

# Enhanced functions

As seen in the table, up to three options can be added to the base unit. They can be ordered directly from the factory (R&S®HOC15x) or at later time (R&S®HVC15x) as a voucher.

## R&S®HOC151/R&S®HVC151 advanced analysis option

The advanced analysis option complements the base unit's measurands by also displaying peak values for voltage, current and power. These are acquired seamlessly at the

full sampling rate of 500 ksample/s. The following additional graphic functions are available:

### Inrush function

The inrush function makes it possible to graphically display switch-on behavior (see picture on next page). Triggering can be either manual or edge-based (pos./neg.) when user-defined voltage or current thresholds are reached. 8192 samples are acquired at all times with a logging period of 16 ms to 67 s.

Function	Description	Base unit R&S®HMC8015	Opt./voucher R&S®HOC151/ R&S®HVC151	Opt./voucher R&S®HOC152/ R&S®HVC152	Opt./voucher R&S®HOC153/ R&S®HVC153
<b>P</b>	Active power (W)	•			
<b>S</b>	Apparent power (VA)	•			
<b>Q</b>	Reactive power (var)	•			
<b>PF</b>	Lambda power factor ( $\lambda$ )	•			
<b>PHI</b>	Phase shift ( $\varphi$ )	•			
<b>FU</b>	Voltage frequency value (Hz)	•			
<b>FI</b>	Current frequency value (Hz)	•			
<b>FPLL</b>	Acquisition frequency (Hz)	•			
<b>URMS</b>	RMS voltage (U RMS)	•			
<b>UAVG</b>	Average voltage (U AVG)	•			
<b>IRMS</b>	RMS current (I RMS)	•			
<b>IAVG</b>	Average current (I AVG)	•			
<b>UTHD</b>	Total harmonic distortion U	•			
<b>ITHD</b>	Total harmonic distortion I	•			
<b>WHM, WHP, WH, AHM, AHP, AH</b>	Energy counter (integrator values)	•			
<b>Logging</b>	Measured value logging (CSV)	•			
<b>USB, Ethernet (GPIO optional – R&amp;S®HMC8015-G)</b>	Remote control interfaces	•			
<b>UPPeak</b>	Maximum voltage (U PEAK)		•		
<b>UMPeak</b>	Minimum voltage (U PEAK)		•		
<b>IPPeak</b>	Maximum current (I PEAK)		•		
<b>IMPeak</b>	Minimum current (I PEAK)		•		
<b>PPPeak</b>	Maximum power (P PEAK)		•		
<b>PMPeak</b>	Minimum power (P PEAK)		•		
<b>Harmonics</b>	Bargraph of up to 50 harmonics		•		
<b>Waveform</b>	Waveform display (displays one period of voltage, current or power)		•		
<b>Trend chart</b>	Current and voltage displayed as a waveform		•		
<b>Inrush</b>	Triggered display of waveform (single shot)		•		
<b>Sensor input</b>	Input for current probe/external shunt			•	
<b>DIN/AIN</b>	Digital/analog inputs and outputs (BNC)			•	
<b>Limit/PASS-FAIL</b>	Limit display			•	
<b>IEC62301</b>	Standby standard				•
<b>EN50564</b>	Extended standby standard				•
<b>EN61000-3-2</b>	Harmonic current for EMC, CE approval				•