Thyristor Power Regulator

Model : W5 SERIES

Features :

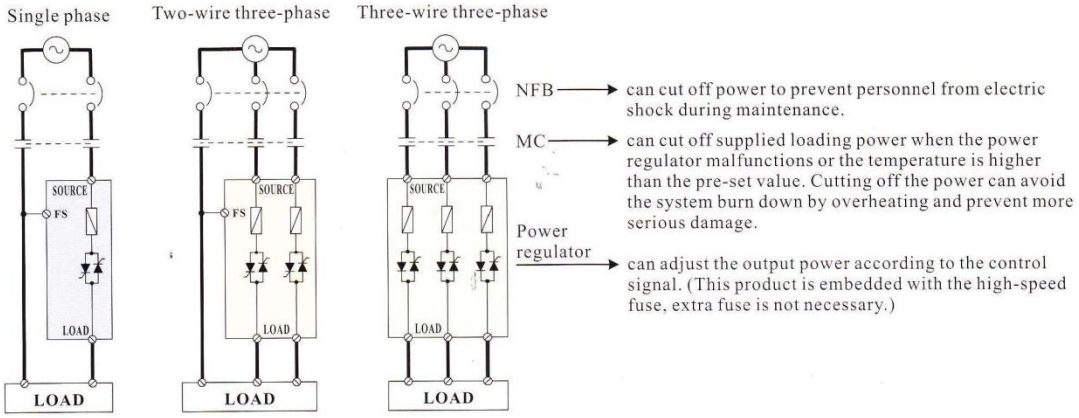
- ☐ Independent adjustment of Max and BIAS.
- ☐ Down-opened Panel, easy for fuse replacement.
- ☐ VR of Max and SFS are installed in the front panel, easy for adjustment.
- ☐ Multi-LED display panel makes the operating condition clear.
- ☐ The auxiliary powers (AC1, AC2) are independently controlled for all models.
- ☐ Build-in buffering output adjustment (SFS VR), adjusting range 1~ 22 seconds.(Only for the phase control product)
- ☐ Top & bottom shielding covers are designed for safety and fashion out looking, also easy for wiring installation.
- ☐ In case of 0.5 Hz sudden power losses, system output can be switched off immediately. Once the power is restored, the system will buffer the output to prevent the voltage surge for fuse burn-down.
- ☐ Main power is one spec. Design for 200 ~ 480VAC.
- ☐ Automatic power frequency detection for 50 ~ 60 Hz. No need for selection or switch.
- ☐ Automatic detection and display for power out-of-phase, SCR overheating, and fuse burn-down with one set of alarm dry contact output.
- ☐ In cases of SCR overheating or fuse burn-down, the system output is stopped immediately. Once the malfunction is eliminated and power is restored, the system will buffer the output to prevent the fuse burn-down.
- ☐ 4~20mA, 1~5VDC, 2~10VDC, 0~20mA, 0~5VDC, 0~10VDC, dry contact points, etc. and all control signals are ready to use.
- ☐ Triggering circuit and the main board are designed separately to avoid the main board damage when main circuit malfunctions.
- ☐ Using European detachable control signal connector for easy replacement without re-wiring installation.

Control and applied loading

輸出量 Output / 控制方式 Control mode	輸出波形 Output wave		
	10% Output	50% Output	90% Output
相位控制 Phase angle control			
零位控制 Zero crossing control	 1 cycle ON and 9 cycle OFF	 1 cycle ON and 1 cycle OFF	 9 cycle ON and 1 cycle OFF

- Phase angle control: continuous phase angle control, steady output, current gauge reading remains steady. But, every half wave will produce harmonic wave.
  Applicable loading: fixed resistance loading, variable resistance loading, inductive loading, IR light bulb.
- Zero crossing control: distributed zero crossing control, minimum resolution 1 Hz, no harmonic wave, and current gauge reading oscillates.
  Applicable loading: fixed resistance loading.

Wiring and setup notices



- Standard main circuit setup: main power → molded case circuit breaker → contactors → power regulator → loading.
- The screw must be tightened during the wiring setup to avoid high temperature resulting from bad contact.
- Once the wiring setup is completed, the front panel and safety cover must be properly installed before the system is powered up to avoid the electric shock or short circuit caused by dropped conductive objects.

Model table

Model : W5 SERIES

Product series	W5	W5 series			
Control		SP	Single - phase angle control		
		SZ	Single - phase zero crossing control		
		TP	Three - wire three - phase angle control		
		TZ	Two - wire three - phase zero crossing control		
		ZZ	Three - wire three - phase zero crossing control		
Main power voltage		1V	110VAC (Only for single - phase power source)		
		4V	200 - 480VAC		
Normal rated current		30	30A		
		45	45A		
		60	60A		
		80	80A		
		100	100A		
		125	125A		
		150	150A		
		180	180A		
		230	230A		
		300	300A		
		380	380A		
		450	450A		
		580	580A		
		720	720A		
Dash		-			
Auxiliary power souree code		1	1 Ø 110VAC		
		2	1 Ø 220VAC		
Input signal code		0	0 ~ 5VDC		
		1	0 ~ 5VDC		
		2	0 ~ 10VDC		
		3	0 ~ 10VDC		
		4	0 ~ 20VDC		
		5	0 ~ 20DC		
		M	Mandal adjustment		
		*	Special		
Buffering time code		C	Buffering time, 2 seconds (Sero - crossing type of product)		
		J	Adjustable buffering time, 1-22 seconds (Phase - angle type of product)		
Special				TF	Inductive reactance typ eof loading
				CV	Constant voltage type
				CL	Limited current type (RMS)
				CC	Constant current type (RMS)

Only for phase-angle type of product

The weights and related dimensions of the power regulators

Single-phase angle and Single-phase zero crossing control (W5SP · W5SZ)

Normal rated current	Figure	Outline dimensions (mm)			Net weights (Kg)	Packed dimensions (mm)			Packed weights (Kg)	Fixed-hole dimensions (mm)				Main power source screw	Way of cooling
		Length	Width	Height		Length	Width	Height		L1	L2	L3	W		
30A	A	162	98	133	1.3	225	127	166	1.5	122	O	O	90	M6	Air-cooling
45A	A	200	98	133	1.5	262	127	166	1.7	122	O	O	90	M6	Air-cooling
60,80A	B	162	112	183	1.7	225	140	220	2.0	122	O	O	104	M6	Air-cooling
100A	C	189	112	183	2.0	250	140	220	2.3	122	O	O	104	M6	Fan-cooling
125,150,180A	C	275	112	183	3.0	336	140	220	3.4	122	86	O	104	M8	Fan-cooling
230A	C	287	112	188	3.4	345	140	220	3.8	122	86	O	104	M10	Fan-cooling
300,380A	I	390	140	248	6.4	450	168	277	7.0	122	86	94	132	M10	Fan-cooling
450A	I	390	140	248	7.1	450	168	277	7.7	122	86	94	132	M10*2	Fan-cooling
580A	I	460	140	248	8.6	600	265	390	10.5	122	86	94	132	M10*2	Fan-cooling
720A	I	560	140	248	10.4	700	265	390	12.7	122	86	239	132	M10*2	Fan-cooling

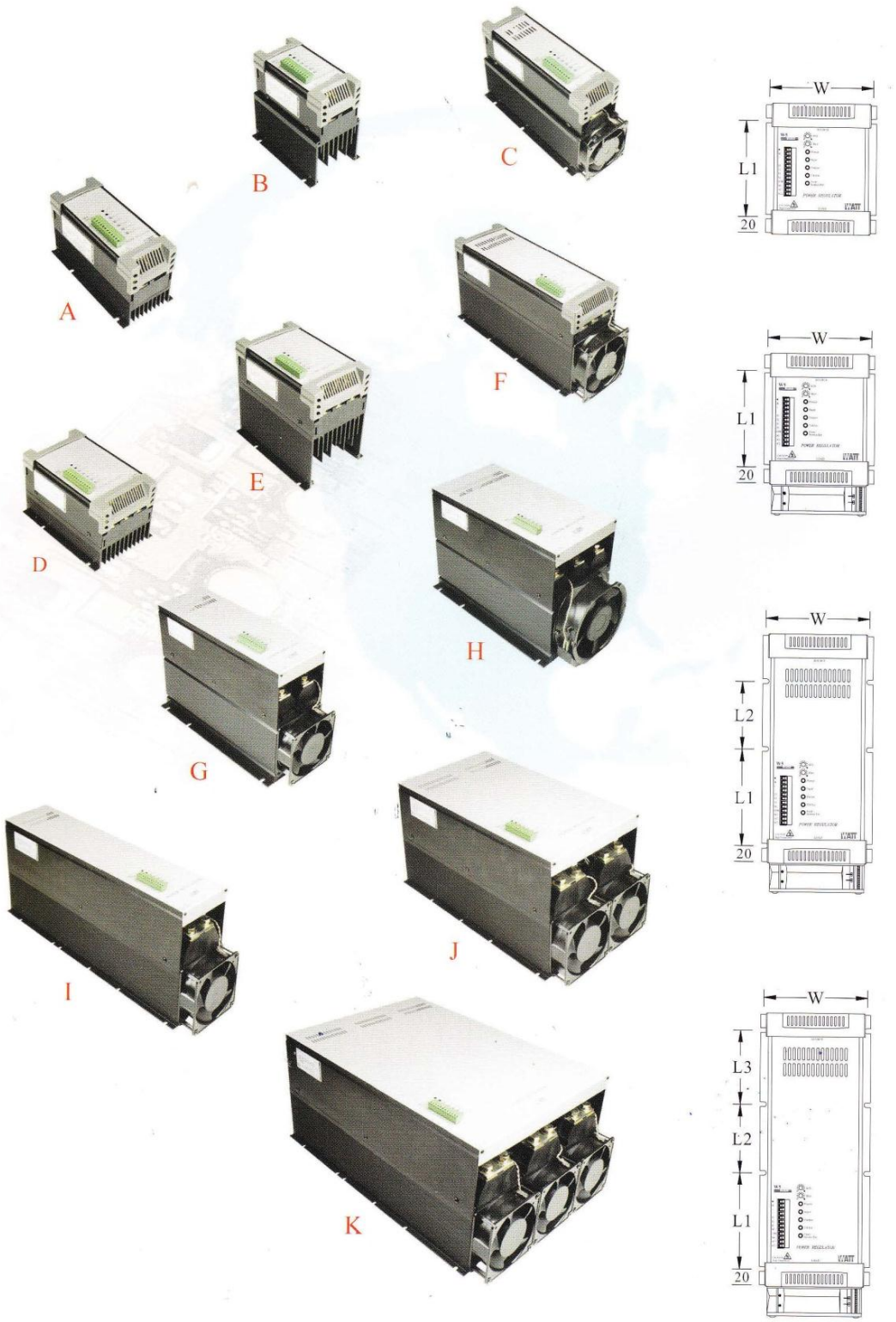
Two-wire three-phase zero crossing control (W5TZ)

Normal rated current	Figure	Outline dimensions (mm)			Net weights (Kg)	Packed dimensions (mm)			Packed weights (Kg)	Fixed-hole dimensions (mm)				Main power source screw	Way of cooling
		Length	Width	Height		Length	Width	Height		L1	L2	L3	W		
30A	A	162	98	133	1.5	225	127	166	1.7	122	O	O	90	M6	Air-cooling
45A	B	162	112	183	1.9	225	140	220	2.2	122	O	O	104	M6	Air-cooling
60,80,100A	C	189	112	183	2.2	250	140	220	2.5	122	O	O	104	M6	Fan-cooling
125A	C	275	112	183	3.1	336	140	220	3.5	122	86	O	104	M8	Fan-cooling
150A	F	326	140	205	4.5	388	168	245	5.0	122	86	O	132	M8	Fan-cooling
180A	F	382	140	205	5.6	443	168	245	6.1	122	86	94	132	M8	Fan-cooling
230A	G	310	155	265	10.4	445	260	420	12.0	230	O	O	143	M10	Fan-cooling
300,380A	G	390	155	265	14.3	525	260	420	16.3	230	80	O	143	M10	Fan-cooling
450A	J	390	260	248	13.2	535	385	390	15.7	122	86	94	252	M10*2	Fan-cooling
580A	J	460	260	248	16.1	600	385	390	18.7	122	86	94	252	M10*2	Fan-cooling
720A	J	560	260	248	20.0	700	385	390	23.0	122	86	239	252	M10*2	Fan-cooling

Three-wire three-phase angle, Three-wire three-phase zero crossing control (W5TP · W5ZZ)

Normal rated current	Figure	Outline dimensions (mm)			Net weights (Kg)	Packed dimensions (mm)			Packed weights (Kg)	Fixed-hole dimensions (mm)				Main power source screw	Way of cooling
		Length	Width	Height		Length	Width	Height		L1	L2	L3	W		
30A	D	200	140	145	2.5	262	168	182	2.9	122	O	O	132	M6	Air-cooling
45A	E	200	140	205	3.0	262	168	245	3.4	122	O	O	132	M6	Air-cooling
60,80,100A	F	202	140	205	3.1	262	168	245	3.5	122	O	O	132	M6	Fan-cooling
125A	F	288	140	205	4.4	350	168	245	5.0	122	86	O	132	M8	Fan-cooling
150A	F	326	140	205	4.8	388	168	245	5.4	122	86	O	132	M8	Fan-cooling
180A	F	382	140	205	5.8	443	168	245	6.3	122	86	94	132	M8	Fan-cooling
230A	H	322	215	265	15.3	450	313	420	17.3	230	O	O	203	M10	Fan-cooling
300,380A	H	402	215	265	21.1	540	313	420	23.4	230	80	O	203	M10	Fan-cooling
450A	K	390	380	248	19.7	525	505	390	22.6	122	86	94	372	M10*2	Fan-cooling
580A	K	460	380	248	24.4	600	505	390	27.4	122	86	94	372	M10*2	Fan-cooling
720A	K	560	380	248	29.6	700	505	390	33.3	122	86	239	372	M10*2	Fan-cooling

Outline appearance and fixed dimensions



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