

谐波滤波器(HFR) Harmonic Filter

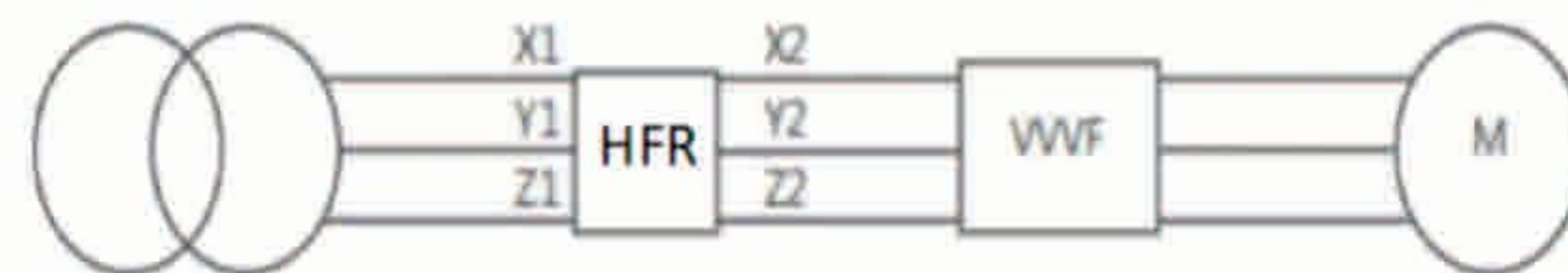
■ 产品概述(Product Introduction)

- 1.与传统无源滤波器相比, HFR系列产品体积更小, 谐波抑制能力更强
- 2.当连接在变频器前端, 经谐波滤波器滤波后总谐波电流小于满负载时基波电流的10%
- 3.效率大于98%, 功率可到250kW。无源谐波滤波器提供了高性价比和稳定可靠的谐波解决方案
- 4.易于安装到现有机柜内
- 5.该系列滤波器与品牌变频器做过精心匹配。适合多种电机控制方式, 确保系统稳定工作, 不会对电网产生任何不良影响
- 6.使用过温保护, 以防过温造成滤波器损坏

- 1.Compared with traditional passive filters, HFR series products are smaller in size and have stronger harmonic suppression capability
- 2.When the harmonic filter is connected in front of the converter, the total harmonic current after filtering is less than 10% of fundamental current at full load
- 3.The efficiency can be greater than 98%, and the power can be up to 250kW. Passive harmonic filters provide cost-effective, stable and reliable harmonic solutions
- 4.It is easy to be installed in cabinets
- 5.This series of filters has been carefully matched with brand converters, and suitable for a variety of motor control methods to ensure stable operation of the system without any effects on the power grid



典型电路图
Typical Circuit Diagram



■ 技术规格(Technical Specification)

- 1.额定电压: AC 380 ~ 480V
- 2.额定频率: 50Hz
- 3.过载能力: 1.5倍 × 额定电流, 60s
- 4.绝缘等级: 过压类别 III 符合EN61800-5-1
- 5.满载效率: 大于98%
- 6.冷却方式: AN
- 7.谐波滤波效果: 满载条件下, 滤波器输入端的总谐波电流畸变率THDi < 10% (背景电压THDu < 2%, 电网额定功率与安装负载比 > 66)
- 8.环境温度(工作): 满载条件下, -25 ~ +50°C
- 9.存储温度: -25 ~ +65°C
- 10.工作海拔: 0 ~ 2000米
- 11.相对湿度: 0 ~ 95%无凝露
- 12.空载电流: 小于额定电流的25%

- 1.Rated Voltage: AC 380 ~ 480V
- 2.Rated Frequency: 50Hz
- 3.Overload Capacity: 1.5 × rated current, 60s
- 4.Insulation Class: overvoltage category III complies with EN61800-5-1
- 5.Full load efficiency: >98%
- 6.Cooling Method: AN
- 7.Harmonic filtering effect: Under full load conditions, the total harmonic current distortion rateTHDi at the filter input is < 10% (background voltage THDu < 2%, ratio of electrical network rated power to load power > 66)
- 8.Ambient Temperature (Operating): under full load, -25~+50°C
- 9.Storage Temperature: -25 ~ +65°C
- 10.Working Altitude: 0 ~ 2000m
- 11.Relative Humidity: 0 ~ 95% without condensation
- 12.No-load current: less than 25% of the rated current

■ 执行标准 (Applicable Standard)

IEEE519 GB/T14549

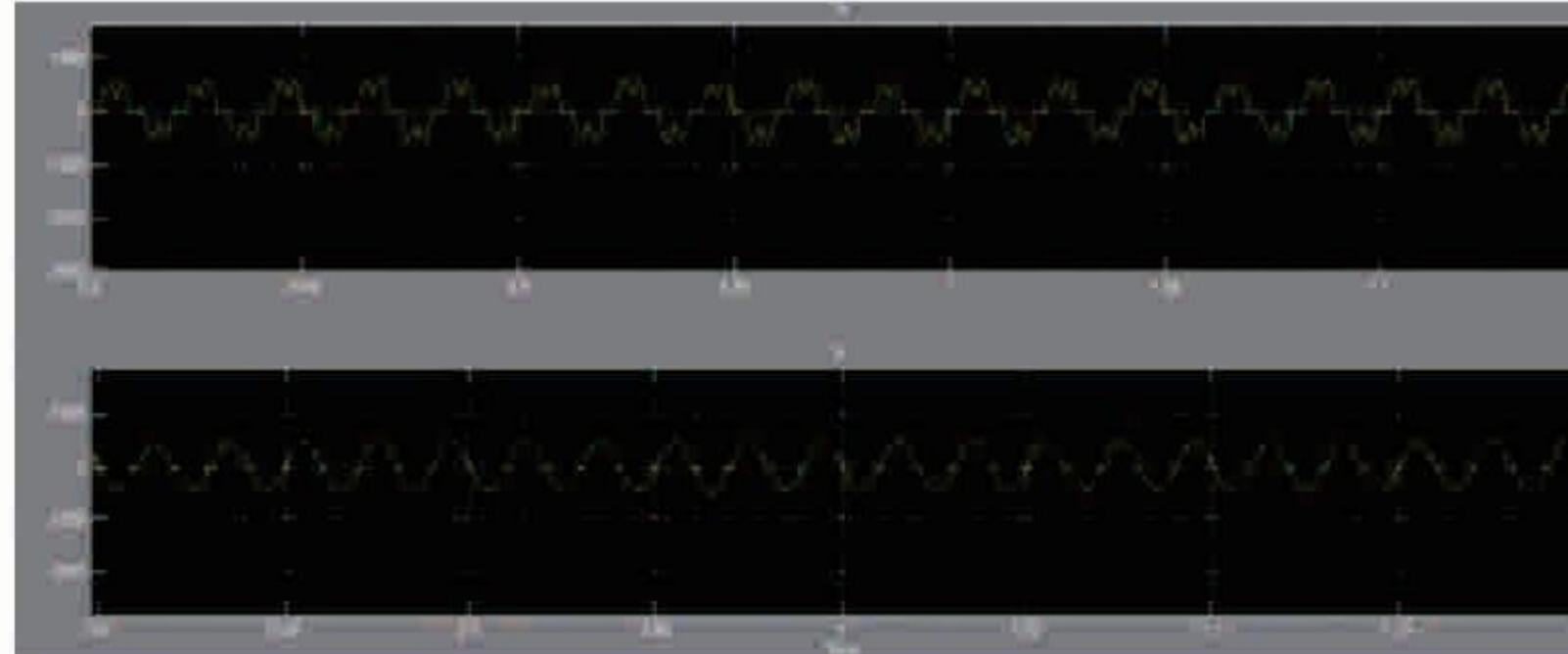
■ 使用注意事项(Precautions for Use)

- 1.DHF谐波滤波器是变频器配套的滤波器，只可安装在不可控整流变频器的电源进线处
- 2.选用时,滤波器的功率与变频器的功率尽量匹配使用，这时可以获得最佳的滤波效果；不匹配时，若功率较大的滤波器用于功率较小的变频器,滤波效果会降低
- 3.滤波器中的电抗器是发热设备，安装时注意保持滤波器周围至少有100mm的空间
- 4.安装时，按照电路图的接线指示，连接可靠的地线
- 5.当海拔、电网质量等使用环境超出技术要求时请咨询厂家

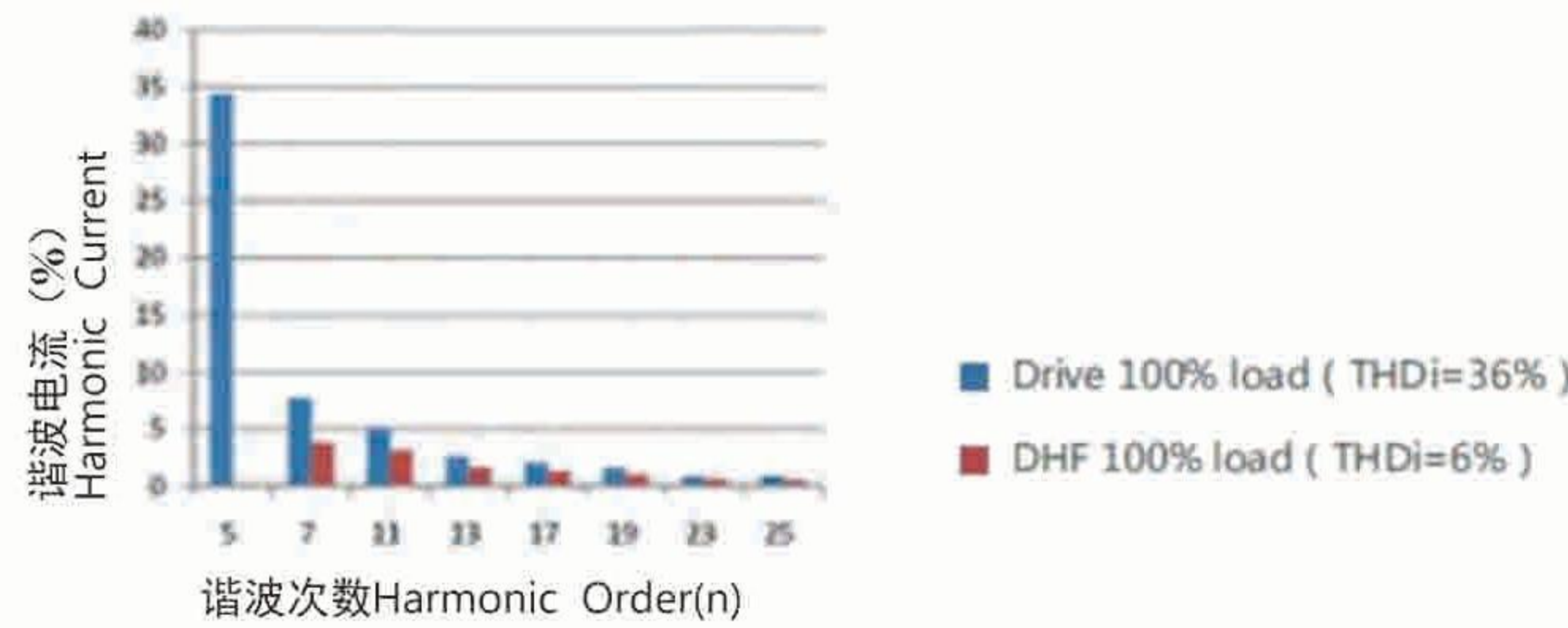
- 1.DHF harmonic filters are matched with converters, and can only be installed at the incoming power line of the uncontrollable rectifier converter
- 2.The power of the filter should match that of the converter as much as possible when used. In this case, the best filtering effect can be obtained. When a larger-power filter is used with a smaller-power converter, the filtering effect will be affected negatively
- 3.The reactor in the filter is a heating device. When installing, make sure to keep at least 100mm of space around the filter
- 4.During installation, follow the wiring instructions in the circuit diagram and connect a reliable ground wire
- 5.When the operating environment such as altitude and power quality exceeds the technical requirements, please consult the manufacturer

■ 仿真图(Simulation Diagram)

无谐波滤波器电流波形图
Current waveform without harmonic filter



加谐波滤波器电流波形图
Current waveform with harmonic filter



使用HFR前后谐波频谱对比图
Harmonic spectrum comparison chart before and after using HFR

■ 成品识别码(Product Identification Code)

HFR	0004	A010
谐波滤波器 Harmonic Filter	额定电流 Rated Current 0004 4A 0015 15A 0150 150A	A: AC 380 ~ 480V 50Hz B: AC 600 ~ 690V 50Hz 总电流谐波畸变率 Total Current Harmonic Distortion Rate 010 THDi<10% 005 THDi<5%