



# Octiv™ Mono 2.0

The world's most accurate RF Power meter

## For accurate in-line RF Power and Impedance measurement CW and advanced pulsed RF applications

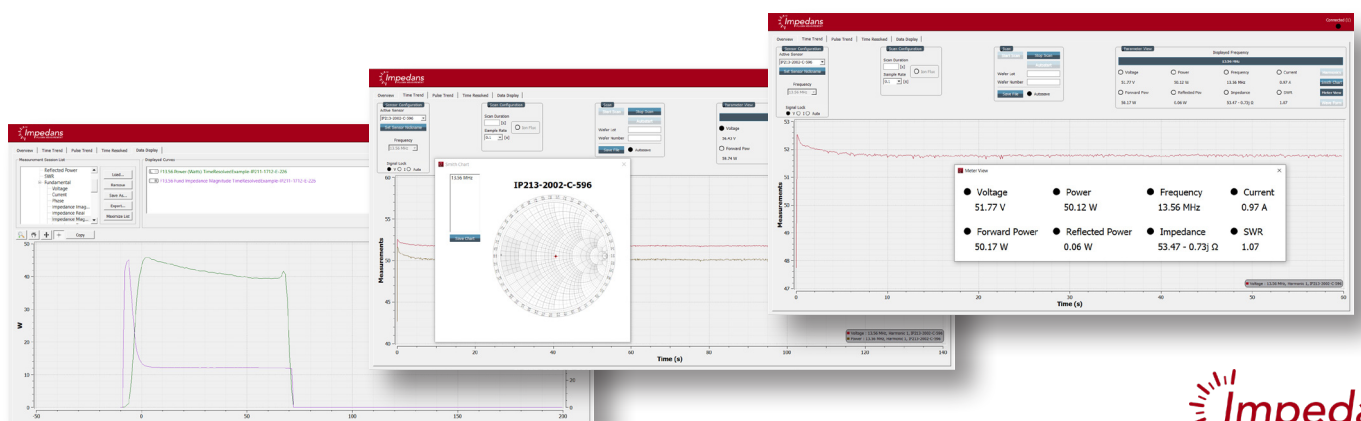
The Impedans Octiv Mono 2.0 is the most advanced sensor on the market for in-line power and impedance measurement, with unrivalled accuracy and functionality. It has 1% power measurement accuracy for VSWR beyond 6.0:1 and has exceptional impedance measurement accuracy, verified over a wide range of impedances. Our calibration standards are NIST traceable through our advanced calibration laboratory (Lab RFx) to guarantee unit-to-unit repeatability.

### Key Features

- Auto-switching between CW and Pulsed RF monitoring in time average mode (TAM).
- Reports pulse frequency and duty cycle with sub-microsecond precision in TAM.
- Integrates over pulse profile for accurate average power and impedance measurement.
- Time-resolved mode with 1 microsecond resolution for detailed pulse waveform analysis.
- Pulse-trend mode to monitor a number of points within the pulse profile, with 1 microsecond gate times.
- RF Frequency tracking band of  $\pm 10\%$  around the fundamental frequency.
- Ethernet, EtherCAT, RS232 and USB APIs available; external sync input and software trigger available.

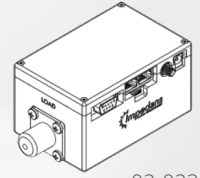
### Key Benefits & Applications

- Five fundamental frequencies on a single sensor, saving cost.
- Various form factors available for Match Unit integration.
- Achieve in-line accuracy specifications comparable to expensive offline vector network analysers for precise match unit or plasma chamber characterisation.
- Data report rates of up to 500 Samples/second as standard.
- With the advanced pulse features, real-time in-pulse matching is now achievable.
- Advanced harmonic rejection ensures accurate power measurement at the selected frequency only.
- Calibrated up to 80° C to compensate for temperature variation.

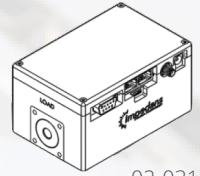


## Model Specifications

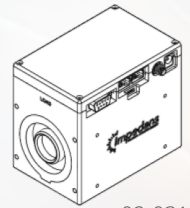
Model #	Fwd Power Range*	Frequency Range*	Connector Interface
02-0231-02	1.5 W - 12 kW	350 kHz - 240 MHz	QC Type
02-0323-01	0.5 W - 5 kW	40 kHz - 4 MHz	QC Type
02-0311-01	1.5 W - 12 kW	350 kHz - 240 MHz	B6N Multicontact Socket
02-0313-01	1.5 W - 12 kW	350 kHz - 240 MHz	B20N Multicontact Socket
02-0318-01	3 W -30 kW	350 kHz - 240 MHz	EIA 1-5/8"
02-0320-01	9 W - 90 kW	350 kHz - 240 MHz	EIA 3-1/8"



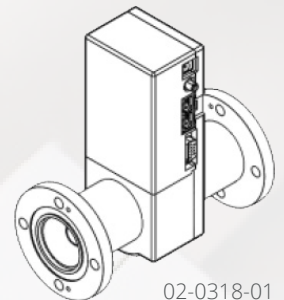
02-0231-02



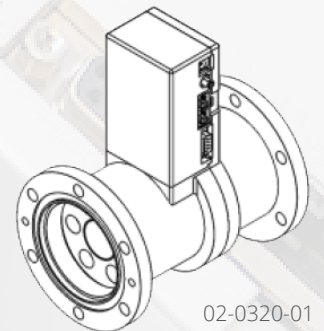
02-0311-01



02-0313-01



02-0318-01



02-0320-01

## General Specifications

Calibration Standard	NIST traceable [Power, Impedance]
Calibration Cycle	1 year to maintain quoted accuracy
Sensor Characteristic Impedance	50 Ohms as standard
RF Connectors	QC, EIA and custom options
RF Power Range @ 50 Ohms impedance	Standard: 12 kW typical (connector dependent) High Power: 30 kW & 90 kW
Operating Temperature Range	10° C - 80° C, calibrated versus temperature
Sensor Power Requirements	15-24 V DC, 0.5 A
Communication Interfaces	Micro USB, RJ45x2
Connectivity (Impedans Software)	USB 2.0, Ethernet
Communication Protocols (Standard)	USB 2.0, HTTP Web Service, Serial, RS232
Communication Protocols (OEM Options)	EtherCAT, EtherNet/IP
Parameter Report Rate (Standard)	USB: 500 S/s, Ethernet: 10 S/s, Serial: 10 S/s
Parameter Report Rate (Upgrade Options)	USB up to 500 S/s, or EtherCAT: 50 S/s
Sensor Pulse Synchronisation	External sync: TTL input Internal sync: Software level trigger

## Power, Voltage & Current Specifications

Power Dynamic Range	> 40 dB
Power Range	See model specifications
Power Resolution	0.25 W
Power Uncertainty (95% confidence)	±1%
Voltage Dynamic Range	80 dB
Voltage Range (Typical)	0.3 V to 3000 V <sub>RMS</sub> , custom available up to 34 kV <sub>pk-pk</sub>
Voltage Resolution	0.1 V <sub>RMS</sub>
Voltage Uncertainty (95% confidence)	±1%
Current Dynamic Range	80 dB
Current Range	2.5 mA <sub>RMS</sub> to 9 A <sub>RMS</sub> , custom available up to 500 A <sub>RMS</sub>
Current Resolution	2.5 mA <sub>RMS</sub>
Current Uncertainty (95% confidence)	±1%

\*Custom options available

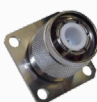
Publication list available at: [impedans.com/octiv-publications](http://impedans.com/octiv-publications)



N Type (M)



N Type (F)



HN (M)



HN (F)



C Type



7/16 (F)



7/16 (M)



LC (F)



LC (M)



EIA (M)



EIA (F)