

调谐电抗器 (ATR) Tuning Reactor

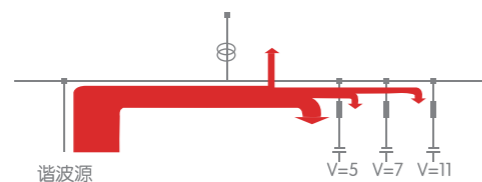
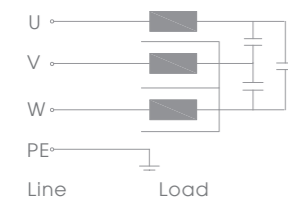
产品概述 (Product Introduction)

现代电力电子设备的大量使用产生的非线性电流正以谐波方式影响电网并加重电网污染，并导致电容器，变压器及传输设备过载并故障，对测量，传动，计算等设备产生的严重干扰，谐振及电压畸变还造成供电事故。串联电抗器可得以改善与避免。电容器串联电抗器后谐振频率低于系统最低（一般为5次及7次），使其在工频下呈容性，以改善功率因数，而在谐振并无放大谐波之虑，良好的阻抗匹配后，电容器组可吸收谐波电流（如5次）30%-60%。

The nonlinear currents generated by the massive use of modern power and electric equipment are impacting the power grid and aggravate its pollution in the harmonic form, cause overload failures to capacitors, transformers and transmission devices and generate serious interference to measuring, transmitting and calculating devices; in addition, resonance and voltage distortions may also result in power supply accidents. Series reactors could effectively improve or avoid such problems. After installing the capacitor and reactor in series, the resonance frequency is lower than the minimum of the system (usually 5th and 7th waves), so that compatibility is showed under power frequency and power factor is improved; meanwhile, there is no need to worry about the amplification of harmonic wave. With satisfactory impedance matching, the capacitor bank could absorb 30% to 60% of the harmonic currents (5th harmonic wave, for example).



典型电路图



去波示意图
To the wave schematic diagram

产品应用 (Product Application)

工作频率 Operating frequency	50Hz-60Hz
额定电流 Rated operating current	5A-2000A
工作电压 Rated operating voltage	220V-10KV
温升 Temperature rise	≤95K
噪音 Noise	≤65dB
三相平衡度 Three-phase equilibrium degree	-5%...+5%
抗电强度 Reactive Strength	Core-Winding 3000VAC/50Hz/5mA/10S Free of arcing breakage (ftested in factory)
绝缘电阻 Insulation Resistance	1000VDC, insulation resistance ≥ 100MΩ
防护等级 Degree of protection	IPO0-IP20
失调系数 Reduction factor	5,67%, 7%, 14%
性能范围 Pn Performance range Pn	5 kvar ... 100 kvar
监控 Monitoring	Temperature switch is integrated, contacts are fitted on terminals.
环境温度/热绝缘等级 Temperature classes	ta 40 ° C/F,H
安装海拔高度 Installation altitude	≤2000 m above sea level
存储温度 Storage temperature	-25 ° C ... +55 ° C
运输温度 Transport temperature	-25 ° C ... +70 ° C
允许的额定湿度 Permissible humidity rating	Humidity 5% ... 95% occasional condensation permissible

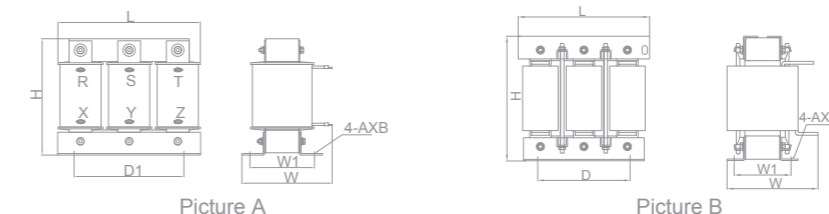
执行标准 (Applicable Standards)

IEC289: 1987 Reactor
GB10229-88 Reactor (equiv IEC289: 1987)
JB9644-1999 Reactors used for semiconductor electrical driving

成品识别码 (Product Identification Code)

ATR	-	02100	-	0400	-	SA07X
调谐电抗器		电抗器容量		工作电压		S:三相 D:单相 A:铝 C:铜 07: 7%电抗率 X: 线绕 B:箔绕

产品尺寸图 (Product Size)



产品型号 Order No.	图号 Picture NO.	补偿容量 Filter bank capacity Qc kvar	电感系数 Inductance	外形尺寸 Dimensions (MAX) L*W*H	安装尺寸 Mounting dimensions D1*W1	额定电流 Rated Current(A) In A	连接 K=端子 F=母排 Connections K = Terminal F = Flat termination	单台的近似总重 Total weight per PU approx. kg
p=5.67%, L = 恒定, 不超过1.82 · I _{thmax} , fRES = 210 Hz Choking factor p = 5.67%, L = constant to 1.82 · I _{thmax} , fRES = 210 Hz								
ATR002800400SA05.67X	A	5.00	6.12	195*100*210	120*72	8.0	K	3.70
ATR004300400SA05.67X	A	7.50	4.081	195*100*210	120*92	12.0	K	5.00
ATR005700400SA05.67X	A	10.0	3.06	195*150*165	120*92	16.0	K	6.40
ATR007100400SA05.67X	A	12.5	2.45	195*165*165	120*112	20.0	K	9.10
ATR0085000400SA05.67X	A	15.0	2.04	195*165*165	120*112	24.0	K	9.30
ATR011300400SA05.67X	A	20.0	1.53	230*160*185	150*95	32.0	K	13.0
ATR014200400SA05.67B	B	25.0	1.22	250*165*200	182*95	40.0	K	18.3
ATR017000400SA05.67B	B	30.0	1.02	250*170*200	182*105	50.0	K	18.0
ATR022700400SA05.67B	B	40.0	0.77	250*180*200	182*115	65.0	F	25.3
ATR028400400SA05.67B	B	50.0	0.61	290*185*220	214*118	80.0	F	34.1
ATR034000400SA05.67B	B	60.0	0.51	290*200*220	214*128	95.0	F	35.6
ATR045400400SA05.67B	B	80.0	0.38	320*205*285	243*130	130.0	F	42
ATR051000400SA05.67B	B	90.0	0.34	320*210*310	243*135	145.0	F	47
ATR056700400SA05.67B	B	100.0	0.31	320*220*310	243*140	160.0	F	51.9
p=7%, L = 恒定, 不超过1.66 · I _{thmax} , fRES = 189 Hz Choking factor p = 7%, L = constant to 1.66 · I _{thmax} , fRES = 189 Hz								
ATR003500400SA07X	A	5.00	7.2	195*100*210	120*72	7.5	K	3.30
ATR005300400SA07X	A	7.50	5	195*100*210	120*92	11.0	K	4.80
ATR007000400SA07X	A	10.0	3.8	195*150*165	120*92	15.0	K	5.90
ATR008800400SA07X	A	12.5	3	195*165*165	120*112	19.0	K	8.60
ATR010500400SA07X	A	15.0	2.5	195*165*165	120*112	23.0	K	8.80
ATR014000400SA07X	A	20.0	1.8	230*160*185	150*95	30.0	K	12.8
ATR017500400SA07B	B	25.0	1.4	250*165*200	182*95	38.0	K	19.1
ATR021000400SA07B	B	30.0	1.2	250*170*200	182*105	45.0	F	19.6
ATR028000400SA07B	B	40.0	0.95	250*180*200	182*115	60.0	F	24.7
ATR035000400SA07B	B	50.0	0.75	290*185*220	214*118	75.0	F	26.5
ATR042000400SA07B	B	60.0	0.62	290*200*220	214*128	90.0	F	34.1
ATR056000400SA07B	B	80.0	0.46	320*205*285	243*130	122.0	F	40.0
ATR063000400SA07B	B	90.0	0.43	320*210*310	243*135	130.0	F	45.0
ATR070000400SA07B	B	100.0	0.37	320*220*310	243*140	150.0	F	50.0
p=14%, L = 恒定, 不超过1.4 · I _{thmax} , fRES = 134 Hz Choking factor p = 14%, L = constant to 1.4 · I _{thmax} , fRES = 134 Hz								
ATR007000400SA14X	A	5.00	16.6	195*120*210	120*92	7.0	K	5.10
ATR010500400SA14X	A	7.50	11.1	195*120*210	120*112	10.0	K	8.10
ATR014000400SA14X	A	10.0	8.29	195*120*210	120*112	14.0	K	9.40
ATR017500400SA14X	A	12.5	6.63	195*120*210	120*112	18.0	K	12.0
ATR021000400SA14X	A	15.0	5.53	250*165*200	182*95	21.0	K	16.0
ATR028000400SA14X	A	20.0	4.14	250*185*200	182*115	30.0	K	18.0
ATR035000400SA14B	B	25.0	3.32	290*180*210	214*113	35.0	K	28.0
ATR042000400SA14B	B	30.0	2.76	290*185*220	214*118	42.0	K	26.0
ATR056000400SA14B	B	40.0	2.07	290*215*280	214*118	56.0	F	35.2
ATR070000400SA14B	B	50.0	1.66	320*230*275	243*135	70.0	F	37.2
ATR084000400SA14B	B	60.0	1.38	320*230*310	243*135	85.0	F	51.1
ATR112000400SA14B	B	80.0	1.04	375*250*320	260*165	110.0	F	54.0
ATR126000400SA14B	B	90.0	0.92	375*250*320	260*165	125.0	F	58.0
ATR140000400SA14B	B	100	0.829	375*265*360	260*175	140.0	F	62.0