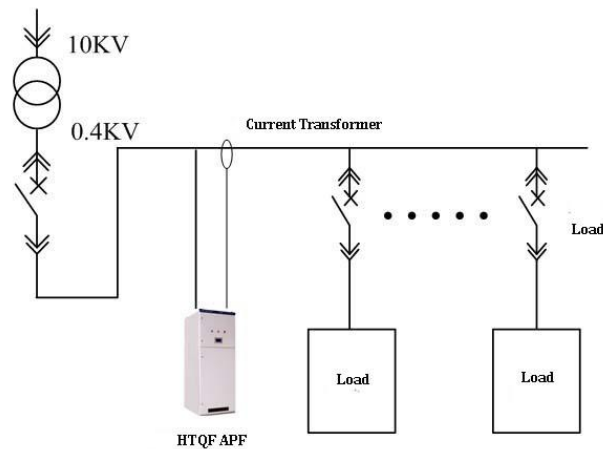


400 V
60 A-100 A

HTQFR type active harmonic filter
Product details brochure

Installation method of APF :



Brief introduction of Hoteam HTQFR active power filter

1. Summary

HTQF R active power filter was designed for internet data center (IDC). It adopted 19inch standard rack having advantages of small size, light weight, safe and reliable.

HTQF R active power filter was designed and manufactured according to industrial product standards. It can meet the various commercial and industrial applications. This product collects harmonic filtering, reactive power compensation and three-phase imbalance correction in one body. It is an ideal choice for the power quality control.

2. Basic functions

- **Harmonic filtering** : harmonic filter function which can set the numbers of harmonic compensation and filtering rate
- **Dynamic reactive power compensation** : reactive power compensation function which can set target power factor(inductive or capacitive)
- **Three phase unbalance correction** : three phase unbalance correction(active power unbalance compensation) function which can be set

- **Multiple work mode** : has work modes of “filter priority”、 “reactive power priority”、 “harmonic filtering only”、 “reactive power compensation only” , can flexibly choose work mode according to specific details of power distribution system
- **Comprehensive analysis and display function** : Real-time take samples of current and voltage, analysis system harmonic, reactive power and active power, and display in the form of chart and waveform.

3. **Main characteristics**

3.1. **Efficient energy-saving**

- Constant frequency PWM patent technology, high current tracking speed、 small ripple wave、 low power loss
- The low loss amorphous alloy magnetic core reactor, low noise, high efficiency
- Overall loss is less than 3%

3.2. **High filtering ability**

- Multiple DSP cooperative control, high accuracy、 fast speed
- High harmonic filtering rate, for target harmonic, effective filtering rate can be 97%
- Can filter 2nd to 50th harmonic

3.3. **Multi-function、 multi-mode、 high adaptability**

- Harmonic graded compensation function, harmonic reactive power integrated compensation, active power balance compensation function
- Advanced control algorithm, adapt to all kinds of complicated site and stable operation, can be parallel running with reactive power compensation cabinet
- Source current and load current detection function can be programmable at site
- True color touch screen, Chinese and English double language interface can be switchover at site
- RS485 port , standard MODBUS RTU communication protocol , computer remote monitor function

3.4. stable、reliable

- design and manufacture according to industrial standard, safe and reliable
- strict thermal design, insure system running safely and reliably
- have over-voltage, over-current and over-heat multiple protection functions
- automatic current limiting after output full load, no need to worry about over load
- fault self diagnosis function
- history event record function

4. model table of R type active power filter

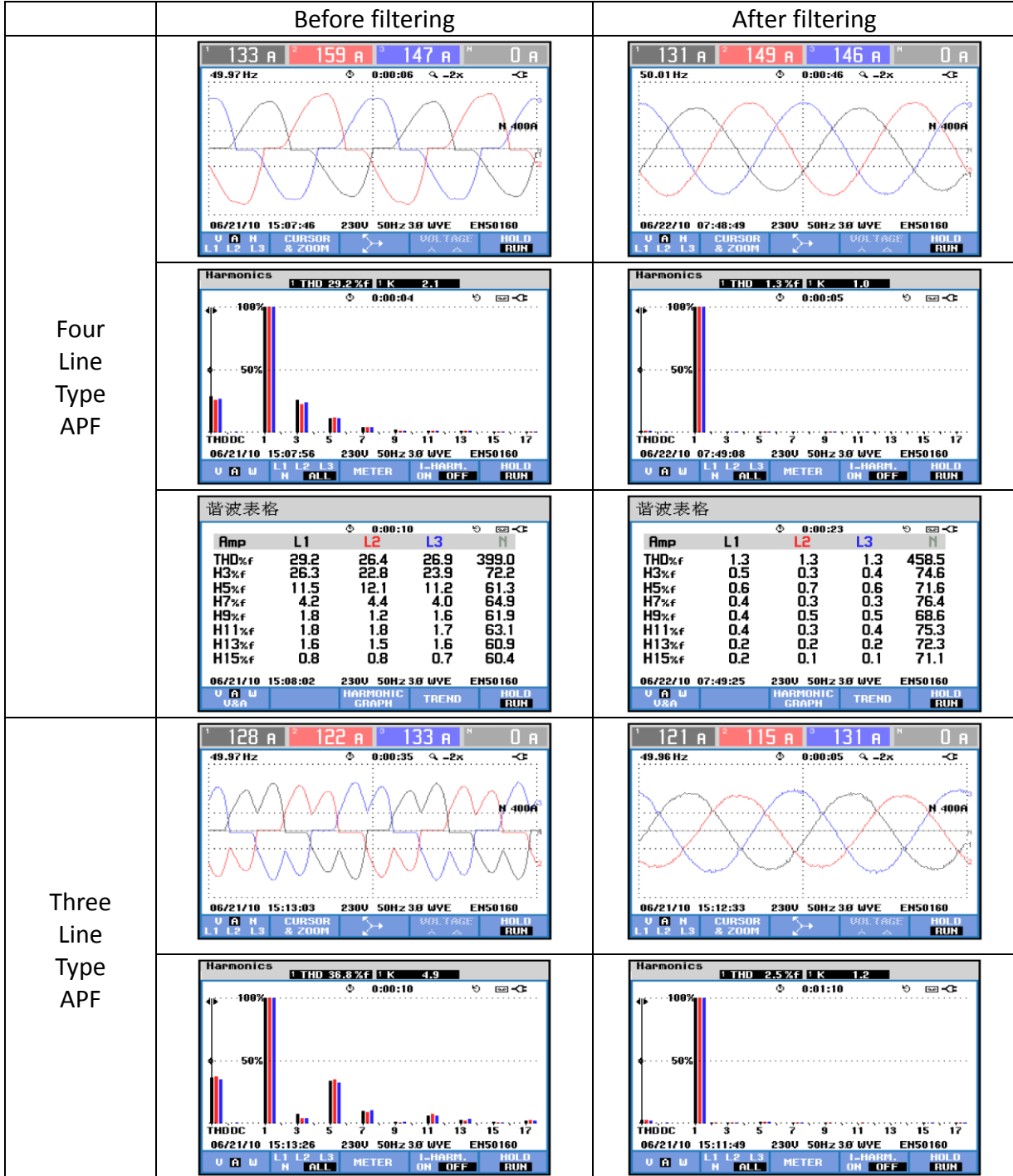
Name	HTQF 3L-0.4/□□□AP-R			HTQF 4L-0.4/□□□AP-R
model	30A	50A	75	100
Wiring mode	Three phase three wire/three phase four wire			
Rated voltage V	400 -20/+15%			
Rated frequency Hz	50/60			
Rated compensation current A	30	50	75	100
Rated compensation capacity kvar	20	33	50	66
weight kG	20	28	48	60
Cabinet type	19inch standard rack type or wall mounted type			
installation	Rack (R type) or wall mount (W type)			
Width mm	440	440	440	440
Depth mm	630	630	630	630
Height mm	176	176	264	264
Weight kg	29	33	69	75
Current detection mode	Source current detection/load current detection, be programmable at site			
Color	RAL9004 black (can be customized)			
Protection level	IP20 (can be customized)			
Incoming line method	back (or down)			

1. Technical parameters

model	HTQF 3L-0.4/□□□A-R 3L	HTQF 4L-0.4/□□□A-R 4L
wire	Three phase three wire	Three phase four wire
features	Apply to 3P3L system, filter was connected among three phase of power grid, it is suited to power system with or without neutral line, it can filter none-	Apply to 3P4L system, can filter the harmonic through phase and neutral line, include zero sequence harmonic

	zero frequency harmonics, compensate reactive power and phase unbalanced.	
Working voltage	320V ~ 480V	320V ~ 420V
Rated current	30A、50A、75A、100A	30A、50A、75A、100A
Work frequency	50/60Hz ±5%	50/60Hz ±5%
Filter ability	Can be more than 97%	
Filter range	2 ~ 50 th harmonic	
Filter effect set	Can separate set each harmonic	
Response time	Transient response<0.1ms, complete response<20ms	
Neutral line compensate ability	-	3 times in line RMS current
Reactive power compensation	Setting range of power factor is from inductive 0.6 to capacitive 0.6	
Balance compensation	Programmable balance of power	
Overload protection	Automatic current limiting when 100% rating output	
Power loss	≤3% rated compensation capacity	
CT requirements	3set , 0.2magnitude or more , secondary 5A	
Current detection means	Source current detection or load current detection	
Display interface	4.3inch touch screen	
language	English/Chinese	
Communication interface	RS - 232/485	
Communication protocol	MODBUS (RTU) support multi-computer communication	
Parallel operation	10sets in parallel at most	
IP	IP20 (please contact manufacturer for higher IP)	
color	black , can be customized	
ambient	Indoor installation , clean environment	
temperature	- 10 ~ 40°C	
Storage temperature	- 25 ~ 70°C	
Relative humidity	Max 95%RH (no condensation)	
altitude	1000m	
Main applications	Suitable for industrial big capacity load, such as rectifier, frequency converter, UPS, IF furnace, A rc furnace and so on.	Suitable to commercial buildings, such as energy saving lamp, computer, UPS and so on which may product 3 rd harmonic.

5. Filtering effect

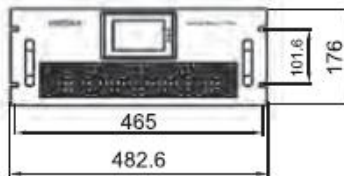


谐波表格				
Amp	L1	L2	L3	THD
THD%f	36.8	37.5	35.4	377.8
H3%f	8.0	4.5	3.9	61.2
H5%f	33.6	35.0	32.6	60.4
H7%f	9.8	9.2	10.5	59.1
H9%f	1.5	0.4	1.1	63.0
H11%f	6.5	7.6	6.1	61.9
H13%f	2.9	2.4	3.2	60.9
H15%f	1.1	0.5	0.7	61.6

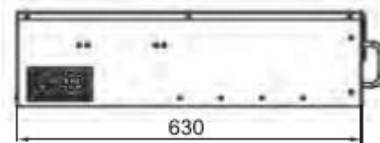
谐波表格				
Amp	L1	L2	L3	THD
THD%f	2.5	2.5	2.4	405.1
H3%f	0.9	0.8	0.4	68.4
H5%f	1.3	1.3	1.3	65.0
H7%f	0.7	0.8	0.9	61.0
H9%f	0.4	0.4	0.2	65.9
H11%f	0.3	0.5	0.3	63.2
H13%f	0.3	0.2	0.3	63.6
H15%f	0.9	0.3	0.4	61.3

6. dimension

front view



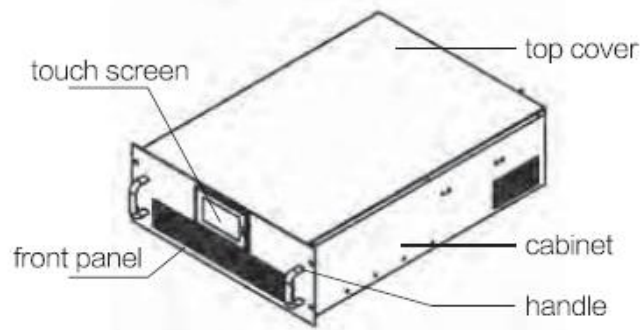
left view



440.4



design sketch



Pictures of Active harmonic filter

Rack type



Wall-mounting type

