YASKAWA

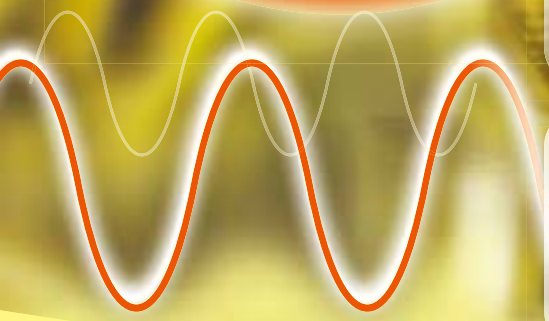
Low Harmonics Regenerative Matrix Converter

U1000

Let us solve your power supply problems.

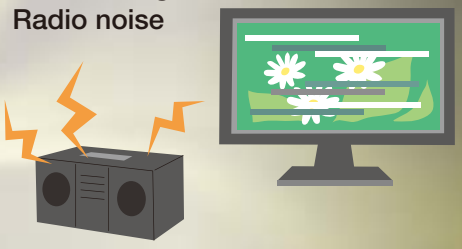
Harmonic current causes power supply problems.

Problems caused by harmonic current



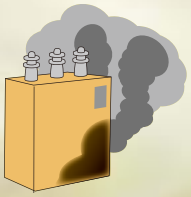
Malfunction of control devices and leaking breaks.

TV flickering:
Radio noise



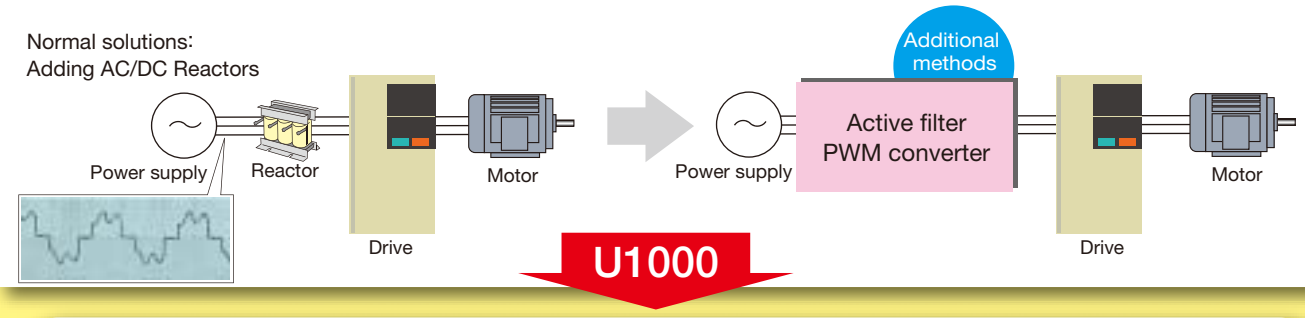
Overheat and burn of power supply reactor.

Burn, noise , and vibration to phase advance capacitors.

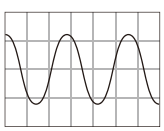
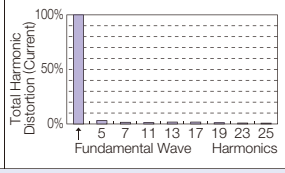


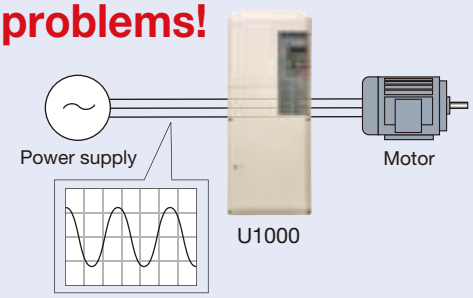
Harmonic current interferes with electric devices.

If normal solutions are not enough, additional methods are necessary.



One U1000 can solve your harmonics problems!

Power Current Waveform Samples	Input Current Spectrums	Current Distortion	Power factor
		5%	0.98



■ Standard Specifications

200 V Class

ND: Normal Duty, HD: Heavy Duty

Model CIMR-U□2A□□□□			0028	0042	0054	0068	0081	0104	0130	0154	0192	0248
Rated Input/Output	Rated Input Current A	ND	25	38	49	62	74	95	118	140	175	226
		HD	20	25	38	49	62	74	95	118	140	175
	Rated Input Capacity kVA	ND	12	17	22	28	34	43	54	64	80	103
		HD	9	12	17	22	28	34	43	54	64	80
	Rated Output Current A	ND	28	42	54	68	81	104	130	154	192	248
		HD	22	28	42	54	68	81	104	130	154	192
	Overload Tolerance		HD Rating: 150% of rated output current for 60 s, ND Rating: 120% of rated output current for 60 s (Derating may be required for repetitive loads)									
	Carrier Frequency		4 kHz (User adjustable up to 10 kHz. Derating may be required.)									
	Max. Output Voltage		Depends on input voltage									
	Max. Output Frequency		400 Hz									
Power	Rated Voltage/Rated Frequency		Three-phase AC power supply: 200 to 240 Vac 50/60 Hz									
	Allowable Voltage Fluctuation		-15% to +10%									
	Allowable Frequency Fluctuation		±3% (Frequency fluctuation rate: 1 Hz/100 ms or less)									
	Allowable Power Voltage Imbalance between Phases		less than 2%									
Harmonic Current Distortion Rate			5% or less (IEEE 519)									
Input Power Factor			0.98 or more (for rated load)									

400 V Class

Model CIMR-U□4A□□□□			0011	0014	0021	0027	0034	0040	0052	0065	0077	0096	0124	0156	0180	0216	0240	0302	0361	0414	0477	0590	0720	0900	0930
Rated Input/Output	Rated Input Current A	ND	10	13	19	25	31	36	47	59	70	87	113	142	164	197	218	275	329	377	434	537	655	819	846
		HD	8.7	10	13	19	25	31	36	47	59	70	87	113	142	164	197	218	275	329	377	434	537	655	819
	Rated Input Capacity kVA	ND	9	12	17	22	28	33	43	54	64	80	103	130	150	180	200	251	300	344	396	490	598	748	773
		HD	8	9	12	17	22	28	33	43	54	64	80	103	130	150	180	200	251	300	344	396	490	598	748
	Rated Output Current A	ND	11	14	21	27	34	40	52	65	77	96	124	156	180	216	240	302	361	414	477	590	720	900	930
		HD	9.6	11	14	21	27	34	40	52	65	77	96	124	156	180	216	240	302	361	414	477	590	720	900
	Overload Tolerance		HD Rating: 150% of rated output current for 60 s, ND Rating: 120% of rated output current for 60 s (Derating may be required for repetitive loads)																						
	Carrier Frequency		CIMR-U□4□0011 to 4□0414: 4 kHz (User adjustable up to 6 kHz. Derating may be required.) CIMR-U□4□0477 to 4□0930: 3 kHz																						
	Max. Output Voltage		Depends on input voltage																						
	Max. Output Frequency		400 Hz																						
Power	Rated Voltage/ Rated Frequency		Three-phase AC power supply (CIMR-U□4A□/4P□): 380 to 500 Vac 50/60 Hz Three-phase AC power supply (CIMR-U□4E□/4W□): 380 to 480 Vac 50/60 Hz																						
	Allowable Voltage Fluctuation		-15% to +10%																						
	Allowable Frequency Fluctuation		±3% (Frequency fluctuation rate: 1 Hz/100 ms or less)																						
	Allowable Power Voltage Imbalance between Phases		less than 2%																						
Harmonic Current Distortion Rate			5% or less (IEEE 519)																						
Input Power Factor			0.98 or more (for rated load)																						

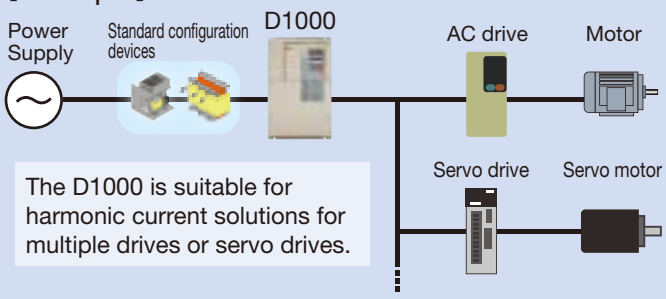
Note: For details, refer to the U1000 catalogs (No. KAEP C710636 02).

■ Yaskawa also offer other products for harmonic solutions.

D1000 with a drive or servo drive to improves the power factor and suppresses harmonics.

YASKAWA Regenerative Energy-saving Unit
Power Regenerative Converter
D1000
200 V Class, 5.0 kW to 130 kW
400 V Class, 5.0 kW to 630 kW

【Example】



The D1000 is suitable for harmonic current solutions for multiple drives or servo drives.

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