能量回馈电抗器（EFR) Energy Regenerated Reactor

■ 产品概述 （Product Introduction）

变频器制动时所产生的再生能量回馈到电网，并加以利用，但是整流单元是IGBT，会产生较多的高次谐波电流，进而会对电网污染。所以在变频器的前端加上能量回馈电抗器和滤波器组合以改善电能质量。

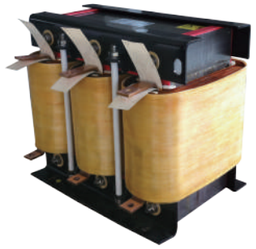
The regenerative energy generated during the braking of the frequency converter is fed back to the power grid and utilized, but the rectifier unit is an IGBT, which generates a large amount of high-order harmonic current and can pollute the power grid. So adding an energy feedback reactor and filter combination at the front end of the frequency converter to improve power quality.

电流范围 Current Range: 10-1000A
电压范围 Voltage Range: 220-1140V

■ 成品识别码 (Product Identification Code)

EFR	–	0080	–	0M54	–	0.4SC
能量回馈电抗器 Energy Regenerated Reactor		额定电流 Rated Current 30A-1600A		电感量 Resistance Value M:mH U:uH		0.4:Working Voltage 0.2=220V,0.4=380V,0.7=690V,1.1=1140V S: D=Single Phase Reactor S=Three Phase Reactor C: C=Copper A:Aluminium

矿用防爆电抗器（BFR) Mine Explosion Reactor



■ 产品概述 （Product Introduction）

矿用防爆变频器为封闭金属外壳，变频器及其外围器件都安装在封闭的空间内，由于结构的特殊性，变频器的主要发热器件即功率模块IGBT采用真空热管或者水冷散热方式，但是电抗器等器件也是系统内较大的发热源，像一个电炉在持续发热，如何减小电抗器的发热量，关系到变频器的运行可靠性及机器寿命。我们通过磁芯和导体发热的合理选择，处理以及反复验算，保证了电抗器在密闭条件下的高性能运行。

Mine explosion-proof inverter has a closed metal housing, and the inverter and peripheral devices are installed in a closed space. Because of the special structure, the main heating device of the inverter, i.e., the power module IGBT, uses vacuum heat pipe cooling or water cooling method. However, the reactors and other devices are also large heat source within the system, just like a continuously heating furnace. The method to reduce the reactor's heat is related to the operational reliability of the inverter and the life of the machine. Through processing and repeated checking based on a reasonable choice of magnetic core and conductor heating, ensuring the high-performance operation in confined conditions.

电流范围 Current Range: 10-1000A
电压范围 Voltage Range: 220-1140V

■ 成品识别码 (Product Identification Code)

BFR	–	0080	–	0M54	–	0.4SC
防爆四象限电抗器 Explosion four quadrant reactor		额定电流 Rated Current 30A-1600A		电感量 Resistance Value M:mH U:uH		0.4:Working Voltage 0.2=220V,0.4=380V,0.7=690V,1.1=1140V S: D=Single Phase Reactor S=Three Phase Reactor C: C=Copper A:Aluminium

VAHNDER

空心电抗器（HAR) Core Reactor

■ 产品概述 （Product Introduction）

采用高品质的环氧树脂真空浸渍，并高温固化。该产品具有节能、电感线性度好，电抗值精确、线圈温升分布均匀、动热稳定性能高，抗短路、过载能力强，绝缘强度好，电磁场均匀性好，损耗低，温升低使用寿命长，基本免维护，噪声低，阻燃、无污染体积小、重量轻和安装运用使用方便等特点。

It applies the high quallty epoxy resin vacuum impregnatlon, solldficatlon through high temperature. The product has the features of energy saving. good inductiveine perfomance. accurate resistance value, uniform dlistibution of coll temperature rise, high dynamic thermal stabililty, anti-short circuit, strong overload ability, good insulation intensity, good uniform distribution of electromagnetic field, low loss, low temperature rise, long service life, maintenance-free, low noise, flame-retardant, pollution-free, small size, light weight, and easy to Installation and use and so on.

■ 产品应用 （Product Application）

一般用于配电线路。从同一母线引出的分支馈线上往往串有空心限流电抗器，以限制馈线的短路电流并维持母线电压，不致因馈线短路而致过低。并在其表面进行耐候涂层处理：喷涂具有高绝缘电阻和憎水性的室温硫化硅橡胶(RTV),利用RTV胶的优良绝缘性能，使电抗器沿面电阻保持较好的绝缘性能，对电抗器产品表面树技状放电现象具有很好的抑制作用。从而保证空心限流电抗器在户外环境下安全运行。该产品应用计算机进行电磁优化计算和空间三维结构设计，采用环氧玻纤增强的多包封并联结构、使用先进的工艺技术和微机控制的生产设备及引进的检验设备进行生产和检验。该产品具有电感线性好、损耗低、温度分布均匀、绝缘强度好、机械强度高、局放小、喉音低、体积小、重量轻、防潮、阻燃、过载能力强、可靠性高、无污染、免维护、环境效果好等优点。

Generally used for distribution lines. Hollow current limiting reactors are often connected in series on branch feeders from the same busbar to limit the short-circuit current of the feeder and maintain the busbar voltage, so as not to be too low due to feeder short circuits. And weather resistant coating treatment is applied to its surface: spraying room temperature vulcanized silicone rubber (RTV) with high insulation resistance and hydrophobicity, utilizing the excellent insulation performance of RTV rubber to maintain good insulation performance along the surface resistance of the reactor, and effectively suppressing the dendritic discharge phenomenon on the surface of the reactor product. Thus ensuring the safe operation of hollow current limiting reactors in outdoor environments. This product uses computers for electromagnetic optimization calculations and spatial 3D structure design. It adopts a multi encapsulated parallel structure reinforced with epoxy fiberglass, advanced process technology, microcomputer controlled production equipment, and imported inspection equipment for production and inspection. This product has the advantages of good inductance linearity, low loss, uniform temperature distribution, good insulation strength, high mechanical strength, small partial discharge, low throat sound, small size, light weight, moisture-proof, flame retardant, strong overload capacity, high reliability, pollution-free, maintenance free, and good environmental effect.

电流范围 Current Range: 30-1600A
电压范围 Voltage Range: 220-35KV

■ 成品识别码 (Product Identification Code)

HAR	–	0080	–	0M54	–	0.4SC
空心电抗器 Core reactor		额定电流 Rated Current 30A-1600A		电感量 Resistance Value M:mH U:uH		0.4:Working Voltage 0.2=220V,0.4=380V,0.7=690V,1.1=1140V S: D=Single Phase Reactor S=Three Phase Reactor C: C=Copper A:Aluminium

VAHNDER