

COMMISSIONING OF ACTIVE FILTERS

1.- End user data

End user			
Location		Order No	

2.- Integrator data

Integrator			Area	
Hours worked		km	Commissioning date	
#	Name		ID number	
1				
2				

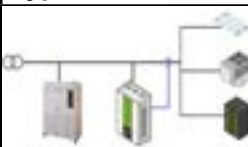
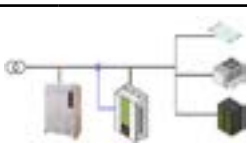
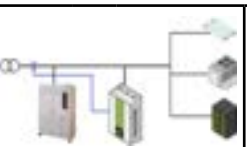
3.- Active Filter data

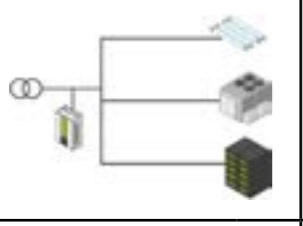
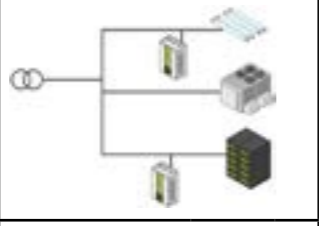
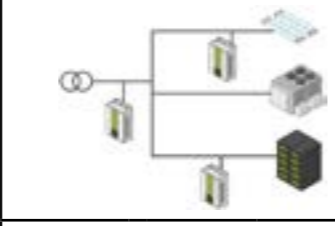
Model		Code	
Serial number		Manufacturing date	
ID number		Internal IP	

4.- Visual inspection of the device

Description	OK	NO OK
Visual inspection of the devices; no scratches or dented are visible...		
Check the absence of voltage and the impossibility to reconnect		
Ambient temperature within the working temperature range (-10 °C ... 45 °C)		
Verification of the cross section of the cables is in accordance with the device's specifications.		mm ²
Verification of the proper power connection (L1, L2, L3, N) and Earth.		
Verification of the communications' connection (if needed)		
<i>(Cabinet model active filter) Verify the 125 A fuses are installed in the connection module.</i>		
Check that the mains voltage is suitable for the filter's working range.		
Notes:		

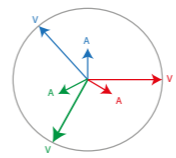
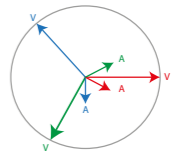

5.- Installation inspection

	Location	Mains side	Load side
Current transformers (CT)	Wiring and absence of the jumper bars in the terminal		
	Ratio	/ 5 A	
	Without reactors (not recommended)	Contact After Sales Service	
Capacitor banks	With detuned reactors to the 5th harmonic or higher.	<i>Disable 3rd harmonic in the Active Filter</i>	
	With detuned reactors to the 3rd harmonic or higher.		
	Type of connection		
			




Protections	Verify the correct sizing of the protections		
	Circuit breaker (Caliber / Type / Programming) :		
	RCD (Caliber / Type / Programming) :		
Other Active Filters	Type of connection		
			
			Contact After Sales Service
Notes:			

7.- Verification of on-screen parameters

Close the device and power up

Description		OK	NO OK
Display responds			
No alarms or warnings are shown on-screen.			
Phase sequence	Sign of the active power (positive)		
	Cos φ between 0.7 (inductive) ... 0.98 (capacitive)		
	Phasor diagram is correct		
		OK	
			NO OK
Verify whether all the slave devices have been detected.		ID of slave devices:	
<i>Note: Wait 5 minutes after the connection between devices is done</i>			
Notes:			

8.- Screen data with the Active Filter stopped

	Mains Active Power: Reactive Power: Current THD:	Load Active Power: Reactive Power: Current THD:
	Voltage L1 L2 L3	Current Mains L1 L2 L3 Load
	Voltage L1 L2 L3 Frequency	Current Mains L1 L2 L3 N

6.- Electrical elements

Verify phase sequences and correspondence with their CT	L1 / L2 / L3	OK	NO OK
		L1 (S1-S2) / L2 (S1-S2) / L3 (S1-S2)	
Check and note the tightening torque in the terminals:			
SINAF3xxx030F	Power cable connections (Phases)	Normalized 1.5 ... 1.8 Nm	Checked
	Neutral cable connections	1.5 ... 1.8 Nm	
	Earth cables connections	2.2 ... 2.4 Nm	
	Connections of the terminals of the CT	0.5 ... 0.6 Nm	
SINAF3xxx100 SINAF3xxx200	Power cable connections (Phases)	6 Nm	
	Neutral cable connections	35 Nm	
	Earth cables connections	35 Nm	
	Connections of the terminals of the CT	0.8 Nm	
SINAFMxxx030W SINAFMxxx060W	Power cable connections (Phases)	2.2 ... 2.4 Nm	
	Neutral cable connections	2.2 ... 2.4 Nm	
	Earth cables connections	2.2 ... 2.4 Nm	
SINAFMxxx100W SINAFMxxx100R	Power cable connections (Phases)	8 ... 10 Nm	
	Neutral cable connections	8 ... 10 Nm	
	Earth cables connections	10 ... 14 Nm	
SINAFMxxx100C SINAFMxxx200C SINAFMxxx300C SINAFMxxx400C	Power cable connections (Phases)	45 Nm	
	Neutral cable connections	45 Nm	
	Earth cables connections	45 Nm	
Notes:			

	<p>Mains power</p> <table border="1"> <thead> <tr> <th></th> <th>P</th> <th>Q</th> <th>S</th> <th>cos φ</th> </tr> </thead> <tbody> <tr> <td>L1</td> <td>0.9 kW</td> <td>0.7 kvar</td> <td>0.9 kVA</td> <td>1.00</td> </tr> <tr> <td>L2</td> <td>0.8 kW</td> <td>-1.7 kvar</td> <td>0.9 kVA</td> <td>0.95</td> </tr> <tr> <td>L3</td> <td>0.8 kW</td> <td>0.9 kvar</td> <td>1.0 kVA</td> <td>1.00</td> </tr> </tbody> </table>		P	Q	S	cos φ	L1	0.9 kW	0.7 kvar	0.9 kVA	1.00	L2	0.8 kW	-1.7 kvar	0.9 kVA	0.95	L3	0.8 kW	0.9 kvar	1.0 kVA	1.00	<p>Load power</p> <table border="1"> <thead> <tr> <th></th> <th>P</th> <th>Q</th> <th>S</th> <th>cos φ</th> </tr> </thead> <tbody> <tr> <td>L1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>L2</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>L3</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		P	Q	S	cos φ	L1					L2					L3																
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	<p>Limits</p> <p>Min current.</p> <p>Current limit</p> <p>Cos φ</p>	<p>Notes:</p>
	<p>Current transformer</p> <p>Num. Transformers</p> <p>Position</p> <p>Ratio</p> <p>Invert</p>	<p>Notes:</p>
	<p>Alarms</p> <p>Resonance</p>	<p>Notes:</p>
	<p>Communications</p> <p>IP Address</p> <p>Netmask</p> <p>Gateway</p> <p>DHCP</p>	<p>Notes:</p>
	<p>RS485</p> <p>Modbus device</p>	<p>Notes:</p>
	<p>Date/Time</p> <p>Time</p> <p>Date</p> <p>Time Zone</p> <p>Internet time</p>	<p>Notes:</p>

9.- Configuration Data

	<p>Specifications</p> <p>Model:</p> <p>Type:</p>	<p>Notes:</p>
	<p>Installed units</p>	<p>Notes:</p>
	<p>Working mode</p> <p>Mode</p> <p>Enable functions</p> <p>Harmonics Phase balance</p> <p>Priority Reactive</p>	<p>Notes:</p>
	<p>Harmonics selection</p> <p>3 5 7 9 11 13</p> <p>15 17 19 21 23 25</p>	<p>Notes:</p>

10.- Screen data with the Active Filter running

	Mains Active Power: Reactive Power: Current THD:	Load Active Power: Reactive Power: Current THD:																																												
	Voltage L1 L2 L3	Current <table border="1"> <thead> <tr> <th>Mains</th> <th>Load</th> </tr> </thead> <tbody> <tr> <td>L1</td> <td>L1</td> </tr> <tr> <td>L2</td> <td>L2</td> </tr> <tr> <td>L3</td> <td>L3</td> </tr> </tbody> </table>	Mains	Load	L1	L1	L2	L2	L3	L3																																				
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11.- Simplified single line diagram of the installation (with active filter)

Acceptance and Signatures	
Installer	Client