508	1.4	.028	25NL26
25FL27	.021	1.25	403	2.2	.044	25NL27
25FL28	.033	1.55	320	3.5	.070	25NL28
25FL29	.053	1.95	253	5.4	.11	25NL29
25FL30	.083	2.45	201	8.7	.18	25NL30
25FL31	.13	3.10	159	14	.28	25NL31
25FL32	.21	3.90	126	22	.45	25NL32
25FL33	.33	4.95	100	36	.71	25NL33
25FL34	.53	6.00	80	57	1.1	25NL34
25FL35	.83	8.00	63	89	1.8	25NL35
25FL36	1.3	10.0	50	140	2.9	25NL36
25FL37	2.1	12.5	40	220	4.6	25NL37
25FL38	3.3	16	31	360	7.2	25NL38
25FL39	5.3	20	25	570	11.	25NL39

SIZE 37

FL SERIES		V-RMS VOLTS 60 CPS	I-DC MA	R OHMS ±20%	NL SERIES	
ELEC. PART NO.	L ±25% HENRIES				L MIN. HENRIES	ELEC. PART NO.
37FL18	.0010	.465	3250	.059	.0019	37NL18
37FL19	.0016	.600	2580	.092	.0031	37NL19
37FL20	.0025	.750	2040	.150	.0048	37NL20
37FL21	.0040	.900	1620	.23	.0077	37NL21
37FL22	.0063	1.15	1280	.36	.012	37NL22
37FL23	.010	1.45	1020	.59	.019	37NL23
37FL24	.016	1.85	808	.93	.031	37NL24
37FL25	.025	2.35	641	1.5	.049	37NL25
37FL26	.040	2.95	508	2.3	.078	37NL26
37FL27	.063	3.70	403	3.5	.12	37NL27
37FL28	.10	4.70	320	5.8	.20	37NL28
37FL29	.16	6.00	253	9.2	.31	37NL29
37FL30	.25	7.50	201	15	.50	37NL30
37FL31	.40	9.5	159	23	.79	37NL31
37FL32	.63	12	126	37	1.3	37NL32
37FL33	1.0	15	100	58	2.0	37NL33
37FL34	1.6	19	80	92	3.2	37NL34
37FL35	2.5	24	63	150	5.1	37NL35
37FL36	4.0	30	50	230	8	37NL36
37FL37	6.3	38	40	380	13	37NL37
37FL38	10	48	31	570	20	37NL38
37FL39	16	60	25	930	32	37NL39

SIZE 50

FL SERIES		V-RMS VOLTS 60 CPS	I-DC MA	R OHMS ±20%	NL SERIES	
ELEC. PART NO.	L ±25% HENRIES				L MIN. HENRIES	ELEC. PART NO.
50FL17	.0021	1.00	4100	.066	.0027	50NL17
50FL18	.0033	1.25	3250	.11	.0043	50NL18
50FL19	.0052	1.55	2580	.17	.0068	50NL19
50FL20	.0083	1.95	2040	.26	.011	50NL20
50FL21	.013	2.45	1620	.41	.017	50NL21
50FL22	.021	3.10	1280	.66	.027	50NL22
50FL23	.033	3.90	1020	1.1	.043	50NL23
50FL24	.052	4.90	808	1.6	.068	50NL24
50FL25	.083	6.00	641	2.6	.11	50NL25
50FL26	.13	8.00	508	4.3	.17	50NL26
50FL27	.21	10.0	403	6.7	.28	50NL27
50FL28	.33	12.5	320	11	.44	50NL28
50FL29	.52	15.5	253	17	.70	50NL29
50FL30	.83	20.0	201	28	1.1	50NL30
50FL31	1.3	25.0	159	45	1.8	50NL31
50FL32	2.1	31.5	126	68	2.8	50NL32
50FL33	3.3	39.5	100	110	4.5	50NL33
50FL34	5.2	50	80	190	7.1	50NL34
50FL35	8.3	65	63	270	11	50NL35
50FL36	13	80	50	430	18	50NL36
50FL37	21	100	40	670	29	50NL37
50FL38	33	125	31	1100	45	50NL38
50FL39	52	160	25	1700	72	50NL39

SIZE 62

FL SERIES		V-RMS VOLTS 60 CPS	I-DC MA	R OHMS ±20%	NL SERIES	
ELEC. PART NO.	L ±25% HENRIES				L MIN. HENRIES	ELEC. PART NO.
62FL16	.0023	1.40	5170	.059	.0035	62NL16
62FL17	.0036	1.75	4100	.093	.0056	62NL17
62FL18	.0058	2.20	3250	.14	.0087	62NL18
62FL19	.0091	2.75	2580	.22	.014	62NL19
62FL20	.015	3.50	2040	.35	.022	62NL20
62FL21	.023	4.40	1620	.56	.035	62NL21
62FL22	.036	5.50	1280	.89	.056	62NL22
62FL23	.058	7.0	1020	1.4	.088	62NL23
62FL24	.091	9.0	808	2.2	.14	62NL24
62FL25	.15	11.0	641	3.6	.22	62NL25
62FL26	.23	14.0	508	5.7	.36	62NL26
62FL27	.36	17.5	403	8.9	.57	62NL27
62FL28	.58	22.5	320	14	.9	62NL28
62FL29	.91	28.0	253	22	1.4	62NL29
62FL30	1.5	35.5	201	36	2.3	62NL30
62FL31	2.3	45	159	59	3.6	62NL31
62FL32	3.6	55	126	90	5.7	62NL32
62FL33	5.8	70	100	150	9.2	62NL33
62FL34	9.1	90	80	240	15	62NL34
62FL35	15	115	63	360	23	62NL35
62FL36	23	140	50	580	37	62NL36
62FL37	36	180	40	940	59	62NL37
62FL38	58	225	31	1500	93	62NL38
62FL39	91	285	25	2200	150	62NL39

SIZE 75

FL SERIES		V-RMS VOLTS 60 CPS	I-DC MA	R OHMS ±20%	NL SERIES	
ELEC. PART NO.	L ±25% HENRIES				L MIN. HENRIES	ELEC. PART NO.
75FL15	.0029	2.25	6510	.066	.0041	75NL15
75FL16	.0047	2.85	5170	.10	.0064	75NL16
75FL17	.0076	3.60	4100	.16	.010	75NL17
75FL18	.012	4.55	3250	.25	.016	75NL18
75FL19	.019	5.50	2580	.39	.026	75NL19
75FL20	.030	7.0	2040	.62	.041	75NL20
75FL21	.048	9.0	1620	1.0	.065	75NL21
75FL22	.076	11.5	1280	1.5	.10	75NL22
75FL23	.12	14.5	1020	2.5	.16	75NL23
75FL24	.19	18.0	808	4.0	.26	75NL24
75FL25	.30	23.0	641	6.2	.42	75NL25
75FL26	.48	29.0	508	9.9	.66	75NL26
75FL27	.76	36.5	403	16	1.1	75NL27
75FL28	1.2	46	320	25	1.7	75NL28
75FL29	1.9	60	253	39	2.7	75NL29
75FL30	3.0	75	201	64	4.2	75NL30
75FL31	4.8	90	159	100	6.7	75NL31
75FL32	7.6	115	126	160	11	75NL32
75FL33	12	145	100	260	17	75NL33
75FL34	19	185	80	420	27	75NL34

SIZE 87

FL SERIES		V-RMS VOLTS 60 CPS	I-DC MA	R OHMS ±20%	NL SERIES	
ELEC. PART NO.	L ±25% HENRIES				L MIN. HENRIES	ELEC. PART NO.
87FL15	.0073	5.10	6510	.12	.010	87NL15
87FL16	.012	6.40	5170	.19	.016	87NL16
87FL17	.018	8.10	4100	.30	.025	87NL17
87FL18	.029	10.2	3250	.47	.040	87NL18
87FL19	.046	12.8	2580	.74	.063	87NL19
87FL20	.073	16.2	2040	1.2	.10	87NL20
87FL21	.12	20.4	1620	1.8	.16	87NL21
87FL22	.18	25.7	1280	2.9	.26	87NL22
87FL23	.30	32.4	1020	4.6	.41	87NL23
87FL24	.47	40.5	808	7.3	.65	87NL24
87FL25	.74	51	641	12	1.0	87NL25
87FL26	1.2	64	508	19	1.7	87NL26
87FL27	1.8	81	403	30	2.6	87NL27
87FL28	3.0	102	320	47	4.2	87NL28
87FL29	4.7	128	253	74	6.5	87NL29
87FL30	7.4	162	201	120	11	87NL30
87FL31	12	204	159	190	17	87NL31
87FL32	18	257	126	300	26	87NL32
87FL33	30	324	100	480	42	87NL33

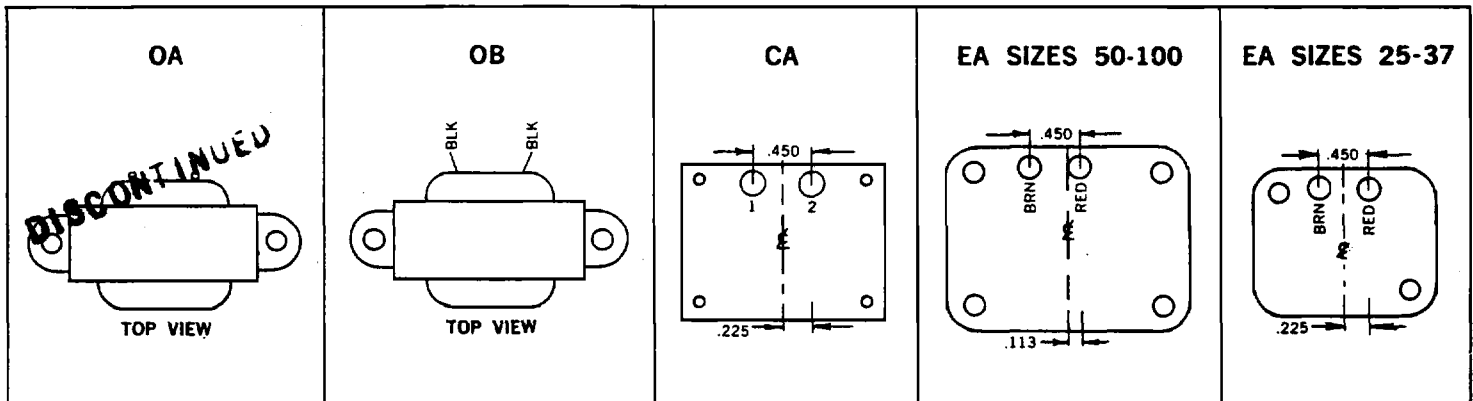
SIZE 100

FL SERIES		V-RMS VOLTS 60 CPS	I-DC MA	R OHMS ±20%	NL SERIES	
ELEC. PART NO.	L ±25% HENRIES				L MIN. HENRIES	ELEC. PART NO.
100FL15	.012	8.80	6510	.18	.016	100NL15
100FL16	.018	11.1	5170	.29	.026	100NL16
100FL17	.029	13.9	4100	.45	.041	100NL17
100FL18	.046	17.5	3250	.71	.066	100NL18
100FL19	.074	22.0	2580	1.1	.10	100NL19
100FL20	.12	27.7	2040	1.7	.16	100NL20
100FL21	.19	35.0	1620	2.7	.26	100NL21
100FL22	.30	44.0	1280	4.3	.42	100NL22
100FL23	.47	55.5	1020	6.9	.66	100NL23
100FL24	.74	70	808	11	1.1	100NL24
100FL25	1.2	88	641	17	1.7	100NL25
100FL26	1.9	111	508	28	2.7	100NL26
100FL27	3.0	139	403	45	4.2	100NL27
100FL28	4.8	175	320	73	6.8	100NL28
100FL29	7.5	220	253	110	11	100NL29
100FL30	12	277	201	190	17	100NL30
100FL31	19	350	159	290	28	100NL31
100FL32	30	440	126	450	42	100NL32

NOTES:

- The inductance values given are at the corresponding V-RMS 60 CPS voltages and I-DC = 0. For test purposes, it is recommended that inductance measurements be made by impedance, or E-I method. This is preferable to bridge type instruments because of the relatively high AC voltage levels and low Q values at 60 CPS.
- For canned parts (CA, etc.) with very small resistance values ($R \leq 1.0$), the total resistance at the terminals is slightly higher than the table values. If required, request this data giving complete part number.
- Dielectric withstanding voltage: 500 V-RMS 60 CPS.
- Insulation resistance ≥ 1000 megohms @ 500 V-DC.
- All electrical data is @ $25 \pm 5^\circ\text{C}$.
- For complete packaging information refer to appropriate Package Bulletins (OA, OB, EA, & CA).
- Sizes 25 and 37 encapsulated parts (EA) have only 2 thru holes.
- All OB type parts with part numbers ending with 15, 16, or 17 have self leads (solid) with sleeving.
- Specify complete part number, e.g. OA25FL20, OB37NL-18, EA50FL17.

TERMINAL/LEAD LOCATION

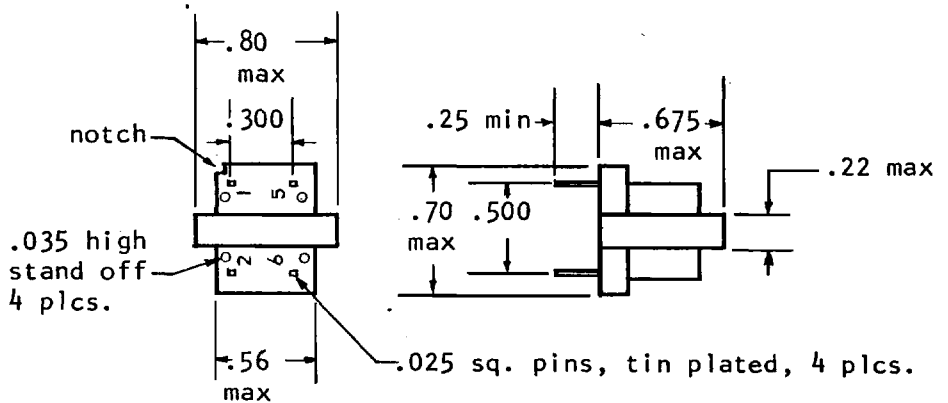
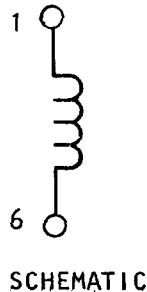


REV.	PART NUMBER	Lo±25% MILLI-H	DCR±20% OHMS	MAX AMPS	TEST VOLTS
	OC18CL24	.95	.20	2.0	1.60
	OC18CL25	1.50	.32	1.6	2.00
	OC18CL26	2.40	.50	1.3	2.54
	OC18CL27	3.80	.80	1.0	3.20
	OC18CL28	6.00	1.3	.80	4.03
	OC18CL29	9.50	2.0	.63	5.07
	OC18CL30	15.0	3.2	.50	6.39
	OC18CL31	24.0	5.0	.40	8.04
	OC18CL32	38.0	8.0	.32	10.1
	OC18CL33	60.0	13	.25	12.8
	OC18CL34	95.0	20	.20	16.1
	OC18CL35	150	32	.16	20.1
	OC18CL36	240	50	.13	25.4
	OC18CL37	380	80	.10	32.0
	OC18CL38	600	130	.080	40.3
	OC18CL39	950	200	.063	50.7
	OC18CL40	1500	320	.050	63.9
	OC18CL41	2400	500	.040	80.5
	OC18CL42	3800	800	.032	101
	OC18CL43	6000	1300	.025	128
	OC18CL44	9500	2000	.020	161

DWG. NO.

NOTES:

1. INITIAL INDUCTANCE, Lo, is measured at 1 KHz and RMS TEST VOLTS.
2. MAXIMUM CURRENT rating is combined DC and RMS AC for a 50°C rise at an ambient of 20°C and with no heat sink.
3. INDUCTANCE AT MAX AMPS is approx. 80% of Lo.
4. MAXIMUM OPERATING TEMPERATURE is 130°C.
5. DIELECTRIC WITHSTANDING VOLTAGE is 1500 VRMS 60Hz.
6. WEIGHT is approximately 13 grams.
7. All electrical data is at 20± 5°C.



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± .XX ± .XXX ± .010	CONTRACT NO.		MAGNETIC CIRCUIT ELEMENTS MONTEREY, CALIFORNIA			
	APPROVALS	DATE				
MATERIAL	DRAWN <i>Wilson</i>	7-17-81	AUDIO CHOKES			
FINISH	CHECKED					
DO NOT SCALE DRAWING	ISSUED <i>W. Conklin</i>	7-17-81	SIZE A	FSCM NO. 09349	DWG. NO. OC18CL	REV.
			SCALE 1:1		SHEET	