Three Phase Filters

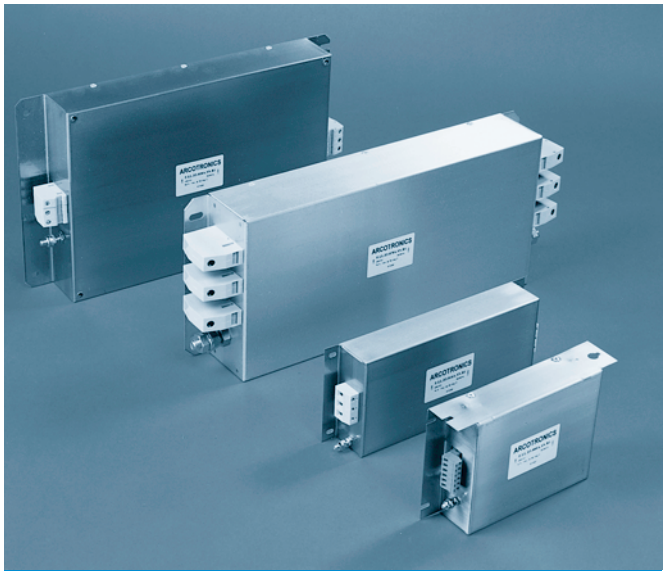
Residential / Light industrial environments

F.LL.D3 series – **SN/SH** type

High performance slim design

This range of three phase filters offer a state-of-the-art solution for the suppression of inverters and power drive systems. The multistage circuitry helps to maintain very high performance across a broad frequency range. In most installations, motor cable lengths of up to 20m can be achieved without additional output filtering. Available in 480Vac or 520Vac versions with terminal block connections on all models or optional threaded terminals on the 16 Amp to 100 Amp variants inclusive.

- Current ratings from 8A to 300A
- High attenuation performance
- Choice of voltage ratings for worldwide applications
- Safety block or threaded terminations
- Low earth leakage versions
- 3 phase + neutral designs available



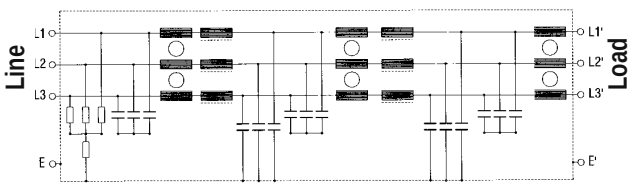
Mechanical specifications

Manufacture:	metal enclosure, electrical components sealed with self-extinguishing resin.
Connections:	phases: threaded with nuts plus washers 16A to 100A inclusive. terminal blocks all current ratings. earth: threaded with nuts plus washers

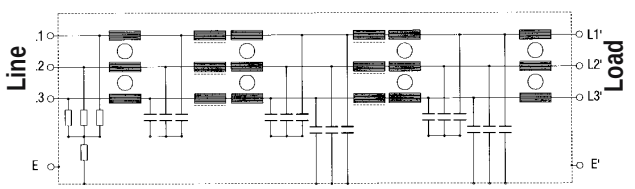
Electrical specifications

Rated voltage (V_R):	SN: 480Vac 50/60Hz SH: 520Vac 50/60Hz
Rated current (I_R):	referred to room temperature = 40°C
Leakage current (I_L):	at 440V / $\sqrt{3}$, 50Hz, max value
Voltage test (2_S):	lines to ground 'SN'-3200Vdc 'SH'-3470Vdc line to line 1700Vdc
Climatic category:	HPF (25/085/21); temperature range: -25°C to +85°C

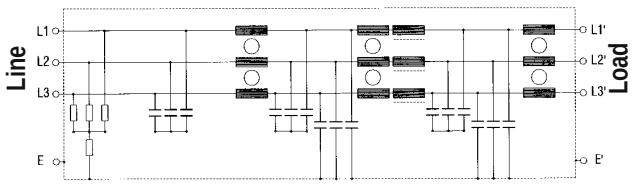
Circuit diagram A



Circuit diagram B



Circuit diagram C



Approvals 22.2 N°8

Except model marked*

KEMET CHARGED.

Filter range

Code	I_R (A)	ΔI_L (mA)	Cx (µF)	Cy (nF)	L – per phase (mH)	R (MΩ)	L_R (mΩ)	Circ' diag'
F.LL.D3.008A.SN.R1	8	77	9x1	6x110	0.5	3x0.33 + 1 x 0.62	< 35	A
F.LL.D3.016A.S – . –1	16	77	9x1	6x110	0.5	3x0.33 + 1 x 0.62	< 15	A
F.LL.D3.030A.S – . –1	30	77	9x1	6x110	0.5	3x0.33 + 1 x 0.62	< 15	A
F.LL.D3.036A.S – . –1	30	77	9x1	6x110	0.5	3x0.33 + 1 x 0.62	< 15	A
F.LL.D3.050A.S – . –1	50	77	9x1	6x110	0.5	3x0.33 + 1 x 0.62	< 9	A
F.LL.D3.070A.S – . –1	70	77	9x2.2	6x110	0.27	3x0.33 + 1 x 0.62	< 4	B
F.LL.D3.100A.S – . –1	100	77	9x2.2	6x110	0.27	3x0.33 + 1 x 0.62	< 3	B
F.LL.D3.140A.S – . –1	140	77	3x1.5 + 6x3.7	6x110	0.27	3x0.33 + 1 x 0.62	< 1	C
F.LL.D3.200A.S – . –1-	200	77	3x2.2 + 6x4.4	6x110	0.27	3x0.33 + 1 x 0.62	< 0.7	C
F.LL.D3.300A.S – . –1- *	300	235	9x2.2	6x340	0.27	3x0.33 + 1 x 0.62	< 0.5	B

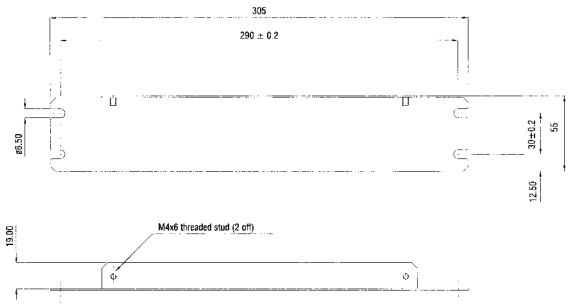
6 = low earth leakage design available, details on request

I = Threaded terminals ≤ 100A
R = Terminal blocks - all ratings

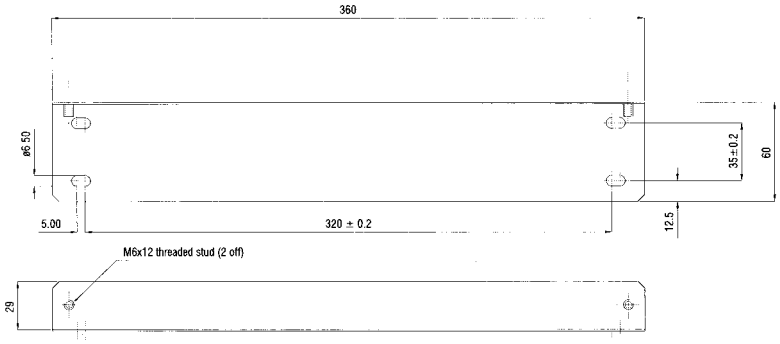
N = 480Vac
H = 520Vac

Δ = See leakage current note on page two

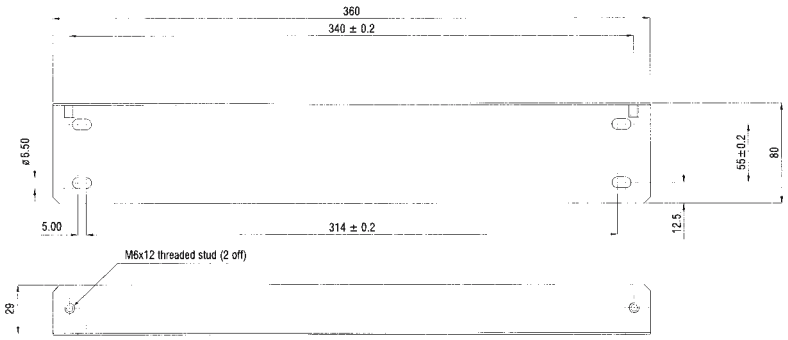
16A SN.I1/R1



30 - 36A SN.I1/R1



50A SN.I1/RI

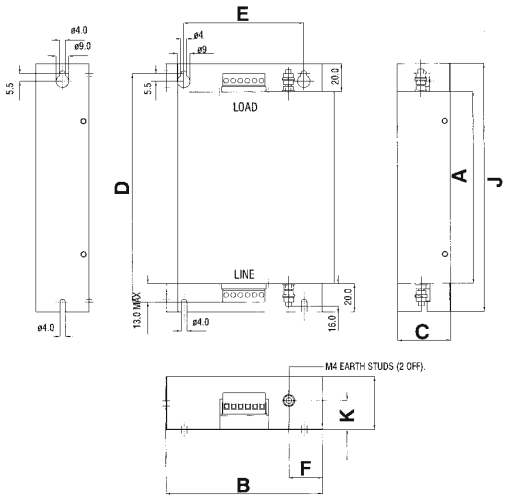


Adapter Brackets

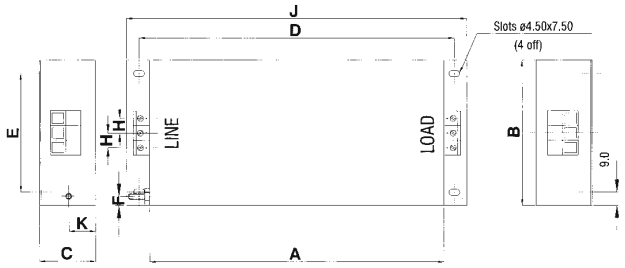
The adapter brackets are designed to allow mounting of the 16 - 50A products in a vertical plane in order to minimise on space occupied within the control panel. The 8A product has this option built into the standard enclosure design.

Dimensions (mm) and connections

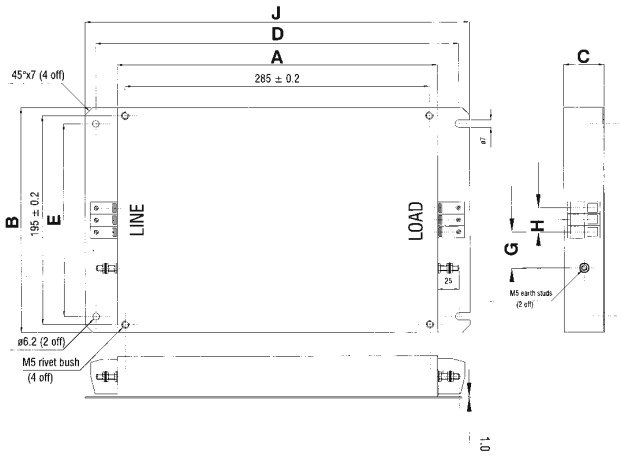
Case R ...F.LL.D3...008A...



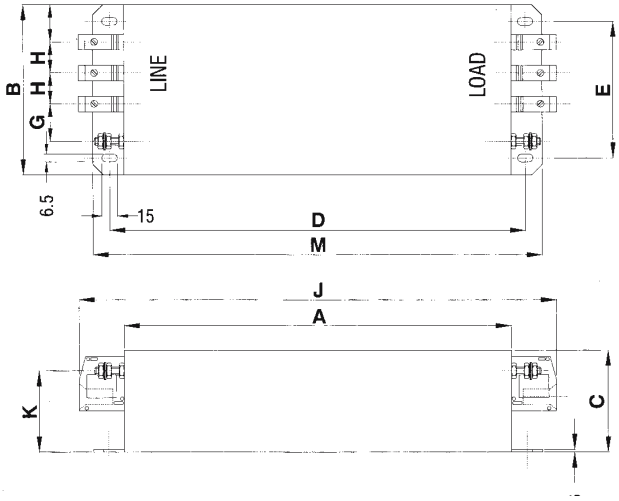
Case S ...F.LL.D3...016A...



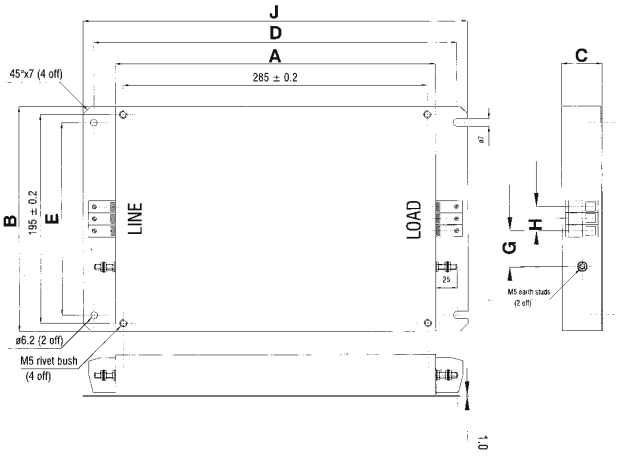
Case T ...F.LL.D3...030A – 050A...



Case U ...F.LL.D3...070A – 200A....



Case V ...F.LL.D3...300A...



Note:

Overall length dimension J is not exceeded by threaded terminal versions (available from 16 Amp to 100 Amp inclusive). Details of the line and earth terminal thread sizes are tabulated opposite.

Dimensions

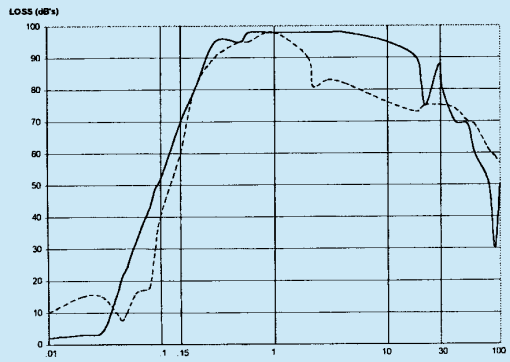
Code	A	B	C	D	E	F	G	H	J	K	L	M	Case	Line Terminal	Earth Terminal
F.LL.D3.008A.SN.R1	137	112	38	163	86	24	-	-	177	21	-	-	R	4mm²	M4
F.LL.D3.016A.S – .I1	199	98	38	213	80	6	-	24	230	18	-	-	S	M4	M4
F.LL.D3.016A.S – .R1	199	98	38	213	80	6	-	10	230	18	-	-	S	4mm²	M4
F.LL.D3.030A.S – .I1	300	210	39	340	180	-	30	60	360	-	-	-	T	M5	M5
F.LL.D3.030A.S – .R1	300	210	39	340	180	-	30	20	360	-	-	-	T	10mm²	M5
F.LL.D3.036A.S – .I1	300	210	39	340	180	-	30	60	360	-	-	-	T	M5	M5
F.LL.D3.036A.S – .R1	300	210	39	340	180	-	30	20	360	-	-	-	T	10mm²	M5
F.LL.D3.050A.S – .I1	300	210	50	340	180	-	30	60	360	-	-	-	T	M6	M6
F.LL.D3.050A.S – .R1	300	210	50	340	180	-	30	20	360	-	-	-	T	10mm²	M6
F.LL.D3.070A.S – .I1	350	170	65	375	130	-	35	30	420	32.5	-	400	U	M8	M8
F.LL.D3.070A.S – .R1	350	170	65	375	130	-	36	32	436	32.5	-	400	U	25mm²	M8
F.LL.D3.100A.S – .I1	350	170	65	375	130	-	35	30	420	32.5	-	400	U	M8	M8
F.LL.D3.100A.S – .R1	350	170	65	375	130	-	36	32	436	32.5	-	400	U	50mm²	M10
F.LL.D3.140A.S – .R1	350	170	90	375	130	-	36	32	436	45	-	400	U	50mm²	M10
F.LL.D3.200A.S – .R1	450	220	153	500	180	-	36	32	550	75	-	550	U	95mm²	M10
F.LL.D3.300A.S – .R1	450	260	153	660	220	-	28	31	742	103	47	700	V	150mm²	M10

I = Threaded terminals ≤ 110A
R = Terminal blocks - all ratings

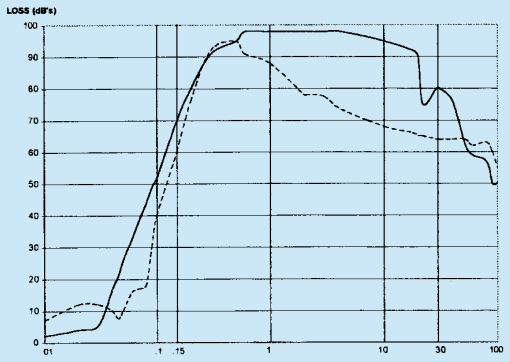
N = 480Vac
H = 520Vac

Insertion loss (Typical)

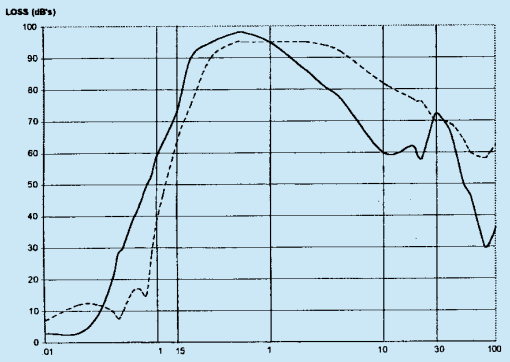
– – – Symmetrical (line to line) —— Asymmetrical (line to ground)



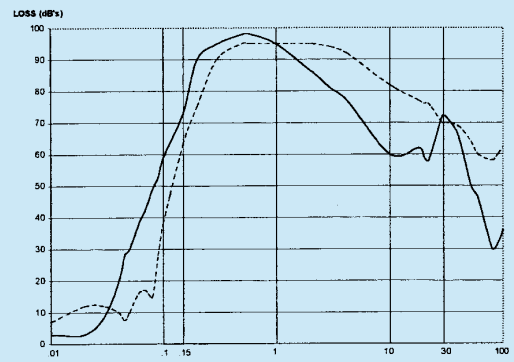
...F.LL.D3.008A...



...F.LL.D3.016A...



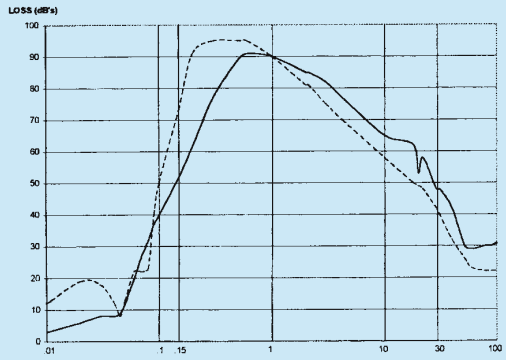
...F.LL.D3.030A – 036A...



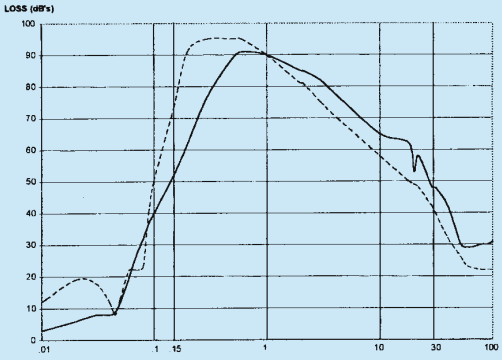
...F.LL.D3.050A...

Insertion loss (Typical)

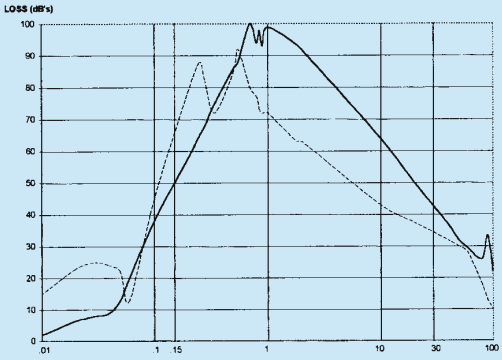
– – – Symmetrical (line to line) —— Asymmetrical (line to ground)



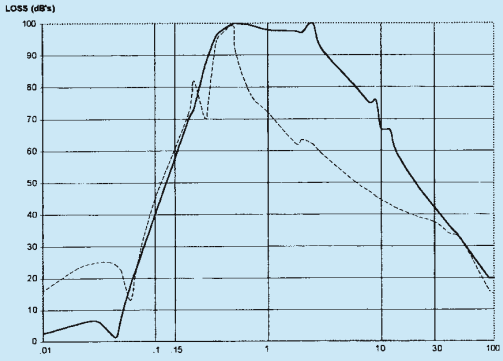
...F.LL.D3.070A...



...F.LL.D3.100A...



...F.LL.D3.140A...



...F.LL.D3.200A...

Note: 300A performance data available on request