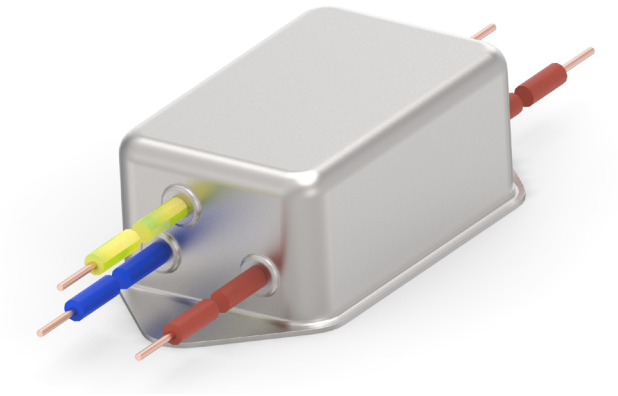
CORCOM LIGHTING EMI FILTERS

FB, FBL & FBH SERIES

INTRODUCTION

TE Connectivity adds even more range to the FB series product line with new part numbers designated with the FBL and FBH. FBL is part of the FB series and is targeted toward applications that need standard EMI performance levels in a smaller package size. The FBH series has the added benefit of operating to $480V_{AC}$ and up to a 90°C ambient temperature. LED Drivers have different levels of integrated filtering but when connected to a load the filtering may not be enough to attenuate the conducted emissions. In addition, some lighting applications can reach higher currents and the 10 and 20A versions of the FBL products will satisfy those types of applications. The FB and FBH series have current levels up to 5 Amps.



BENEFITS

- Compact size
- 277 V_{AC}/V_{DC} (FB Series)
- $480V_{AC}/V_{DC}$ (FBH Series)
- Strong differential mode performance (FB series part numbers)
- Solid lead wires (FB series)
- Stranded lead wires (FBL and FBH series)
- Ambient temperature 50°C (FB & FBL series)
- Ambient temperature 90°C (FBH series)

APPLICATIONS

- LED lighting/drivers/controllers
- LED displays
- Office and hospital lighting
- Architectural lighting
- Instrumentation lighting
- Outdoor signage
- UV curing lights
- Lower current industrial applications
- Fluorescent ballasts
- Horticulture lighting

APPROVALS

- CSA Certified FB only
- VDE Approved FB only
- cURus Recognized FBL and FBH only

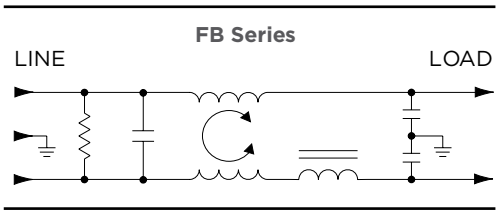
CORCOM FB SERIES

ELECTRICAL SPECIFICATIONS

Max. Leakage current each Line to Ground	@277 V_{AC} 60 Hz	0.28 mA
	@250 V_{AC} 50Hz	0.21 mA
Hipot rating (one minute)	Line to Ground	2300 V_{DC}
	Line to Line	1853 V_{DC}
Rated Voltage (max.)	277 V_{AC} / V_{DC}	
Operating Frequency	50/60 Hz	
Rated Current	0.5 to 5A	

* VDE Approved at 250 V_{AC} & 250 V_{DC}

ELECTRICAL SCHEMATICS



MINIMUM INSERTION LOSS - MEASURED IN CLOSED 50 Ohm SYSTEM

COMMON MODE / ASYMMETRICAL (LINE TO GROUND)

Part Number	Frequency — MHz									
	0.03	0.05	0.1	0.15	0.5	1	5	10	20	30
HFB3	4	8	12	14	26	32	45	44	38	42
2FB3	3	7	13	16	28	34	45	44	41	41
3FB3	-	1	6	8	20	26	41	41	47	50
5FB3	-	2	5	9	21	26	41	40	44	48

DIFFERENTIAL MODE / SYMMETRICAL (LINE TO LINE)

Part Number	Frequency — MHz									
	0.03	0.05	0.1	0.15	0.5	1	5	10	20	30
HFB3	6	11	20	25	43	51	55	51	42	41
2FB3	6	11	20	25	43	51	51	44	40	39
3FB3	6	10	17	21	37	47	54	48	44	42
5FB3	6	10	16	20	31	40	51	47	44	41

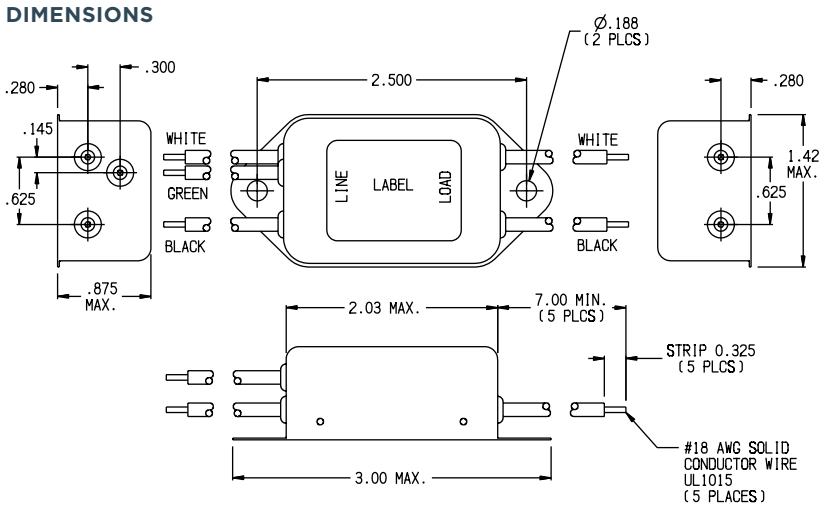
PRODUCT SELECTION IFORMATION

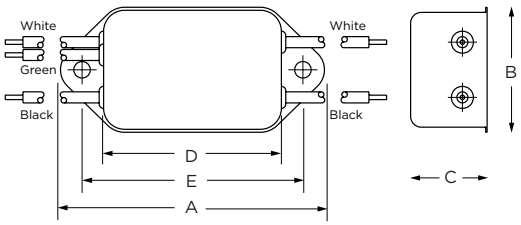
Part Number	Catalog PN	Description
8-1609095-8	HFB3	0.5A FB Series with wire leads
8-1609095-9	2FB3	2A FB Series with wire leads
9-1609095-0	3FB3	3A FB Series with wire leads
9-1609095-1	5FB3	5A FB Series with wire leads

CASE DIMENSIONS

Part Number	A	B	C	D	E
	(max)	(max)	(max)	(max)	±.025 ±.635
FB Series	3.0	1.42	.875	2.03	2.5
	76.2	36.07	22.23	51.56	63.5

DIMENSIONS



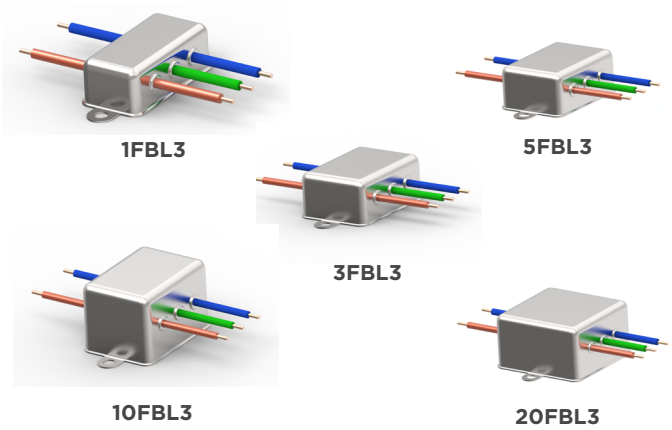


CORCOM FBL SERIES

ELECTRICAL SPECIFICATIONS

Max. Leakage current each Line to Ground	@120 V_{AC} 60 Hz	0.12 mA
	@250 V_{AC} 60 Hz	0.25 mA
	@300 V_{AC} 60 Hz	0.30 mA
Hipot rating (one minute)	Line to Ground	2300 V_{DC}
	Line to Line	1853 V_{DC}
Rated Voltage (max.)	300V_{AC} / V_{DC}	
Operating Frequency	50/60 Hz	
Rated Current	1, 3, 5, 10 and 20A	

* VDE Approved at 250 V_{AC} & 250 V_{DC}

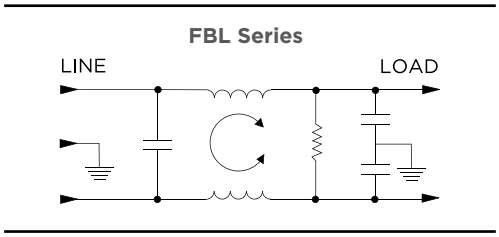


MINIMUM INSERTION LOSS - MEASURED IN CLOSED 50 Ohm SYSTEM

COMMON MODE/ASYMMETRICAL (LINE TO GROUND) INSERTION LOSS DATA

Part Number	Frequency — MHz					
	0.15	0.5	1	5	10	30
1FBL3	20	33	41	45	45	48
3FBL3	20	31	38	46	45	47
5FBL3	10	21	26	37	42	47
10FBL3	11	23	26	34	37	45
20FBL3	8	21	32	35	38	42

ELECTRICAL SCHEMATICS

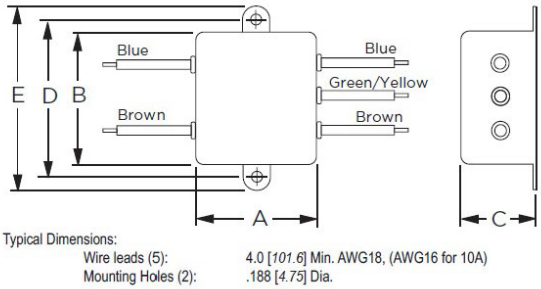


* VDE Approved at 250 V_{AC} & 250 V_{DC}

PRODUCT SELECTION INFORMATION

Part Number	Catalog PN	Description
6-1609091-4	1FBL3	1A FBL Version
6-1609091-5	3FBL3	3A FBL Version
6-1609091-6	5FBL3	5A FBL Version
6-1609091-7	10FBL3	10A FBL Version
6-1609091-8	20FBL3	20A FBL Version

DIMENSIONS



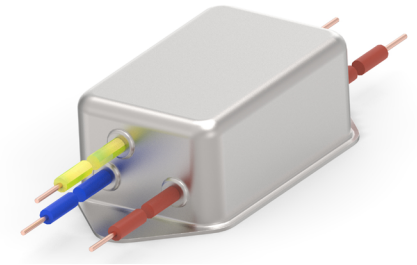
CASE DIMENSIONS

Part Number	A (max)	B (max)	C (max)	D ±.015 ±.38	E (max)
1FBL3	0.96	1.82	0.66	2.125	2.53
	24.4	46.2	16.8	53.98	64.3
3FBL3 & 5FBL3	1.32	1.82	0.78	2.125	2.53
	33.5	46.2	19.8	53.98	64.3
10FBL3	1.32	1.82	1.16	2.125	2.53
	33.5	46.2	29.5	53.98	64.3
20FBL3	2.07	2.065	1.16	2.375	2.81
	52.58	52.45	29.5	60.33	71.37

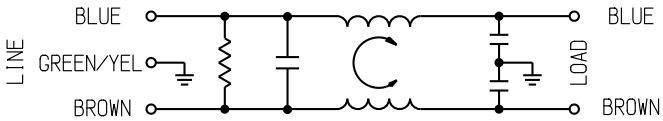
CORCOM FBH SERIES
ELECTRICAL SPECIFICATIONS

Max. Leakage current each Line to Ground	@ 277 V_{AC} 60 Hz	.28 mA
	@ 250 V_{AC} 50Hz	.21 mA
Hipot rating (one minute)	Line to Ground	2250 V_{DC}
	Line to Line	2275 V_{DC}
Rated Voltage (max.)	480 V_{AC}	
Operating Frequency	50/60 Hz	
Rated Current - FBH	1, 2, 3, 5 Amp	

* VDE Approved at 250 V_{AC} & 250 V_{DC}



ELECTRICAL SCHEMATICS



TYPICAL LOSS - MEASURED IN CLOSED 50 Ohm SYSTEM

COMMON MODE / ASYMMETRICAL (LINE TO GROUND)

Part Number	Frequency — MHz									
	0.03	0.05	0.1	0.15	0.5	1	5	10	20	30
1FBH3	3	6	11	15	21	24	35	40	48	61
2FBH3	3	6	11	15	21	24	35	40	48	61
3FBH3	3	6	11	15	21	24	35	40	48	61
5FBH3	3	6	11	15	21	24	35	40	48	61

DIFFERENTIAL MODE / SYMMETRICAL (LINE TO LINE)

Part Number	Frequency — MHz									
	0.03	0.05	0.1	0.15	0.5	1	5	10	20	30
1FBH3	-	-	-	1	5	10	18	53	60	78
2FBH3	-	-	-	1	5	10	18	53	60	78
3FBH3	-	-	-	1	5	10	18	53	60	78
5FBH3	-	-	-	1	5	10	18	53	60	78

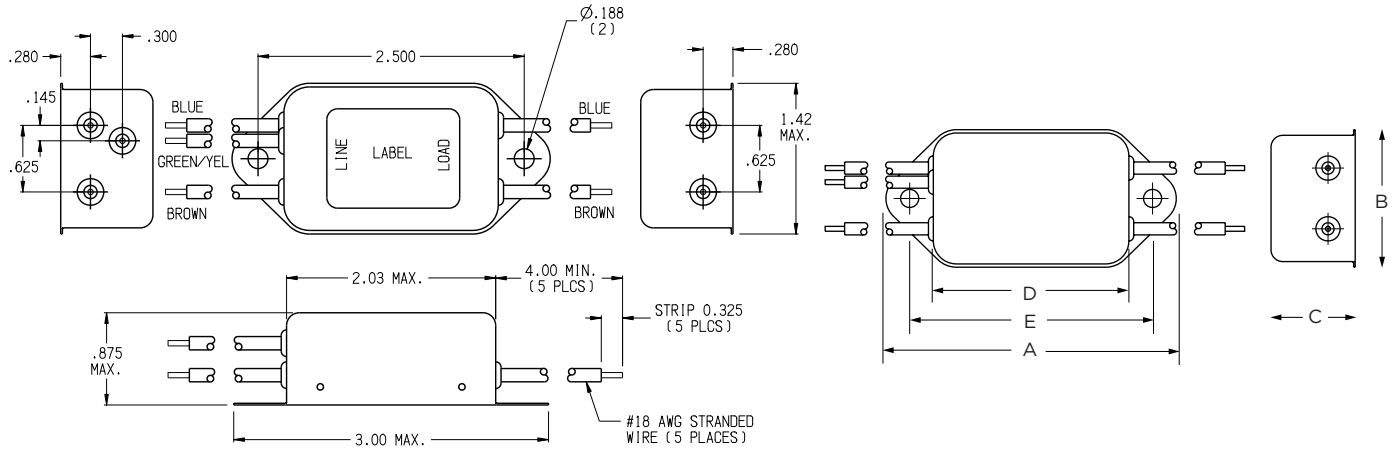
CASE DIMENSIONS

Part Number	A	B	C	D	E
	(max)	(max)	(max)	(max)	±.025 ±.635
FBH Series	3.0	1.42	.875	2.03	2.5
	76.2	36.07	22.23	51.56	63.5

PRODUCT SELECTION IFORMATION

Part Number	Catalog PN	Description
2-1609028-8	1FBH3	1A FBH Version
2-1609028-9	2FBH3	2A FBH Version
3-1609028-0	3FBH3	3A FBH Version
3-1609028-1	5FBH3	5A FBH Version

DIMENSIONS



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