

# **OSFS**

# **Active Filters**

OSFS - The highly dynamic Active Filter

OSFS units encompass a broad range of state-of-the-art Active Filters with a web server function. The product range is characterized in particular by its variety of options for high-power applications plus a large selection of 690 V units and a special filter.

#### The OSFS range

- F Fixed-rating unit:

For wall mounting

- M2 Modular unit:

In freestanding cabinet with up to 3 modules per cabinet

- UL UL certificate
  - 3 3-wire:

For compensating three phases without a neutral conductor

- 4 4-wire:

For compensating three phases and the neutral conductor

- V2 Voltage Controlled:

voltage controlled Active Filter

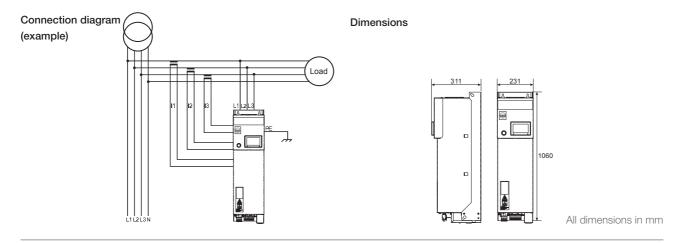
OSES

#### Technical Data

OSFS-F (3-wire fixed-rating unit), 400 V

OSFS-F (S-WIFE lixed-rating unit), 400 V	
Туре	OSFS 30-400-3-F
Article-No.	39-22441
Power rating	21 kVA
Compensating current per phase at 50/60 Hz	30 A <sub>rms</sub>
System voltage	400 V ± 10 %
Nominal frequency	50/60 Hz ± 5 %
Number of phases	3
Phase connections	3 phases without neutral conductor (TN, TT)
Harmonics compensation	Individually up to the 49th order
Degree of compensation	> 98 %
Correction of power factor cos φ	Up to 1.0
Parallel operation	OSFS Filters can be operated in parallel
Response time	< 1 ms
Power loss	< 1 000 W
Maximum air flow requirements	400 m³/h
Noise level	< 70 dB (A)
Ambient conditions	0 up to 95 $\%$ relative humidity, non-condensing, max. altitude: 1000 m above sea level
Operating temperature	0 to 50 °C, derating exceeding 40 °C
Dimensions (W x H x D) [mm]	231 x 1 060 x 311
Weight [kg]	50
Cabinet colour	RAL 7035 (light grey), RAL 5017 (traffic blue)
Type of protection	IP20, IP21 according to IEC 529, other ratings upon request
Environmental conditions	chemical 3C2, mechanical 3S2
Electromagnetic compatibility (EMC)	EN55011, Class B
Certificates	CE, UKCA
Interfaces	Web server, Ethernet (Modbus TCP)

The units can be installed in parallel and are available as standard versions from 208 V to 480 V. Other voltages, interfaces and IP-classes on request.





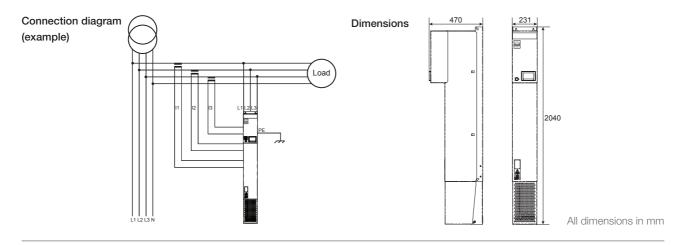
OSES

#### Technical Data

OSFS-F (3-wire fixed-rating unit), 400 V and 690 V

Туре	OSFS 50-400-3-F	OSFS 75-400-3-F	OSFS 90-400-3-F	OSFS 120-400-3-F	OSFS 150-400-3-F	OSFS 90-690-3-F
Article-No.	39-22442	39-22402	39-22400	39-22403	39-22443	39-22444
Power rating	35 kVA	52 kVA	62 kVA	83 kVA	104 kVA	108 kVA
Compensating current per phase at 50/60 Hz	50 A <sub>rms</sub>	75 A <sub>rms</sub>	90 A <sub>rms</sub>	120 A <sub>rms</sub>	150 A <sub>rms</sub>	90 A <sub>rms</sub>
System voltage			400 V $\pm$ 10 %			690 V $\pm$ 10 %
Nominal frequency			50/60 H	Iz ± 5 %		
Number of phases			(	3		
Phase connections		3 phase	s without neutra	al conductor (Ti	N, TT, IT)	
Harmonics compensation		Inc	dividually up to t	the 49th harmo	nic	
Degree of compensation	> 98 %					
Correction of power factor cos φ	Up to 1.0					
Parallel operation	OSFS Filters can be operated in parallel					
Response time			< 1	ms		
Power loss	< 1 600 W	< 2 535 W	< 3 180 W	< 3 155 W	< 3 225 W	< 2 969 W
Maximum air flow requirements			600	m³/h		
Noise level			< 70	dB (A)		
Ambient conditions	0 up to 95 %	relative humidi	ty, non-conden	sing, max. altitu	ıde: 1000 m ab	ove sea level
Operating temperature		0 to	50 °C, up to 40	°C without der	ating	
Dimensions (W x H x D) [mm]	231 x 2 040 x 470					
Weight [kg]	91	91	91	105	116	150
Cabinet colour	RAL 7035 (light grey), RAL 5017 (traffic blue)					
Type of protection	IP 20 according to IEC 529					
Environmental conditions	Class 3C3 (chemical), class 3S3 (mechanical)					
Electromagnetic compatibility (EMC)	EN 55011, class B					
Certificates	CE, ABS, DNV GL, UKCA					
Interfaces	Web server, Ethernet (Modbus TCP)					

The units can be installed in parallel and are available as standard versions from 208 V to 480 V resp. 480 V to 690 V. Other voltages, interfaces and IP-classes on request.



OSES

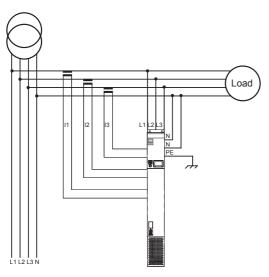
#### **Technical Data**

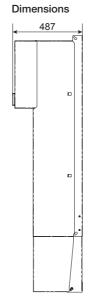
OSFS-F (4-wire fixed rating unit), 400 V

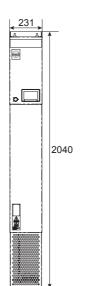
OSFS-F (4-wire lixed rating unit), 400 V	
Туре	OSFS 100-400-4-F
Article-No.	39-22429
Power Rating	70 kVA
Compensating current at 50/60 Hz	phase current 100 $A_{\rm rms}$ / neutral current 300 $A_{\rm rms}$
System voltage	400 V ± 10 %
Nominal frequency	50/60 Hz ± 2 %
Number of phases	3
Phase connections	3 phases with neutral conductor (TN,TT,IT)
Harmonics compensation	individual compensation up to 49th order
Degree of compensation	> 98 %
Correction of power factor cos φ	Up to 1.0
Upgradeability	OSFS Active Filters can be operated in parallel
Response time	< 1 msec
Power loss	< 2235 W
Maximum air flow requirements	600 m³/h
Noise level	< 70 dB (A)
Ambient conditions	0 up to 95 % relative humidity, non-condensing, max. altitude: 1000 m above sea level
Operating temperature	0 to 50 °C, derating exceeding 40 °C
Dimensions (W x H x D) [mm]	231 x 1 650 x 487
Weight [kg]	90
Cabinet colour	RAL 7035 (light grey), RAL 5017 (traffic blue)
Type of protection	IP20 nach IEC 529
Environmental conditions	Class 3C2 (chemical), class 3S2 (mechanical)
Electromagnetic compatibility (EMV)	EN 55011, class B
Certificates	CE, UKCA
Interfaces	Web server, Ethernet (Modbus TCP)

The units can be installed in parallel and are available as standard versions from 208 - 415 V. Other voltages, interfaces and IP-classes on request.

#### Connection diagram (example)







OSFS

#### The OSFS-V2 voltage-controlled active filter

The OSFS-V2 is an active filter for the compensation of harmonics in the range of 50 Hz - 5 kHz (up to the 100th harmonic). The world's fastest dynamic active filter offers resonance detection and suppression. It works either with current transformers or it can be operated voltage controlled without current transformers. This makes installation in existing networks considerably easier.

#### Features:

- High-speed active filter (response time < 20  $\mu$ s).
- Reduces interharmonics
- 50 Hz 5 kHz bandwidth
- Voltage and current compensation
- Advanced digital control
- Easy installation
- Insensitive to mains changes
- Harmonic compensation
- Resonance suppression
- Harmonic compensation possible without current transformer
- Not overloadable
- Available in 208 V 480 V



OSES

#### Technical Data

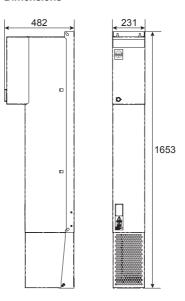
OSFS-V2 (3-wire fixed rating unit), 400 V

Coi o-vz (o-wire lixed rating driit), 400 v	
Туре	OSFS 120-400-3-V2-F
Article-No.	39-22438
Power Rating	83 kVA
Compensating current at 50/60 Hz	120 A <sub>eff</sub>
System voltage	400 V ± 10 %
Nominal frequency	50/60 Hz ± 2 %
Number of phases	3
Phase connections	3 phases without neutral conductor (TN,TT, IT)
Harmonics compensation	Compensation curve for harmonics and interharmonics up to 5 kHz (100th order)
Degree of compensation	> 97 %
Correction of power factor cos φ	Up to 1.0
Upgradeability	OSFS Active Filters can be used in parallel
Response time	< 20 µs
Power loss	< 1 200 W
Maximum air flow requirements	600 m³/h
Noise level	< 70 dB(A)
Ambient conditions	0 up to 95 % relative humidity, non-condensing, max. altitude: 1000 m above sea level
Operating temperature	0 up to 50 °C, up to 40 °C with derating
Dimensions (W x H x D) [mm]	231 x 1653 x 482
Weight [kg]	90
Cabinet colour	Cabinet: RAL 7035 (grey), Base: RAL 7022 (dark grey)
Type of protection	IP20 to IEC 529
Environmental conditions	Class 3C3 (chemical), class 3S3 (mechanical)
Electromagnetic compatibility (EMV)	EN 55011, Class B
Certificates	CE, UKCA
Interfaces	Web server, Ethernet (Modbus TCP)

The units can be installed in parallel and are available as standard versions from 208 - 480 V. Other voltages, interfaces and IP-classes on request.

#### Connection diagram (example)

#### Dimensions





OSFS

#### Active Filter OSFS-M2 in freestanding cabinet

Modern medical equipment, the latest LED technology and present-day motor control systems make the most exacting demands on power supply quality. Certain loads, however, greatly distort the supply-side waveform by generating harmonics. This situation often calls for an improvement in power quality. With the FRAKO Modular Active Filter, the distortion caused by individual loads, groups of consumers or the entire electrical installation is reduced to a tolerable level or totally eliminated from the network.

#### Clear benefits:

- 8 versions enable optimum adaption to the compensation requirement: 90 A, 125 A, 150 A, 180 A, 250 A, 270 A, 300 A and 375 A
- Modular construction with only one control unit
- User-friendly touchscreen
- User-friendly remote service
- Current-controlled
- New: optionally also available voltage-controlled, if on site there is no space for current transformers
- Voltage range: 208 V 480 V and 690 V



OSES

#### Technical Data

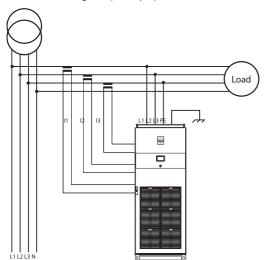
OSFS-M2 (3-wire modular unit), 400 V

Type         OSFS 75- 400-3-M2         OSFS 150- 400-3-M2         OSFS 150- 400-3-M2         OSFS 200- 400-3-M2         OSFS 300- 400-3-M2         OSFS 375- 400-3-M2         OSFS 375- 400-3-M2 </th <th>OOI O WIZ (O WIIC MOddiai driit), 4</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	OOI O WIZ (O WIIC MOddiai driit), 4								
Article-No. 39-22480 39-22481 39-22481 39-22483 39-22485 39-22485 39-22465 39-22475 39-22468 Power rating	Type								
Compensating current per phase at 50/60 Hz         70 A <sub>eff</sub> 100 A <sub>eff</sub> 125 A <sub>eff</sub> 150 A <sub>eff</sub> 200 A <sub>eff</sub> 250 A <sub>eff</sub> 300 A <sub>eff</sub> 375 A <sub>eff</sub> System voltage           Nominal frequency           Number of phases           Number of phases           Phase connections           Harmonics compensation           Degree of compensation           OsFs-M2 Active Filters can be operated in parallel           Response time           Power loss         < 2 760 W         < 2 810 W         < 2 825 W         < 3 225 W         < 5 650 W         < 6 250 W         < 7 925 W           Maximum air flow requirements         600 m³/h         600 m²/h         800 m²/h         1 200 m²/h         1 200 m²/h         1 600 m²/h         1 800 m²/h           Noise level           A mbient conditions           Operating temperature           Operating temperature           Operating temperature           Operating temperature           Operating temperature           Operating temperature           Cabinet: RAL 703	Article-No.	39-22480	39-22481	39-22464		39-22483	39-22465	39-22475	
System voltage	Power rating	52 kVA	69 kVA	87 kVA	104 kVA	139 kVA	173 kVA	208 kVA	260 kVA
Nominal frequency Number of phases Phase connections A phases without neutral conductor (TN, TT, IT) Harmonics compensation Degree of compensation Correction of power factor cos φ Parallel operation Response time Power loss  < 2 760 W < 2 810 W < 2 825 W < 3 225 W < 5 425 W < 5 650 W < 6 250 W < 7 925 W  Maximum air flow requirements 600 m³/h 600 m³/h 600 m³/h 800 m²/h 1 200 m³/h 1 200 m³/h 1 600 m³/h 1 800 m³/h Noise level  Ambient conditions Operating temperature Operating temperature Dimensions (W x H x D) [mm] Weight [kg] 335 335 335 335 335 336 336 337 338 338 338 338 338 338 339 Cabinet: RAL 7032 (dark grey) Type of protection Electromagnetic compatibility (EMC) Certificates  CE, DNV GL, UKCA		70 A <sub>eff</sub>	100 A <sub>eff</sub>	125 A <sub>eff</sub>	150 A <sub>eff</sub>	200 A <sub>eff</sub>	250 A <sub>eff</sub>	300 A <sub>eff</sub>	375 A <sub>eff</sub>
Number of phases   3   3   472   495   609   609   First Conductor (IV)   First Conducto	System voltage				400 V	± 10 %			
Phase connections  3 phases without neutral conductor (TN, TT, IT)  Harmonics compensation  Degree of compensation  Correction of power factor cos φ  Parallel operation  Response time  Power loss <a href="#"> <a< th=""><th>Nominal frequency</th><th></th><th></th><th></th><th>50/60 H</th><th>lz ± 2 %</th><th></th><th></th><th></th></a<></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a></a>	Nominal frequency				50/60 H	lz ± 2 %			
Harmonics compensation  Degree of compensation  Degree of compensation  Correction of power factor cos   Parallel operation  Response time  Power loss  < 2 760 W < 2 810 W < 2 825 W < 3 225 W < 5 425 W < 5 650 W < 6 250 W < 7 925 W   Maximum air flow requirements  600 m³/h 600 m³/h 600 m³/h 800 m³/h 1 200 m³/h 1 200 m³/h 1 200 m³/h 1 800 m³/h 1 200 m³/h 1 800 m³/h 1 800 m³/h 1 200 m³/h 1 800 m³/h 1 800 m³/h 1 200 m³/h 1 800 m³/h 1 800 m³/h 1 800 m³/h 1 800 m³/h 1 200 m³/h 1 800 m³/h 1 800 m³/h 1 800 m³/h 1 800 m³/h 1 200 m³/h 1 800 m	Number of phases				;	3			
Degree of compensation   System   Sy	Phase connections			3 phases	without neutr	al conductor (	(TN, TT, IT)		
Correction of power factor cos φ   Parallel operation   OSFS-M2 Active Filters can be operated in parallel	Harmonics compensation			Indiv	idually up to	the 49th harm	nonic		
Parallel operation	Degree of compensation				> 9	8 %			
Response time	Correction of power factor $\cos \phi$				Up t	o 1.0			
Power loss	Parallel operation		OSFS-M2 Active Filters can be operated in parallel						
Maximum air flow requirements  600 m³/h  600 m³/h  600 m³/h  800 m³/h  1 200 m³/h  1 200 m³/h  1 200 m³/h  1 200 m³/h  1 800 m³/h  1 200 m³/h  1 200 m³/h  1 800 m³/h  1 200 m³/h  1 800 m³/h  1 200 m³/h  1 800 m³/h  1 200 m³/h  1 800 m³/h  1 800 m³/h  1 800 m³/h  1 200 m³/h  1 800 m³/h  1 200 m³/h  1 800 m	Response time				< 1	ms			
Noise level  Ambient conditions  O up to 95 % relative humidity, non-condensing, max. altitude: 1000 m above sea level  Operating temperature  O to 50 °C, up to 40 °C without derating  Dimensions (W x H x D) [mm]  Weight [kg]  335  335  335  335  335  347  472  472  495  609  Cabinet colour  Cabinet: RAL 7035 (grey), Base*: RAL 7022 (dark grey)  Type of protection  IP 21 according to IEC 529  Environmental conditions  Class 3C3 (chemical), class 3S3 (mechanical)  Electromagnetic compatibility (EMC)  Certificates  CE, DNV GL, UKCA	Power loss	< 2 760 W	< 2 810 W	< 2 825 W	< 3 225 W	< 5 425 W	< 5 650 W	< 6 250 W	< 7 925 W
Ambient conditions  0 up to 95 % relative humidity, non-condensing, max. altitude: 1000 m above sea level  0 to 50 °C, up to 40 °C without derating  Dimensions (W x H x D) [mm]  800 x 2155 x 610  Weight [kg]  335  335  335  335  335  335  337  472  472  495  609  Cabinet colour  Cabinet: RAL 7035 (grey), Base*: RAL 7022 (dark grey)  Type of protection  IP 21 according to IEC 529  Environmental conditions  Class 3C3 (chemical), class 3S3 (mechanical)  Electromagnetic compatibility (EMC)  Certificates  CE, DNV GL, UKCA	Maximum air flow requirements	600 m <sup>3</sup> /h	600 m³/h 600 m³/h 600 m³/h 800 m³/h 1 200 m³/h 1 200 m³/h 1 600 m³/h 1 800 m³/h						
Operating temperature  O to 50 °C, up to 40 °C without derating  800 x 2155 x 610  Weight [kg]  335  335  335  335  335  335  335  3	Noise level				< 70	dB (A)			
Dimensions (W x H x D) [mm]  Weight [kg]  335  335  335  335  335  335  335  3	Ambient conditions	0 u <sub>l</sub>	p to 95 % rela	ative humidity	, non-conden	sing, max. alt	itude: 1000 n	n above sea le	evel
Weight [kg]  335  335  335  335  335  335  335  3	Operating temperature			0 to 50	°C, up to 40	°C without d	lerating		
Cabinet colour  Cabinet: RAL 7035 (grey), Base*: RAL 7022 (dark grey)  Type of protection  IP 21 according to IEC 529  Environmental conditions  Class 3C3 (chemical), class 3S3 (mechanical)  Electromagnetic compatibility (EMC)  Certificates  CE, DNV GL, UKCA	Dimensions (W x H x D) [mm]	800 x 2155 x 610							
Type of protection  IP 21 according to IEC 529  Environmental conditions  Class 3C3 (chemical), class 3S3 (mechanical)  Electromagnetic compatibility (EMC)  Certificates  CE, DNV GL, UKCA	Weight [kg]	335 335 335 351 472 472 495 609						609	
Environmental conditions  Class 3C3 (chemical), class 3S3 (mechanical)  Electromagnetic compatibility (EMC)  Certificates  Class 3C3 (chemical), class 3S3 (mechanical)  EN55011, class B  CE, DNV GL, UKCA	Cabinet colour	Cabinet: RAL 7035 (grey), Base*: RAL 7022 (dark grey)							
Electromagnetic compatibility (EMC)  Certificates  EN55011, class A; EN55011, class B  CE, DNV GL, UKCA	Type of protection	IP 21 according to IEC 529							
(EMC) EN55011, class A; EN55011, class B  Certificates CE, DNV GL, UKCA	Environmental conditions	Class 3C3 (chemical), class 3S3 (mechanical)							
	· · ·	EN55011, class A; EN55011, class B							
Interfaces Web server, Ethernet (Modbus TCP)	Certificates		CE, DNV GL, UKCA						
	Interfaces	Web server, Ethernet (Modbus TCP)							

Dimensions

The units can be installed in parallel and are available as standard versions from 208 V to 480 V. Other voltages, interfaces and IP-classes on request. \*base can be ordered separately

#### Connection diagram (example)



# 610



OSES

#### Technical Data

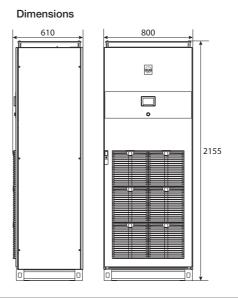
OSFS-M2 (3-wire modular unit), 690 V

Туре	OSFS 90-690-3-M2	OSFS 180-690-3-M2	OSFS 270-690-3-M2			
Article-No.	39-22476	39-22477	39-22478			
Power rating	108 kVA	215 kVA	323 kVA			
Compensating current per phase at 50/60 Hz	90 A <sub>ms</sub>	180 A <sub>rms</sub>	270 A <sub>rms</sub>			
System voltage		690 V ± 10 %				
Nominal frequency		50/60 Hz ± 2 %				
Number of phases		3				
Phase connections	3 phase	s without neutral conductor (Ti	N, TT, IT)			
Harmonics compensation	Inc	dividually up to the 49th harmo	nic			
Degree of compensation		> 98 %				
Correction of power factor $\cos \phi$	Up to 1.0					
Parallel operation	OSFS-M Active Filters can be operated in parallel					
Response time		< 1 ms				
Power loss	< 2969 W < 5813 W < 8657 W					
Maximum air flow requirements	600 m³/h 1200 m³/h 1800 m³/h					
Noise level	< 70 dB (A)					
Ambient conditions	0 up to 95 % relative humidity, non-condensing, max. altitude: 1000 m above sea level					
Operating temperature	0 to 50 °C, up to 40 °C without derating					
Dimensions (W x H x D) [mm]	800 x 2155 x 610					
Weight [kg]	351	495	639			
Cabinet colour	Cabinet: RAL 7035 (grey), Base*: RAL 7022 (dark grey)					
Type of protection	IP 21 according to IEC 529					
Environmental conditions	Class 3C3 (chemical), class 3S3 (mechanical)					
Electromagnetic compatibility (EMC)	EN 55011, class B / EN 55011, class A					
Certificates	CE, DNV GL, UKCA					
Interfaces	Web server, Ethernet (Modbus TCP)					

The units can be installed in parallel and are available as standard versions from 480 V to 690 V.

Other voltages, interfaces and IP-classes on request. \*base can be ordered separately  $\,$ 

# Connection diagram (example)



OSES

#### **Technical Data**

OSFS-UL (3-wire modular device, UL), 480 V

Туре	OSFS 110-480-3-UL	OSFS 220-480-3-UL	OSFS 330-480-3-UL		
Article-No.	39-22423 39-22424		39-22425		
Power rating	76 kVA	152 kVA	229 kVA		
Compensating current per phase at 50/60 Hz	110 A <sub>ms</sub>	220 A <sub>rms</sub>	330 A <sub>rms</sub>		
System voltage		400 V ± 10 %			
Nominal frequency		50/60 Hz ± 2 %			
Number of phases		3			
Phase connections	3 phase	s without neutral conductor (TI	N, TT, IT)		
Harmonics compensation	Inc	dividually up to the 49th harmo	nic		
Degree of compensation		> 98 %			
Correction of power factor $\cos \phi$	Up to 1.0				
Parallel operation	OSFS-UL Active Filters can be operated in parallel				
Response time	< 1 ms				
Power loss	< 2480 W	< 4835 W	< 7190 W		
Maximum air flow requirements	600 m³/h 1200 m³/h 1800 m³/h				
Noise level	< 70 dB				
Ambient conditions	0 up to 95 % relative humidity, non-condensing, max. altitude: 1000 m above sea level				
Operating temperature	0 to 50 °C, up to 40 °C without derating				
Dimensions (W x H x D) [mm]	800 x 2155 x 610				
Weight [kg]	335	472	609		
Cabinet colour	Cabinet: RAL 7035 (grey), Base*: RAL 7022 (dark grey)				
Type of protection	UL Type 1				
Environmental conditions	Class 3C3 (chemical), class 3S3 (mechanical)				
Electromagnetic compatibility (EMC)	EN 61000-6-2, EN 61000-6-4				
Certificates	UL, cUL, UKCA				
Interfaces	Web server, Ethernet (Modbus TCP)				

The units can be installed in parallel and are available as standard versions from 208 V to 480 V. Other voltages, interfaces and IP-classes on request. \*base can be ordered separately

Dimensions

# Load

# 0 2155

All dimensions in mm

Connection diagram (example)

OSES

#### **Technical Data**

OSFS-UL (3-wire modular device, UL), 600 V

Туре	OSFS 90-600-3-UL	OSFS 180-600-3-UL	OSFS 270-600-3-UL			
Article-No.	39-22426	39-22427	39-22428			
Power rating	94 kVA	187 kVA	281 kVA			
Compensating current per phase at 50/60 Hz	90 A <sub>ms</sub>	180 A <sub>rms</sub>	270 A <sub>rms</sub>			
System voltage		600 V ± 10 %				
Nominal frequency		50/60 Hz ± 2 %				
Number of phases		3				
Phase connections	3 phase	s without neutral conductor (TN	N, TT, IT)			
Harmonics compensation	Inc	dividually up to the 49th harmor	nic			
Degree of compensation		> 98 %				
Correction of power factor cos φ	Up to 1.0					
Parallel operation	OSFS-UL Active Filters can be operated in parallel					
Response time		< 1 ms				
Power loss	< 2836 W < 5547 W < 8258 W					
Maximum air flow requirements	600 m³/h 1200 m³/h 1800 m³/h					
Noise level	< 70 dB (A)					
Ambient conditions	0 up to 95 % relative humidity, non-condensing, max. altitude: 1000 m above sea level					
Operating temperature	0 to 50 °C, up to 40 °C without derating					
Dimensions (W x H x D) [mm]	800 x 2155 x 610					
Weight [kg]	351	495	639			
Cabinet colour	Cabinet: RAL 7035 (grey), Base*: RAL 7022 (dark grey)					
Type of protection	UL Type 1					
Environmental conditions	Class 3C3 (chemical), class 3S3 (mechanical)					
Electromagnetic compatibility (EMC)	EN 61000-6-2, EN 61000-6-4					
Certificates	UL, cUL, UKCA					
Interfaces	Web server, Ethernet (Modbus TCP)					

The units can be installed in parallel and are available as standard versions from 480 V to 600 V. Other voltages, interfaces and IP-classes on request. \*base can be ordered separately

Dimensions

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Connection diagram (example)