

HUA YEANG

本公司產品台灣生產製造 通過ISO 9001:2015
取得UL/CE認證 專業第一/技術領先/服務至上



9001:2015



Complies with
UL 1283
CAN C22.2 NO.8



Sine wave Filters

Descriptions

Sine wave filters have been specially designed to improve the wave form and avoid overvoltages in the motors of VSD system. These low-pass filters are installed in inverters with PWM output, between the frequency inverter and the motor. Switching IGBT (isolated gate bipolar transistor) to high frequency causes an output voltage with peaks that can reach 1300 V (or more) in terminals and coils of the motor.

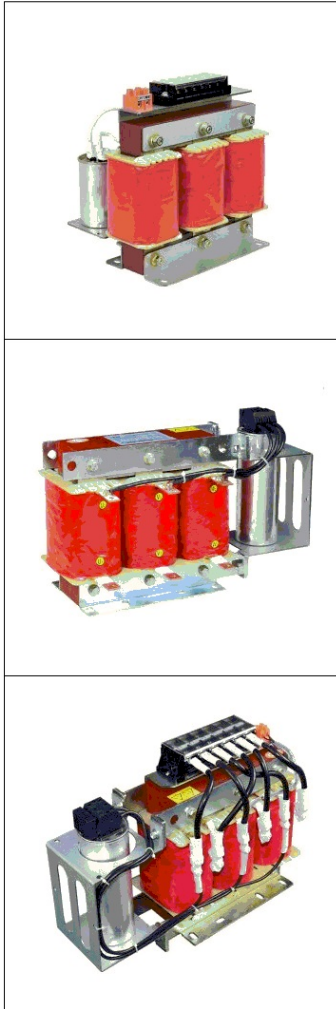
These constant voltage values age the motor and decrease the performance of the coils, also wearing and pitting bearings, causing overheating and unnecessary noises and the transmission of interferences through cables. This effect becomes more obvious the greater the distance between the inverter and the motor.

Functions

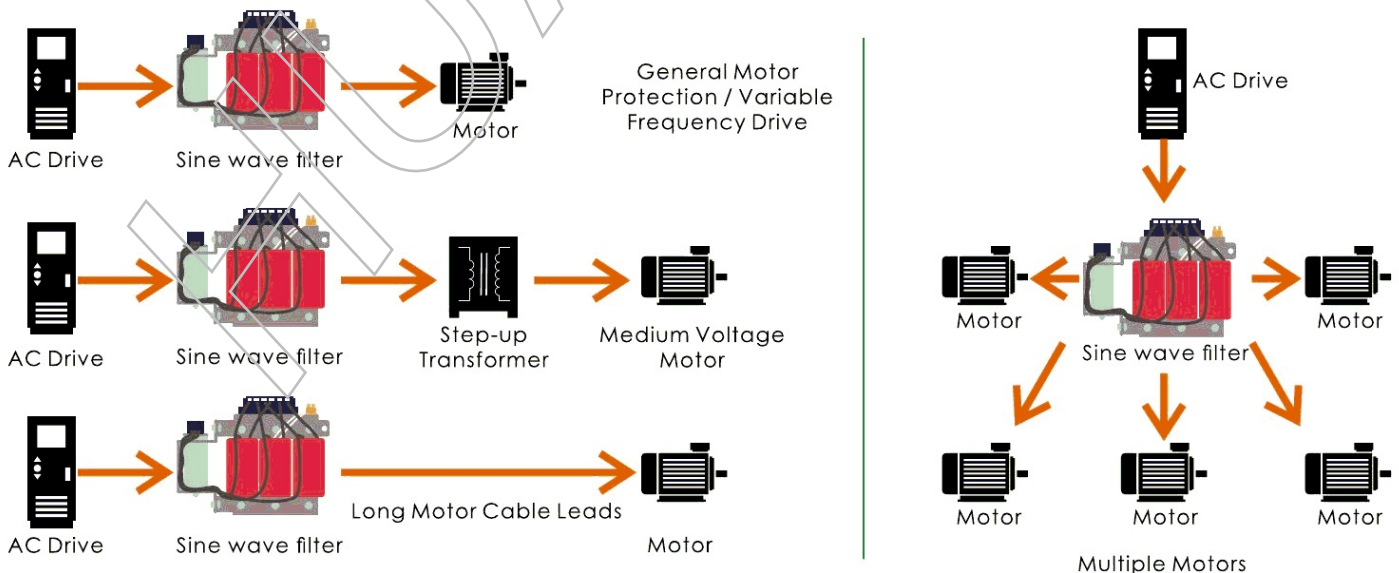
- Reduction of the overvoltage peaks caused by PWM and, therefore, a lower wear of motor insulation systems and bearings;
- Reduction of motor noise and improves motor efficiency;
- Improves the quality of the output wave of the PWM (pulse width modulator), reduces discharge currents driven by pulse frequency, especially in long lines connected to the motor. Recommended for up to 500m motor cable lengths with filter.
- Attenuation of the interference emissions radiated by the conductors between the modulator and motor and improves the entire EMC load on the equipment.

Technical Standards

- Capacitors: CEI EN 60831-1/2, IEC 831-1/2
- Equipment: CEI EN 60439-1, IEC 439-1, ICE 60939
- Industrial network affected by harmonics: CEI EN 61642
- Systems: EN 60439, EN 60831, EN 50081-1, EN 50081-2, class A



Applications



Features

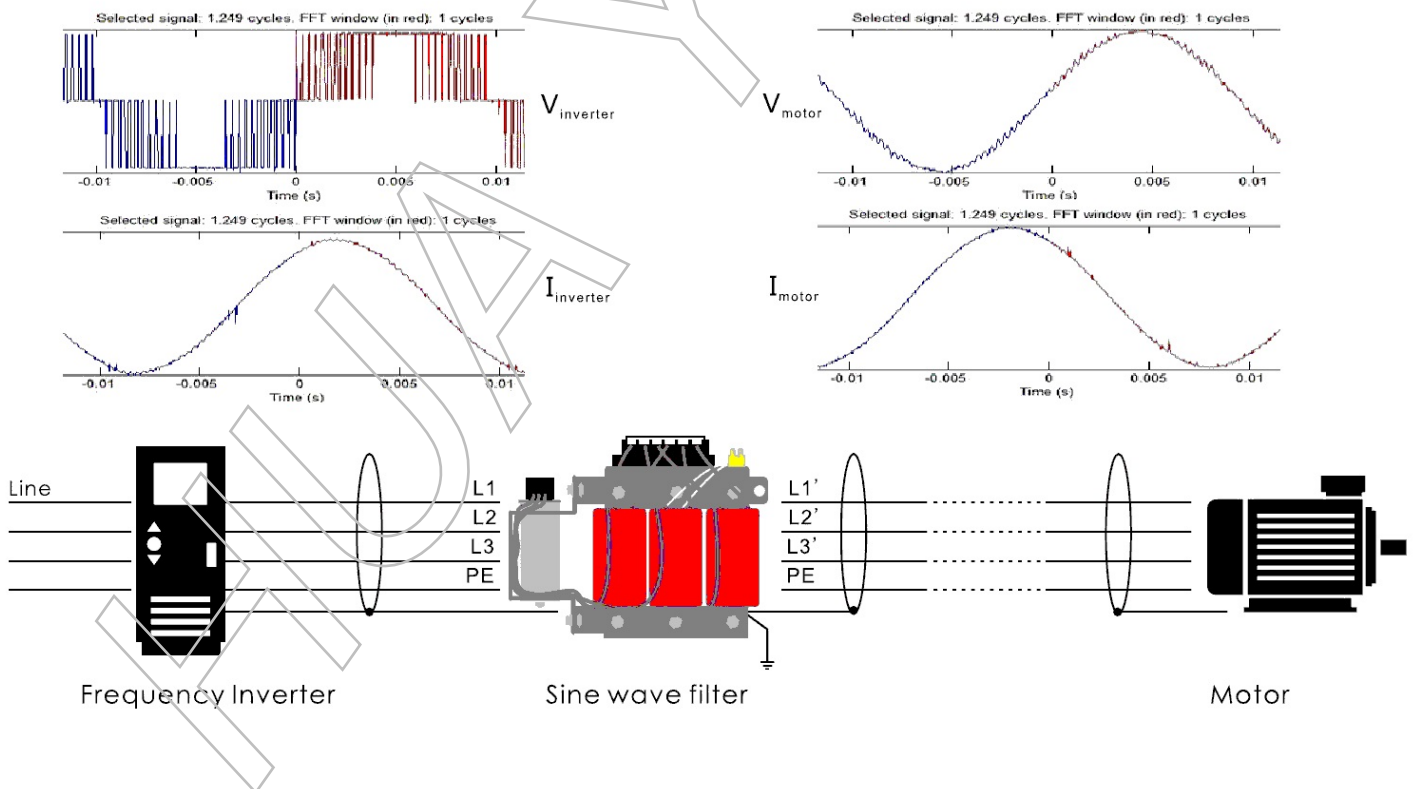
Main Characteristics

Nominal system voltage (ph-ph)	3x 380 to 500 Vac. (Others on request)
Output Motor Frequency	50-100Hz standard (up to 200Hz option available, 800-1000Hz on request.)
Switching frequency	2k to 16kHz
Rated load power (P)	1,5 to 630kW
Nominal current (I)	3.3A to 1209A
Residual ripple voltage THD	<5%
Standard voltage drop at rated current	4% (60Hz)
Maximum permanent overload	1,2 times rated current
Maximum transient overload	2,0 times rated current

Design features

Cabinet	On request
Degree of protection	IP 00 (other on request)
Construction and connection	Terminals or Copper bar
Ventilation	Natural
Mounting	On the floor
Installation	Indoor standards
Operating temperature	Ambient : -25°C to +40°C
Relative humidity	80 %

Block schematic



Selection Table

Filter Model	Picture NO.	System Voltage	Motor drive rating @50Hz (kw)	Rated Current (A)	Switching frequency (kHz)	Connections		Weight (kg)	Dimension (±5mm)					
						Terminal	Copper Bar		D	D1	D2	W	W1	H
HUA-9010-0003-OSW-05	1	3×380 to 500VAC	1.5	3.3	≥6	√		5.0	180	110	/	135	68	175
HUA-9010-0006-OSW-05	1	3×380 to 500VAC	2.2	6	≥6	√		5.0	180	103	/	170	81	190
HUA-9010-0008-OSW-05	1	3×380 to 500VAC	3.7	8	≥6	√		7.0	205	150	/	170	72	200
HUA-9010-0013-OSW-05	2	3×380 to 500VAC	5.5	13	≥5	√		8.5	205	150	/	180	72	200
HUA-9010-0017-OSW-05	2	3×380 to 500VAC	7.5	17	≥5	√		9.0	205	150	/	200	92	200
HUA-9010-0024-OSW-05	2	3×380 to 500VAC	11	24	≥4	√		13	205	150	/	220	110	200
HUA-9020-0032-OSW-05	2	3×380 to 500VAC	15	32	≥4	√		14.5	250	180	/	220	90	260
HUA-9020-0038-OSW-05	2	3×380 to 500VAC	18.5	37	≥4	√		16	250	180	/	220	90	260
HUA-9020-0048-OSW-05	3	3×380 to 500VAC	22	48	≥4	√		23	400	/	100	220	120	270
HUA-9020-0063-OSW-05	3	3×380 to 500VAC	30	63	≥3	√		28	460	225	100	220	126	330
HUA-9020-0076-OSW-05	3	3×380 to 500VAC	37	76	≥3	√		31	460	225	100	220	126	330
HUA-9020-0091-OSW-05	4	3×380 to 500VAC	45	91	≥3			32	410	/	100	220	140	300
HUA-9020-0116-OSW-05	4	3×380 to 500VAC	55	116	≥3			36	435	/	100	220	140	310
HUA-9020-0148-OSW-05	4	3×380 to 500VAC	75	148	≥3			43	435	/	100	240	140	310
HUA-9020-0181-OSW-05	5	3×380 to 500VAC	90	181	≥3			50	280	/	100	365	160	300
HUA-9020-0214-OSW-05	5	3×380 to 500VAC	110	214	≥3			60	300	/	100	370	160	300
HUA-9020-0262-OSW-05	6	3×380 to 500VAC	132	262	≥3			70	360	180	/	410	160	350
HUA-9020-0317-OSW-05	7	3×380 to 500VAC	160	317	≥3			80	360	180	/	420	160	/
HUA-9020-0352-OSW-05	8	3×380 to 500VAC	185	352	≥3			90	380	180	/	430	200	350
HUA-9020-0413-OSW-05	8	3×380 to 500VAC	200	413	≥2			100	380	180	/	420	200	400
HUA-9020-0419-OSW-05	6	3×380 to 500VAC	220	419	≥2			112	360	180	/	450	200	400
HUA-9020-0484-OSW-05	9	3×380 to 500VAC	250	484	≥2			120	360	180	/	510	200	400
HUA-9020-0531-OSW-05	6	3×380 to 500VAC	280	531	≥2			130	360	180	/	470	200	400
HUA-9020-0605-OSW-05	8	3×380 to 500VAC	315	605	≥2			195	460	250	/	500	260	520
HUA-9020-0666-OSW-05	8	3×380 to 500VAC	355	666	≥2			210	480	250	/	500	260	520
HUA-9020-0721-OSW-05	10	3×380 to 500VAC	400	721	≥2			220	480	250	/	600	260	590
HUA-9020-0807-OSW-05	10	3×380 to 500VAC	450	807	≥2			240	480	250	/	600	260	590
HUA-9020-0888-OSW-05	11	3×380 to 500VAC	500	888	≥2			260	480	250	/	640	260	565
HUA-9020-0999-OSW-05	11	3×380 to 500VAC	560	999	≥2			275	540	250	/	640	260	525
HUA-9020-1209-OSW-05	12	3×380 to 500VAC	630	1209	≥2			350	540	300	/	720	320	540

Selection Recommendation: It's compulsory to collect all network conditions

- Rated values and service type of the load to the filter
- Rated values of other non-linear loads
- Indication of the point where the filter has to be installed
- Presence and type of the power factor equipment in the network
- Motor frequency, Switching frequency and fundamental operating frequency

■ For more technical details, please contact our sales representatives

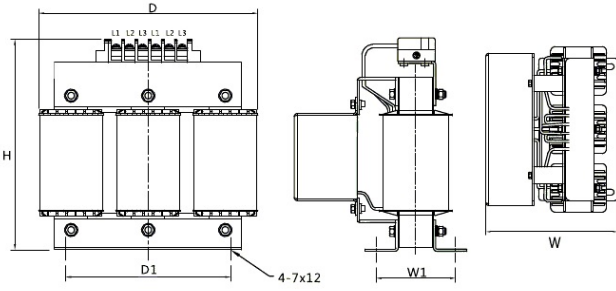
Model Rules:

HUA-□□□□-□□□□-□□□□-□□□□

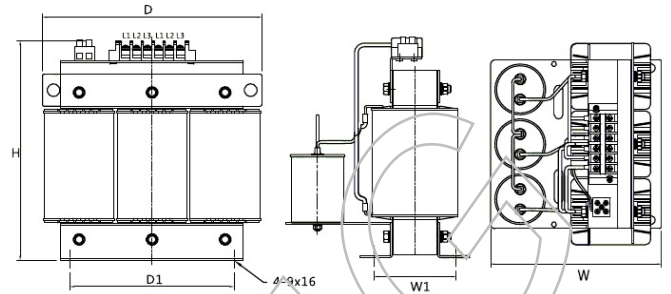
THDv
Series name
Rated current
Brand name

Mechanical data

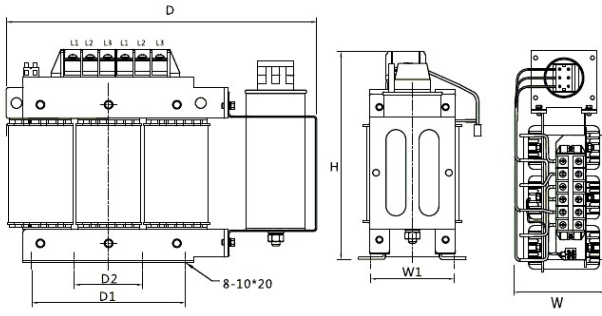
All dimensions in mm; 1 inch = 25,4 mm



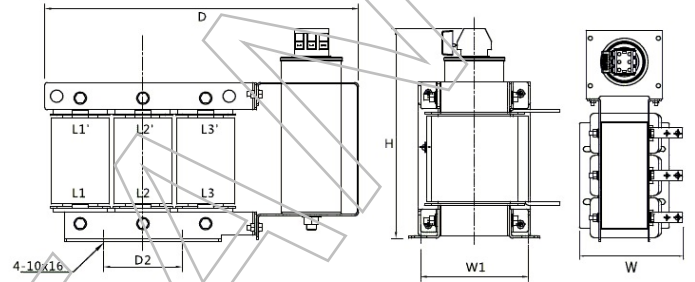
Picture NO. 1



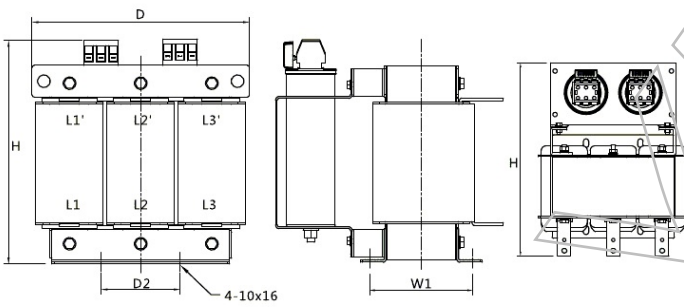
Picture NO. 2



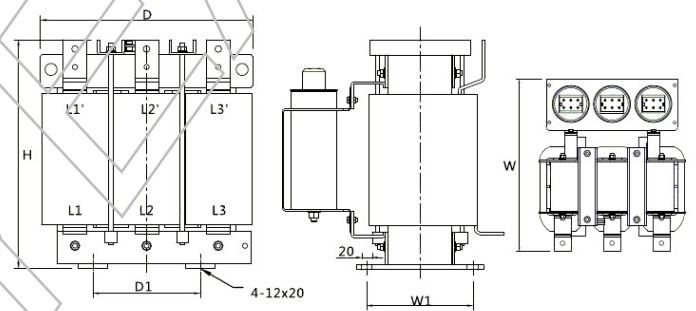
Picture NO. 3



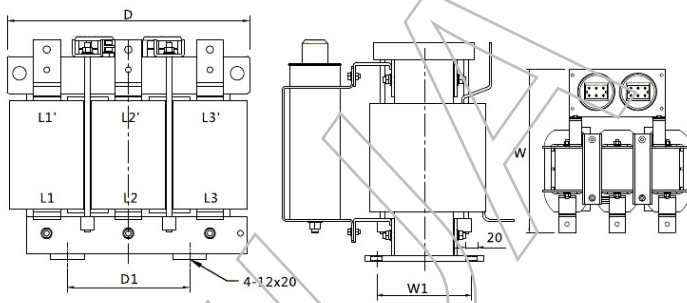
Picture NO. 4



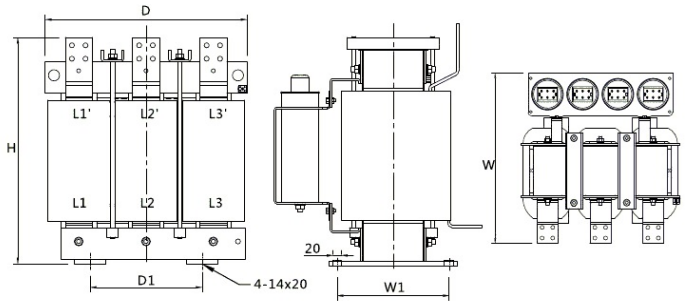
Picture NO. 5



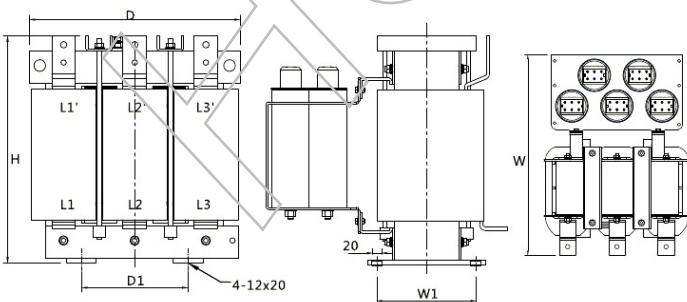
Picture NO. 6



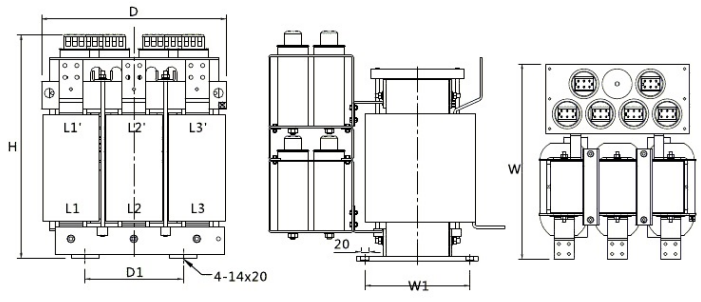
Picture NO. 7



Picture NO. 8



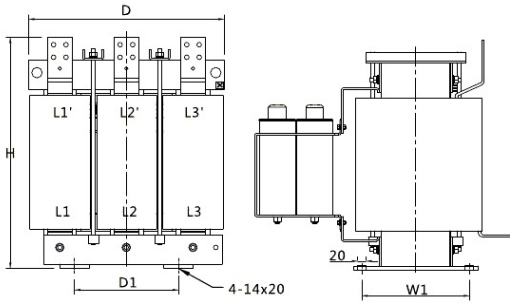
Picture NO. 9



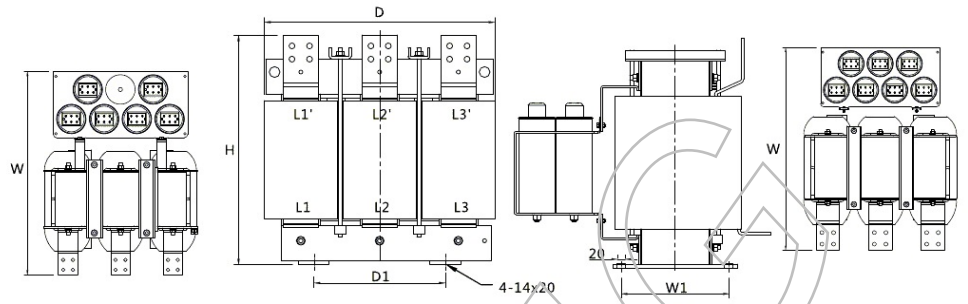
Picture NO. 10

Mechanical data

All dimensions in mm; 1 inch = 25,4 mm

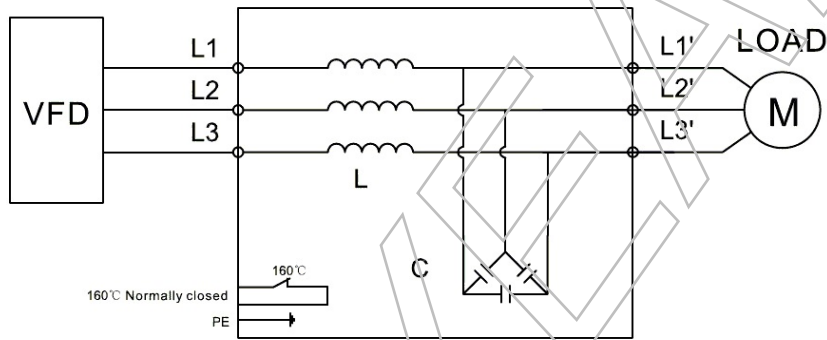


Picture NO. 11



Picture NO. 12

CIRCUIT WIRING



TERMINALS OR COPPER BAR

Input	[L1, L2, L3]
Output	[L1' , L2' , L3']

STANDARDS

TYPE

Capacitors: CEI EN 60831-1/2, IEC 831-1/2
 Industrial network affected by harmonics: CEI EN 51642
 Equipment: CEI EN 60439-1, IEC 439-1, IEC 60939
 Systems: EN 60439, EN 60831, EN 50081-1, EN 50081-2, class A

SIGNS



驊洋實業有限公司

HUA YEANG INDUSTRIAL CO., LTD.

(11257) 台北市北投區中央北路4段476號

HUA YEANG INDUSTRIAL CO., LTD.

TEL:+886-2-2897-6900 FAX:+886-2-2897-6799

HTTP://www.huayang.com

E-Mail:hua.yeang@msa.hinet.net

No.476, Sec. 4, Zhongyang N. Rd., Beitou Dist., Taipei City 112, Taiwan (R.O.C.)