

结构 (Construction)

三相三线滤波器

3-Line filter

金属外壳

Metal case

多种端接形式

Various connections in terminals



产品特点 (Product Features)

- | | |
|---|---|
| 1. 高插入损耗 | 1. High insertion loss |
| 2. 优良的EMI噪声抑制能力 | 2. Excellent EMI noise suppression |
| 3. 长电缆，重载运行工况的理想选择 | 3. Optimized for long motor cable and operation under full load |
| 4. 确保系统符合EN 55011/IEC 61800-3 标准 | 4. Ensured compliance with EN 55011/IEC 61800-3 |
| 5. 参考标准：IEC 60939, UL 1283, CSA 22.2 No.8 | 5. Design complies with IEC 60939, UL 1283, CSA 22.2 No.8 |

应用行业 (Applications)

逆变和变频应用：电梯和升降设备、牵引系统、加热、通风和工业空调

常规三相电机驱动系统

机床设备：打印设备、包装设备、钻床和磨床、纺织设备等

三相电源及UPS

Inverters and frequency converters applications: elevators, cranes, traction system, HVAC systems (heating, ventilation and air conditioning)

General three phase motor drive systems

Machine tools: printing machines, packaging machines, milling and drilling machines, textile machines.

Three-phase power supplies and UPS

技术参数 (Technical Data)

- | | | | |
|-------------------|--|--|--|
| 1. 额定电压(V_R): | 440VAC, 50/60Hz | 1. Rated voltage(V_R): | 440VAC, 50/60Hz |
| 2. 额定电流(I_R): | 5 ~ 1200A @ 40°C | 2. Rated current(I_R): | 5 ~ 1200A @ 40°C |
| 3. 耐压(V_p): | 2250VDC, 5S(Line to line)
2550VDC, 5S(Line to case) | 3. Test voltage(V_p): | 2250VDC, 5S(Line to line)
2550VDC, 5S(Line to case) |
| 4. 温度范围 (使用与存储): | -25°C/+85°C
(25/085/21 IEC 60068-1) | 4. Temperature range
(operation and storage): | -25°C/+85°C
(25/085/21 IEC 60068-1) |
| 5. 过载能力: | 1.5 x I_R 3min/hour
2.5 x I_R 30s/hour | 5. Overload capability
(thermal): | 1.5 x I_R 3min/hour
2.5 x I_R 30s/hour |

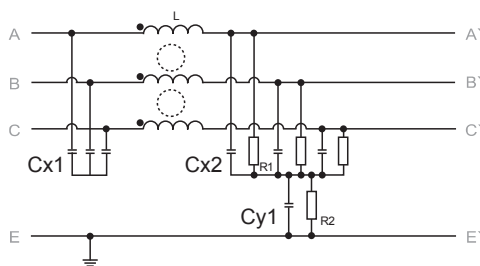
滤波器选型表 (Filter Selection Table)

滤波器型号 Filter type	额定电流@40°C @40°C Rated current@40°C [A]	典型变频器容量 Typical drive power rating [KW]	漏电流 @400VAC/50Hz Leakage current @400VAC/50Hz [mA]	直流电阻 R_{typ} [mΩ]	输入/输出连接形式 Input/Output connections			外形尺寸 Dimension figure	重量 weight [Kg]
NFI-0005-SA	5	0.75 ~ 1.5	< 6	18	√			Picture A	0.8
NFI-0010-SA	10	2.2 ~ 4	< 6	7	√			Picture B	1.5
NFI-0020-SA	20	5.5 ~ 7.5	< 6	7.4	√			Picture C	2.8
NFI-0036-SA	36	11 ~ 15	< 6	3.7	√			Picture C	3
NFI-0050-SA	50	18.5 ~ 22	< 6	2.1	√			Picture C	3.1
NFI-0065-SA	65	30	< 10	1.9	√			Picture D	5
NFI-0080-SA	80	37	< 10	2.3	√			Picture E	7.2
NFI-0100-SA	100	45	< 10	2.1	√			Picture E	7
NFI-0150-SA	150	55 ~ 75	< 10	1.9	√			Picture E	7.7
NFI-0200-SA	200	90	< 30	0.4	√			Picture F	5.5
NFI-0250-BA	250	110 ~ 132	< 30	0.22			√	Picture G	6.9
NFI-0300-BA	300	160	< 30	0.21			√	Picture G	6.9
NFI-0400-BA	400	200	< 30	0.1			√	Picture H	12
NFI-0600-BA	600	215 ~ 315	< 30	0.13			√	Picture H	12.4
NFI-0900-BA	900	400	< 30	0.19			√	Picture I	21.5
NFI-1200-BA	1200	630	< 30	0.12			√	Picture I	21.7

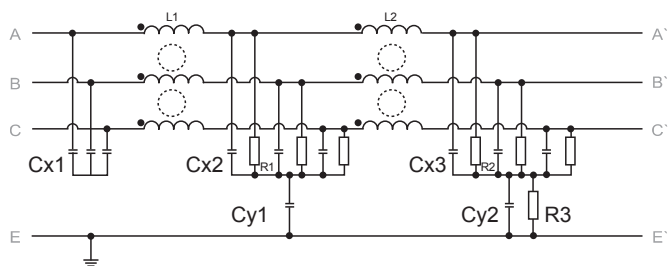
备注：使用漏电流大于0.5mA的滤波器情况，产品必须要有可靠的接地，并在具备可靠的保护措施的情况下才可使用。否则，会有触电的风险存在。

Note: If the leakage current of the filter is greater than 0.5mA, the product should not be used unless there are reliable grounding connection and protective measures. Otherwise, the risk of electric shock exists.

电路原理图 (Electrical Diagram)

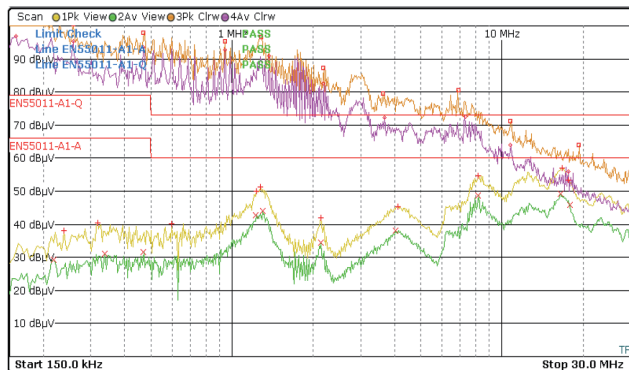


NFI-0005-SA ~ NFI-0036-SA



NFI-0050-SA ~ NFI-1200-BA

传导发射测试 (Conducted Emission Measurement)



无EMI滤波器
without EMI Filter

加装EMI滤波器
with EMI Filter

频率 (MHz) Frequency (MHz)	0.15	0.5	1	5	10	30
无滤波器时进线侧噪声水平 (AV/dBμV) Input side noise level without EMI Filters (AV/dBμV)	92	84	80	66	61	44
加装EMI滤波器后进线侧噪声水平 (AV/dBμV) Input side noise level with EMI Filters (AV/dBμV)	20	25	34	32	40	36
加装EMI滤波器前后噪声衰减倍数 Noise damping factor due to EMI Filter application	3981倍 (folds)	891倍 (folds)	199倍 (folds)	50倍 (folds)	11倍 (folds)	2.5倍 (folds)

产品尺寸图 (Product Size)

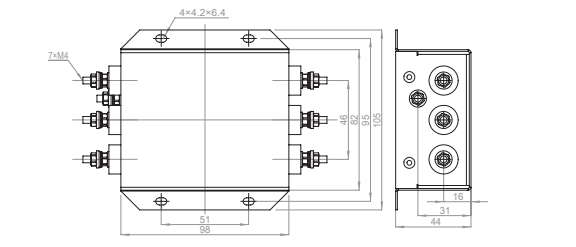


图 A Picture A

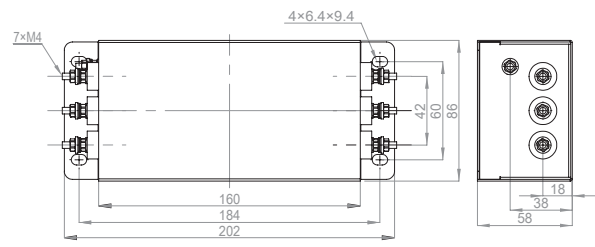


图 B Picture B

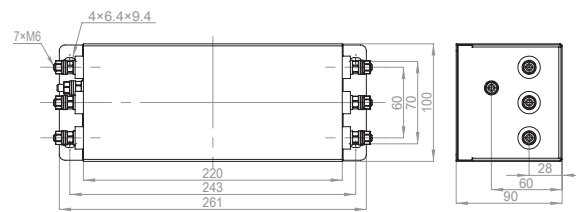


图 C Picture C

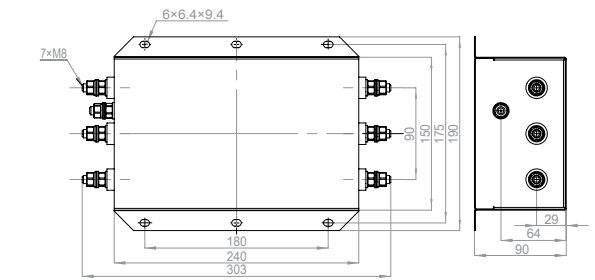


图 D Picture D

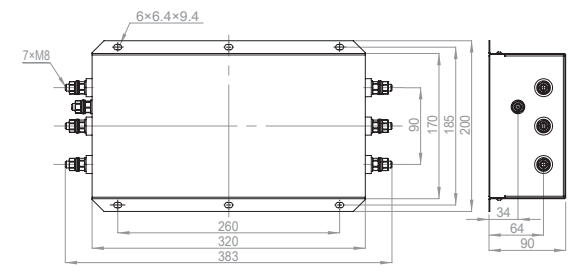


图 E Picture E

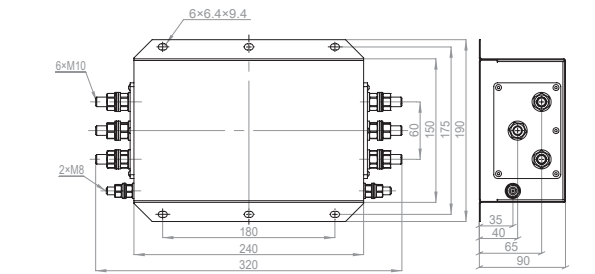


图 F Picture F

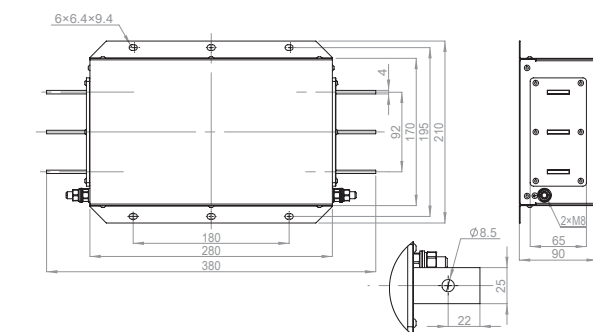


图 G Picture G

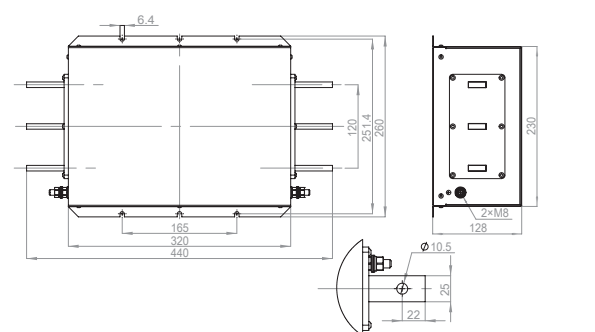


图 H Picture H

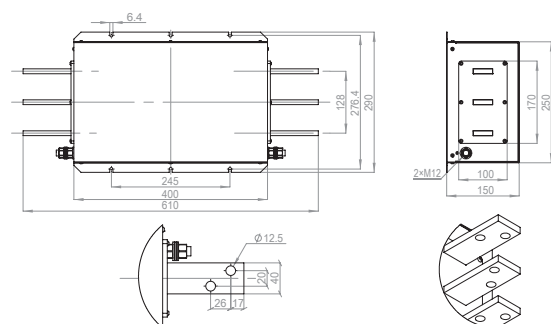
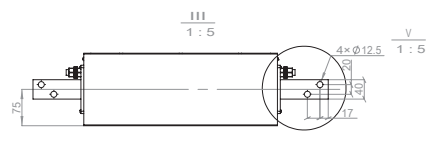
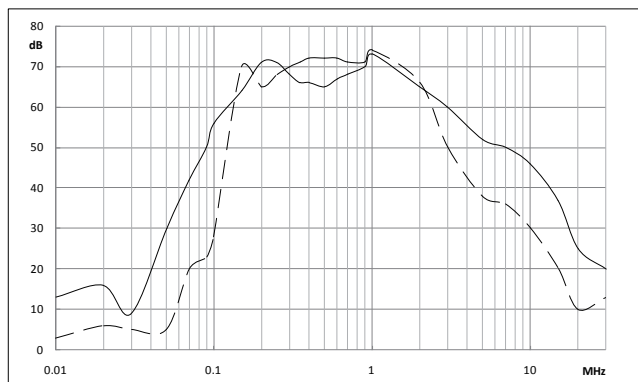


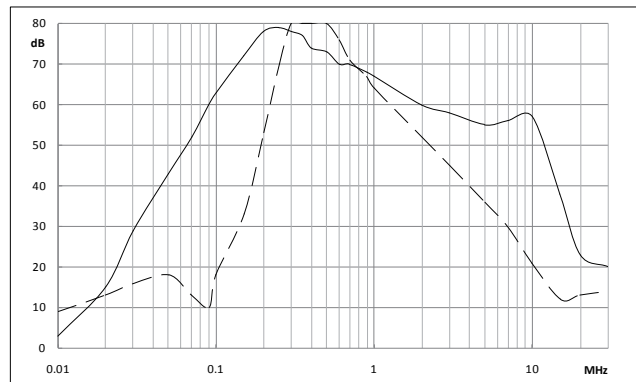
图 I Picture I



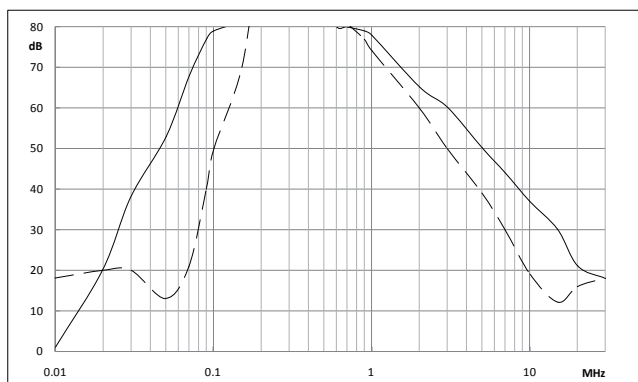
■ 插入损耗 (Insertion Loss (typical values at $Z=50\Omega$))



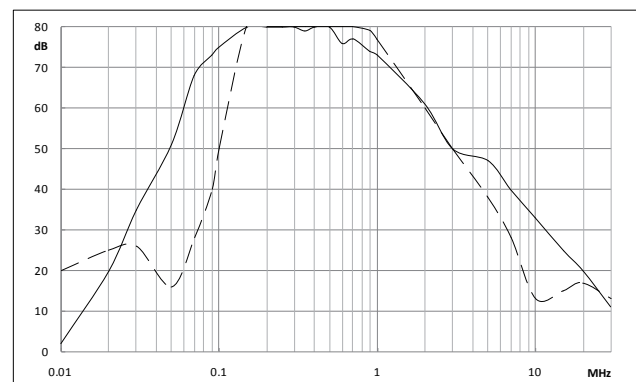
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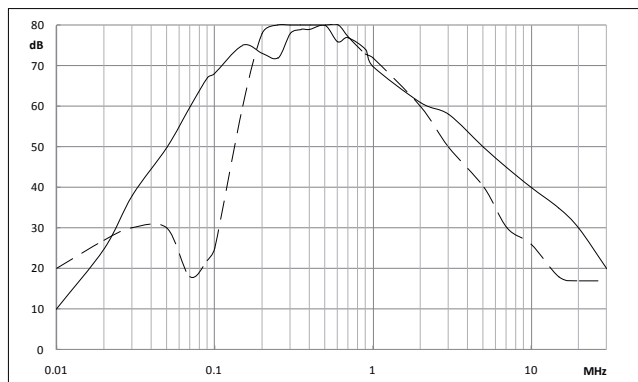
NFI-0010-SA



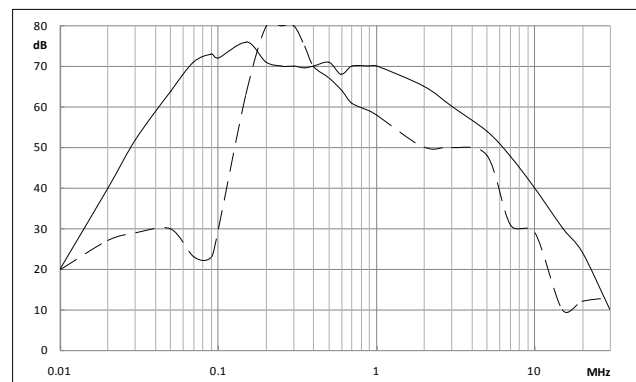
NFI-0020-SA



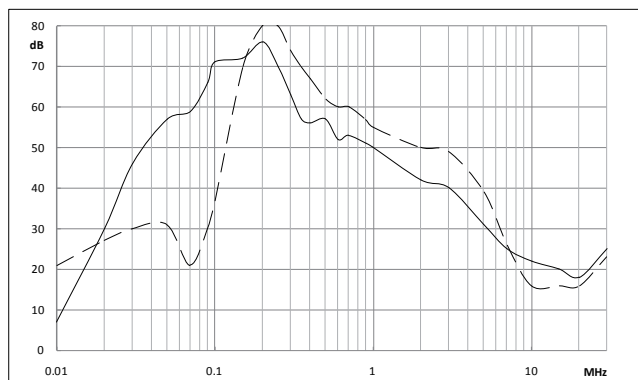
NFI-0036-SA



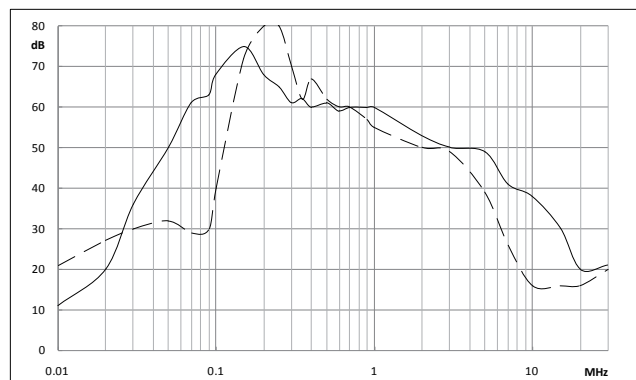
NFI-0050-SA



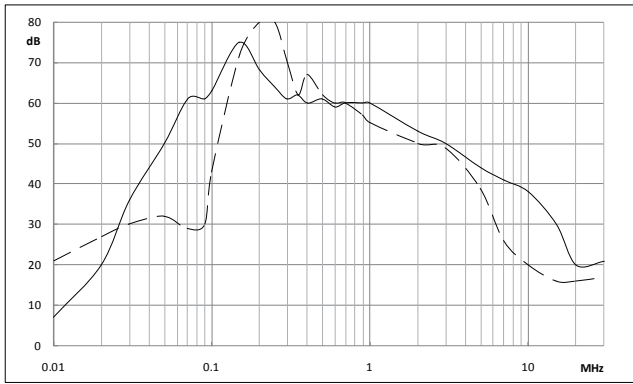
NFI-0065-SA



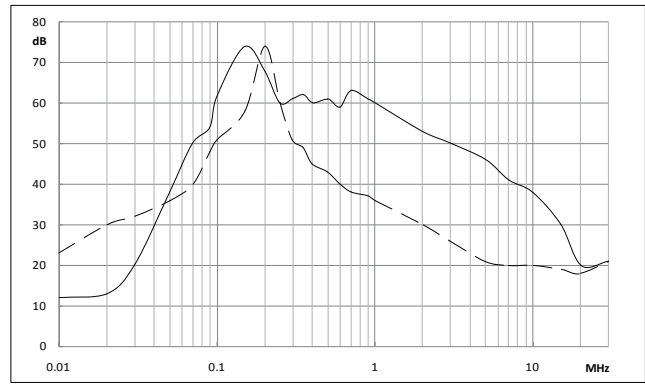
NFI-0080-SA



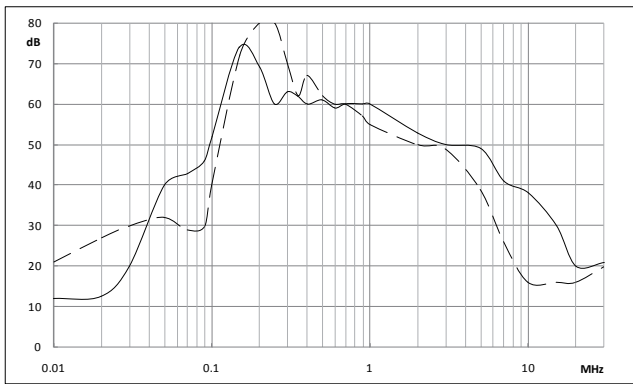
NFI-0100-SA



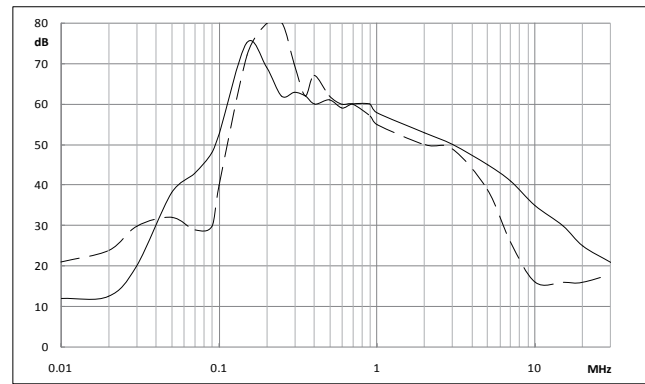
NFI-0150-SA



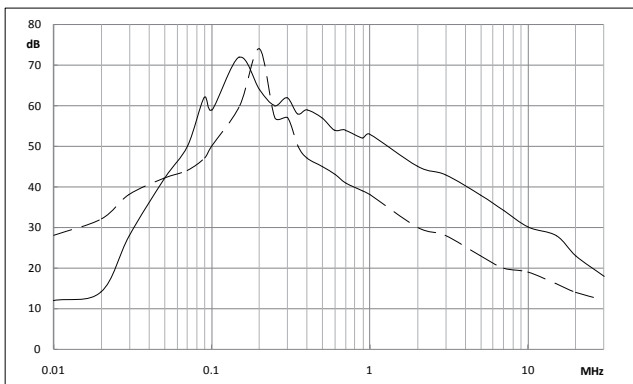
NFI-0200-SA



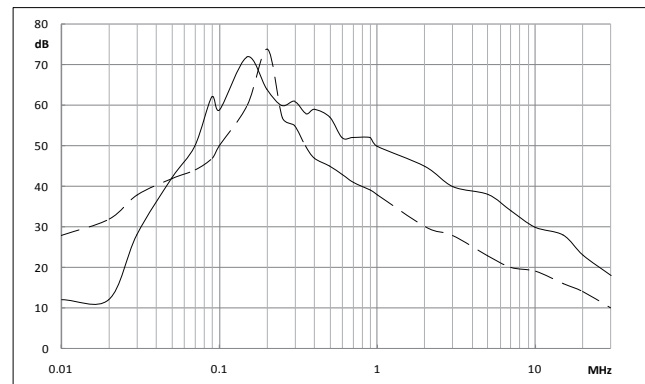
NFI-0250-BA



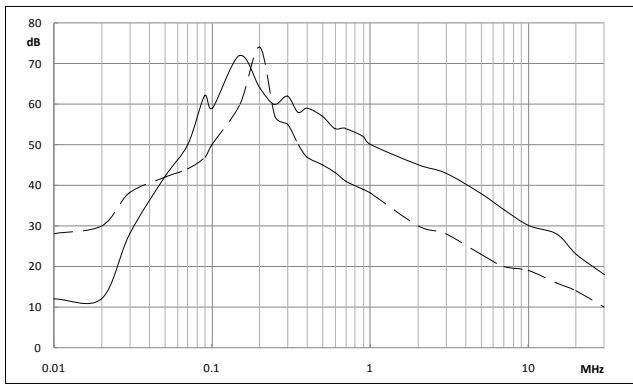
NFI-0300-BA



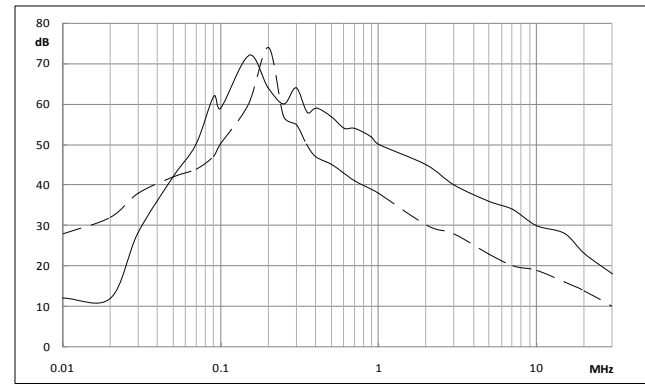
NFI-0400-BA



NFI-0600-BA



NFI-0900-BA



NFI-1200-BA

—— 共模 (common mode) - - - - 差模 (differential mode)

■ 结构 (Construction)

三相三线滤波器	3-Line filter
金属外壳	Metal case
坚固安全的端接形式	Solid and safe connector blocks
书状结构	Book style design



■ 产品特点 (Product Features)

- | | |
|---|---|
| 1. 紧凑的书状结构，重量轻 | 1. Compact book style design and low weight |
| 2. 高插入损耗 | 2. High insertion loss |
| 3. 优良的EMI噪声抑制能力 | 3. Excellent EMI noise suppression |
| 4. 防护等级：IP20 | 4. Degree of protection IP20 |
| 5. 确保系统符合EN 55011/IEC 61800-3 标准 | 5. Ensured compliance with EN 55011/IEC 61800-3 |
| 6. 参考标准：IEC 60939, UL 1283, CSA 22.2 No.8 | 6. Design complies with IEC 60939, UL 1283, CSA 22.2 No.8 |

■ 应用行业 (Applications)

三相变速电机驱动，伺服驱动器，逆变器和变频器
机械制造或过程自动化设备
暖通空调设备、电梯、电源、UPS
机床设备：打印设备、包装设备、钻床和磨床、纺织设备等

3-phase variable speed motor drives, servo drives, inverters and converters
machines or process automation equipment
HVAC equipment, elevators, power supplies, UPS
Machine tools: printing machines, packaging machines, milling and drilling machines, textile machines and so on.

■ 技术参数 (Technical Data)

1. 额定电压(V_R):	480VAC, 50/60Hz	1. Rated voltage(V_R):	480VAC, 50/60Hz
2. 额定电流(I_R):	7 ~ 150A @ 40°C	2. Rated current(I_R):	7 ~ 150A @ 40°C
3. 耐压(V_p):	2250VDC, 5S(Line to line) 2550VDC, 5S(Line to case)	3. Test voltage(V_p):	2250VDC, 5S(Line to line) 2550VDC, 5S(Line to case)
4. 温度范围 (使用与存储):	-25°C/+100°C (25/100/21 IEC 60068-1)	4. Temperature range (operation and storage):	-25°C/+100°C (25/100/21 IEC 60068-1)
5. 过载能力:	1.5 x I_R 3min/hour 2.5 x I_R 30s/hour	5. Overload capability (thermal):	1.5 x I_R 3min/hour 2.5 x I_R 30s/hour

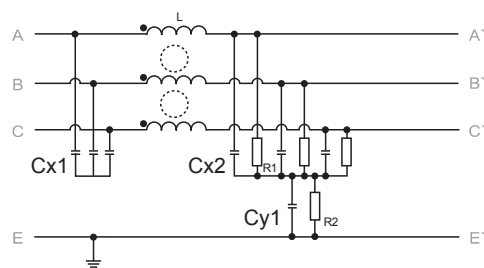
滤波器选型表 (Filter Selection Table)

滤波器型号 Filter type	额定电流@40°C Rated current@40°C [A]	典型变频器容量 Typical drive power rating [KW]	漏电流 @400VAC/50Hz Leakage current @400VAC/50Hz [mA]	直流电阻 R_{typ} [mΩ]	输入/输出连接形式 Input/Output connections			外形尺寸 Dimension figure	重量 Weight [Kg]
NFI-0007-TB	7	4	< 5	9		√		Picture A	0.9
NFI-0016-TB	16	7.5	< 5	7		√		Picture B	1.2
NFI-0030-TB	30	15	< 5	5		√		Picture C	1.6
NFI-0042-TB	42	18.5	< 5	3.2		√		Picture C	1.6
NFI-0050-TB	50	22	< 5	2.1		√		Picture D	3.1
NFI-0065-TB	65	30	< 5	1.9		√		Picture D	3.1
NFI-0080-TB	80	37	< 10	2.3		√		Picture E	6
NFI-0110-TB	110	45	< 10	2		√		Picture E	6
NFI-0150-TB	150	55~75	< 10	1.8		√		Picture E	6

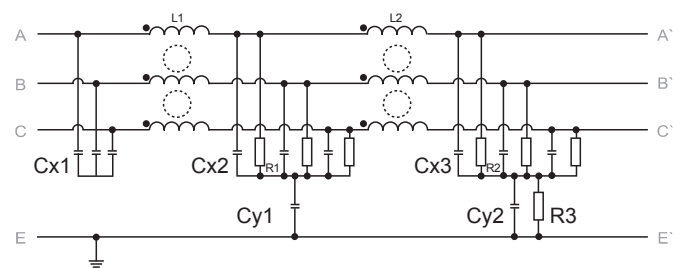
备注：使用漏电流大于0.5mA的滤波器情况，产品必须要有可靠的接地，并在具备可靠的保护措施的条件才可使用。否则，会有触电的风险存在。

Note: If the leakage current of the filter is greater than 0.5mA, the product should not be used unless there are reliable grounding connection and protective measures. Otherwise, the risk of electric shock exists.

电路原理图 (Electrical Diagram)

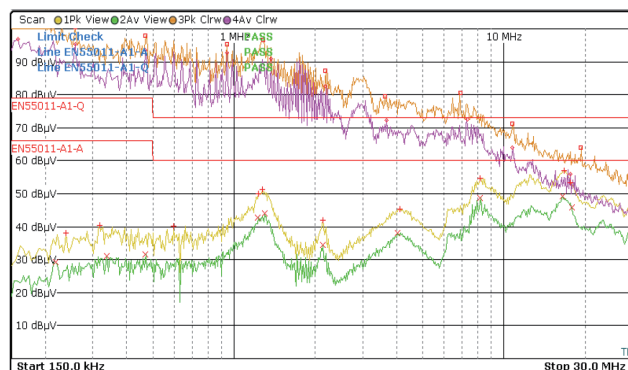


NFI-0007-TB ~ NFI-0042-TB



NFI-0050-TB ~ NFI-0150-TB

传导发射测试 (Conducted Emission Measurement)



无EMI滤波器
without EMI Filter

加装EMI滤波器
with EMI Filter

频率 (MHz) Frequency(MHz)	0.15	0.5	1	5	10	30
无滤波器时进线侧噪声水平 (AV/dBμV) Input side noise level without EMI Filters (AV/dBμV)	92	84	80	66	61	44
加装EMI滤波器后进线侧噪声水平 (AV/dBμV) Input side noise level with EMI Filters (AV/dBμV)	20	25	34	32	40	36
加装EMI滤波器前后噪声衰减倍数 Noise damping factor due to EMI Filter application	3981倍 (folds)	891倍 (folds)	199倍 (folds)	50倍 (folds)	11倍 (folds)	2.5倍 (folds)

结构 (Construction)

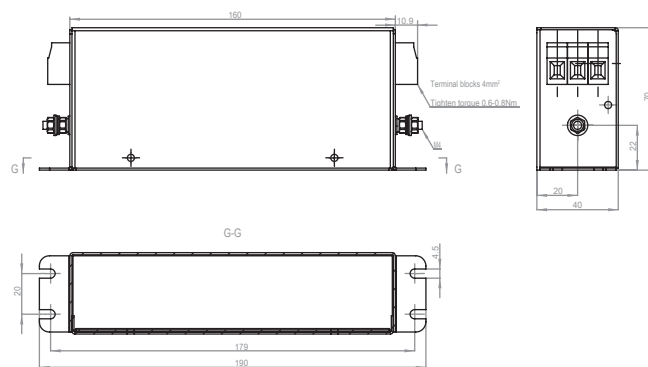


图 A Picture A

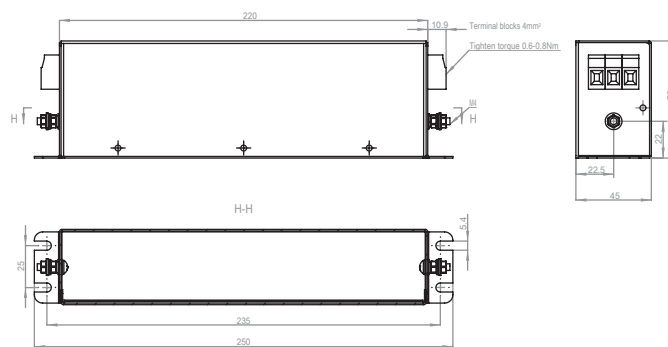


图 B Picture B

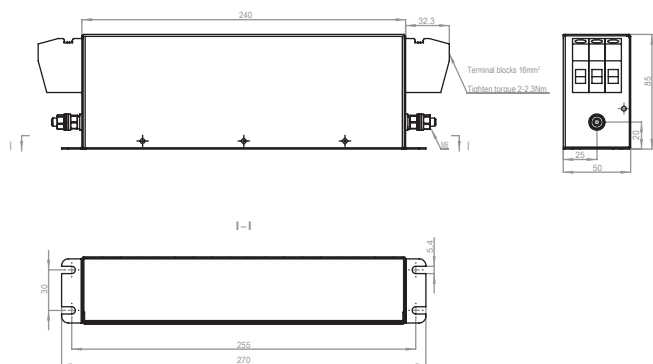


图 C Picture C

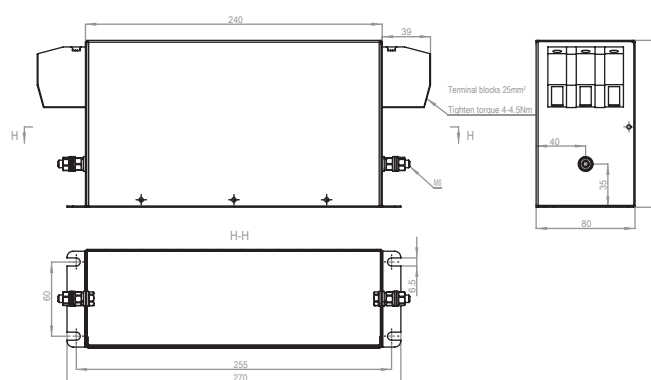


图 D Picture D

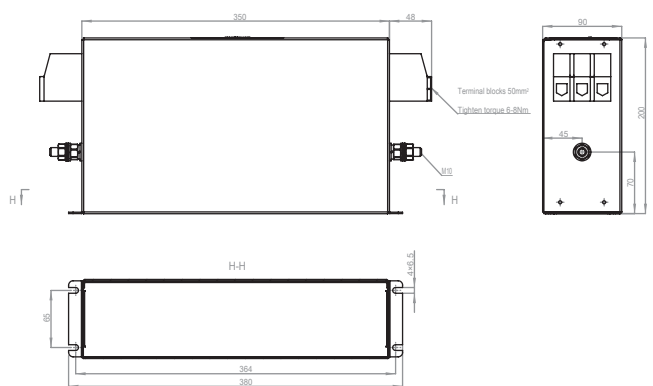
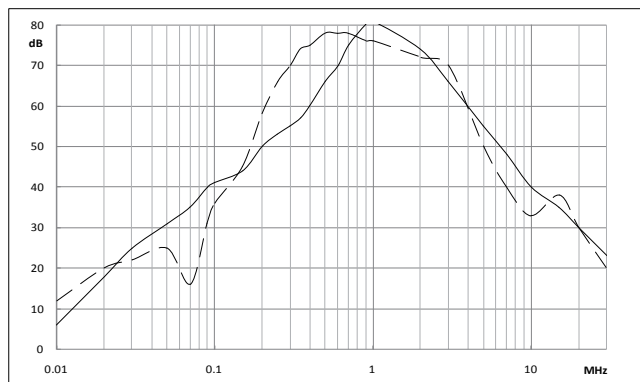
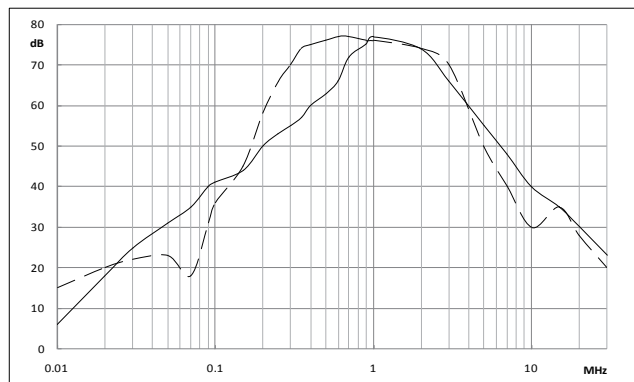


图 E Picture E

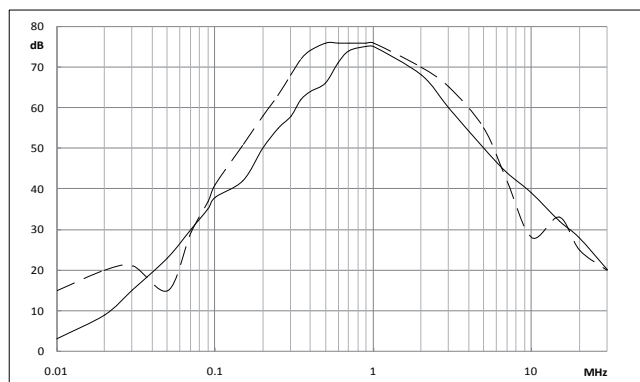
插入损耗 (Insertion Loss (typical values at $Z=50\Omega$))



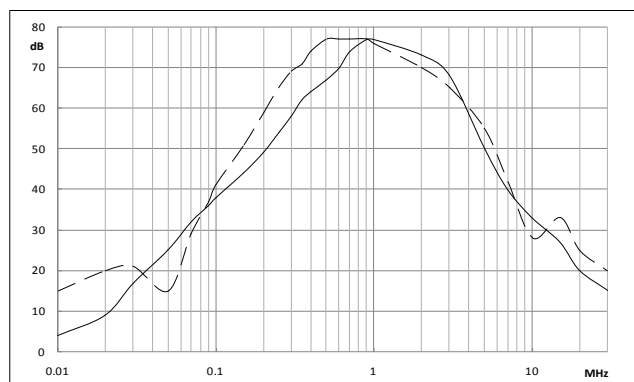
NFI-0007-TB



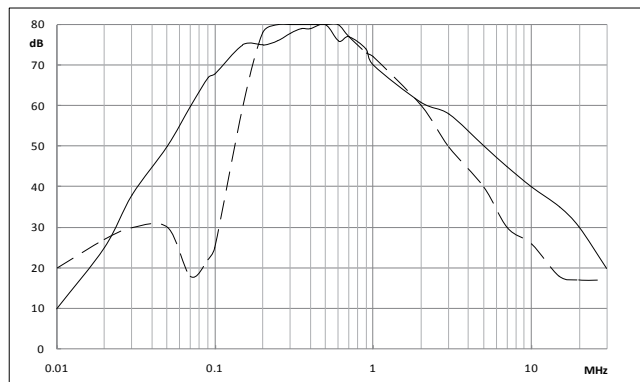
NFI-0016-TB



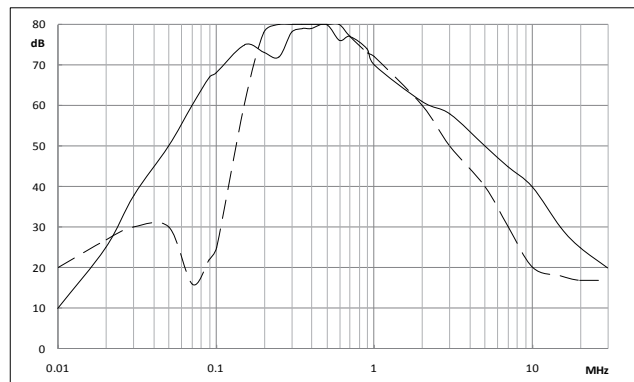
NFI-0030-TB



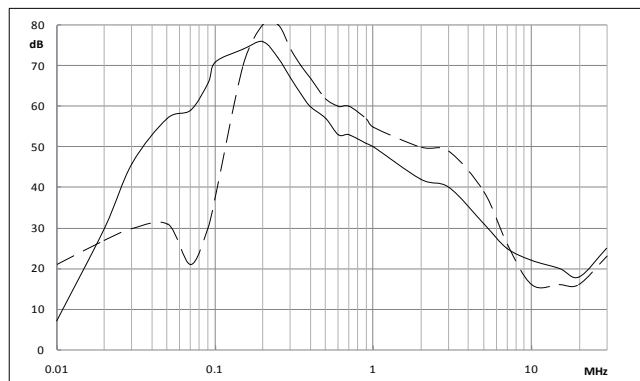
NFI-0042-TB



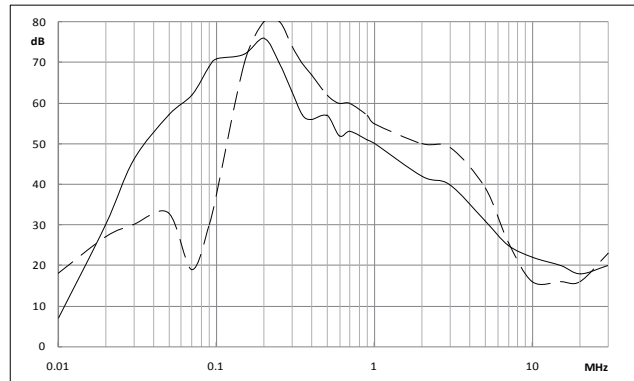
NFI-0050-TB



NFI-0065-TB



NFI-0080-TB



NFI-0110-TB/NFI-0150-TB

———— 共模 (common mode) - - - - - 差模 (differential mode)