

SAMWHA

CAPACITOR

High Performance Capacitors Since 1956

Inside All The E-devices



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Samwha (Thailand) Co.,Ltd was founded in 1997 as Samwha's manufacturing base in Southeast Asia. It is a part of the global network strategy of Samwha Group. It began by producing ferrite cores, high voltage capacitor and low voltage power capacitor. Furthermore, Samwha (Thailand) Co.,Ltd. is playing a major role in its development in Thailand, publicizing the image of Samwha Group, to ultimately become a leading company.



COMPANY HISTORY

SAMWHA THAILAND

- 1997.11 Establish Samwha (Thailand) Co.,Ltd.
- 2002.03 Factory Extend Construction Motor Running Capacitor
- 2003.05 Began mass Production of Motor Running Capacitor
- 2004.06 ISO 9001: 2000 Certification
- 2006.09 Began mass Production of Low Voltage Power Capacitor
- 2009.05 ISO 14001: 2004 Certification
- 2010.08 ISO 14001: 2004 Certification
- 2010.10 TISI Certificate of Low Voltage Power Capacitor.

AFFILIATED COMPANY

- | | |
|--------------------|-----------------------------|
| Samwha Thailand | PT. SAMCON |
| Samwha Electronics | Qingdao Samwha Electronics |
| Korea JCC | Samwha Enterprise |
| Samwha Europe GmbH | Samwha Hongkong |
| Samwha India | Tianjin Samwha Electric |
| Samwha U.S.A. | Samwha Poland |
| Samwha Electric | Samwha Tecom |
| Samwha Trading | Tianjin Samwha Hi-Tech Intl |
| PT. SI | |



DETUNED REACTOR



*Used for capacitor banks
(P.F. improvement)*

SPECIFICATION

- | | |
|---|--|
| 1 Reference Standards | : IEC 60289 and IEC 60076 |
| 2 Service condition and installation | |
| - Ambient Temperature | : $-20 \sim +40\text{ }^{\circ}\text{C}$ |
| - Humidity | : $\leq 85\%$ |
| - Altitude (above sea level) | : ≤ 1000 metre |
| - Type of reactor | : Dry type with multi gapped iron core |
| - Installing application | : Indoor |
| - Type of cooling | : AN (natural air cooled) |
| - Degree of protection | : IP00 |
| - Insulation class | : H (180 $^{\circ}\text{C}$) |
| 3 Ratings | |
| - Number of phases | : Three phase |
| - Rated power frequency | : 50Hz |
| - Rated power voltage | : $\leq 416\text{V}$ (widely range power voltage) |
| - Percentage of reactance (XL / XC) | : 7% |
| - Rated tuning frequency | : 189Hz |
| - Rated reactor voltage | : $\leq 18.1\text{V}$ |
| - Inductance tolerance | : $\pm 3\%$ |
| - Harmonic current limits | : 3rd $\leq 5\%$, 5th $\leq 35\%$ and 7th $\leq 15\%$ |
| - Rated short-time current | : 25 Times of rated current 2 Sec. |
| - Max. Temperature rise of winding | : $\leq 85\text{ K}$ (at 125% of rated current) |

4 Routine test

- Measurement of winding resistance
- Measurement of insulation resistance
- Measurement of inductance
- Measurement of total loss
- Measurement of Q-factor
- Separate-source voltage withstand test
- Induce overvoltage withstand tes

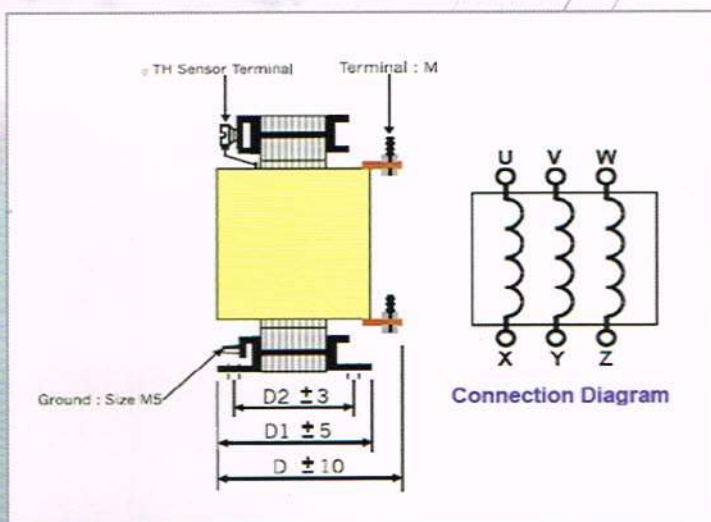
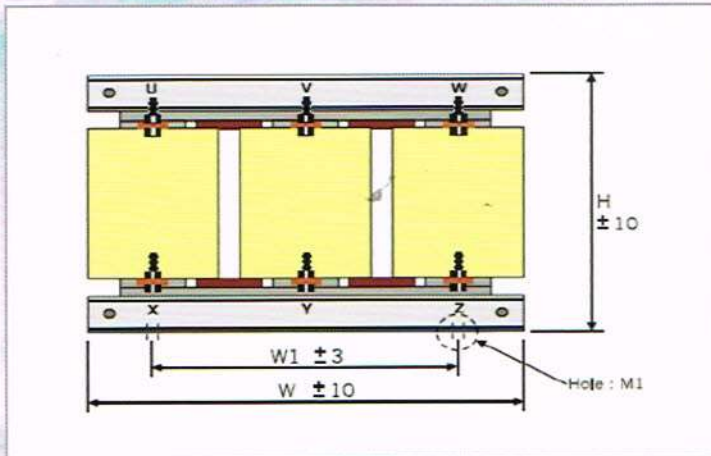
5 Impregnation and banking method

The reactors will be impregnated with insulating varnish under VPI technology (Vacuum Pressure Impregnation) and baked at 140 $^{\circ}\text{C}$. 4 hours.

6 Thermal sensor

Operating temp. 135 $^{\circ}\text{C}$, AC 250V 7.2A, NC Terminal M3

USED FOR CAPACITOR BANK (P.F. improvement)



SPECIFICATION (Designed to use with Capacitor 525V 50Hz)

Rated of Capacitor 525V (kvar)	Generated output Power (kvar)			Rated of Reactor (at 416V)			Total Loss (Watt)	Efficiency h (%)	Sound Level (dB(A))	Dimensions (mm) (+/- 15-20%)								Approx. Weight (kg)
	Rated power Voltage			Inductance/Phase (mH)	Current (Amp.)	Power (kvar)				W	W1	H	D	D1	D2	M	M1	
	380V	400V	416V															
10	5.6	6.2	6.8	6.141	9.40	0.51	45	91.9	< 50	180	120	170	155	120	95	8	Φ8	12
15	8.5	9.4	10.1	4.094	14.10	0.76	55	93.3	< 50	240	160	200	155	120	90	8	Φ8	17
20	11.3	12.5	13.5	3.071	18.70	1.02	70	93.6	< 50	240	160	200	170	140	110	8	Φ8	21
25	14.1	15.6	16.9	2.457	23.40	1.27	80	94.1	< 50	240	160	220	175	145	115	8	Φ8	24
30	16.9	18.7	20.3	2.047	28.10	1.52	90	94.4	< 50	240	160	260	175	145	115	8	Φ8	28
40	22.5	25.0	27.2	1.535	37.50	2.03	105	95.1	< 50	240	160	245	145	145	115	8	Φ8	27
50	28.2	31.2	33.8	1.228	46.80	2.54	120	95.5	< 50	300	160	265	185	155	125	8	Φ8	31
60	33.8	37.5	40.5	1.024	56.20	3.05	130	95.9	< 50	300	200	270	185	155	115	8	Φ8	34
70	39.4	43.7	47.3	0.877	65.60	3.56	160	95.7	< 50	300	200	270	200	165	125	8	Φ8	39
75	42.3	46.8	50.6	0.819	70.30	3.81	170	95.7	< 50	300	200	270	205	175	135	8	Φ8	42
80	45.1	49.9	54.0	0.768	45.00	4.07	180	95.8	< 50	300	200	270	210	180	140	8	Φ8	45
90	50.7	56.2	60.8	0.682	84.30	4.57	200	95.8	< 50	300	200	325	205	165	125	10	Φ8	46
100	56.3	62.4	67.5	0.614	93.70	5.08	210	96.0	< 50	300	200	325	210	175	135	10	Φ8	49
120	67.6	74.9	81.0	0.512	112.40	6.10	215	96.6	< 50	300	200	325	225	190	150	10	Φ8	58
160	90.1	99.9	108.0	0.384	149.90	8.13	290	96.6	< 50	300	200	330	235	195	155	10	Φ8	63
200	112.7	124.8	135.0	0.307	187.40	10.16	350	96.6	< 50	320	210	350	245	200	165	10	Φ8	75



SAMWHA CAPACITOR

Low Voltage Power Capacitor

DRY TYPE (CYLINDER)

DRY TYPE (UNIT)

DRY TYPE (OUTDOOR)

OIL TYPE (INDOOR)

OIL TYPE (STEEL CASE)

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