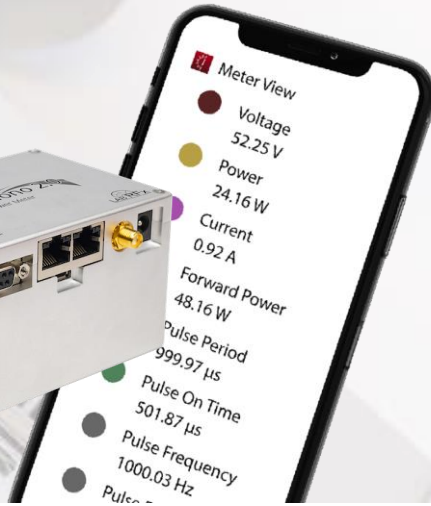


Octiv™ Mono 2.0

The world's most accurate RF Power meter



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

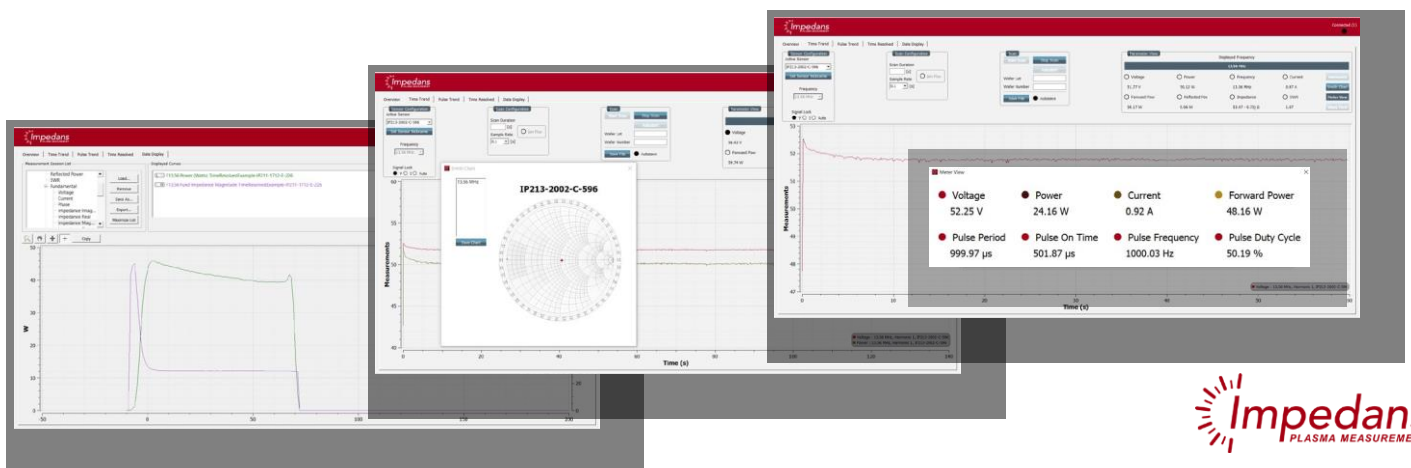
The Impedans Octiv Mono 2.0 is the most advanced sensor on the market for in-line power and impedance measurement, with unrivaled accuracy and functionality. It has 1% power measurement accuracy for VSWR beyond 6.0:1 and has exceptional impedance measurement accuracy, verified over a wide range of impedances. 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 +/-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.
- Thin profile model (24 mm) 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, up to 30k Samples/second on request.
- 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 |
|------------|------------------|-------------------|--------------------------|
| 02-0231-01 | 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" |

General Specifications

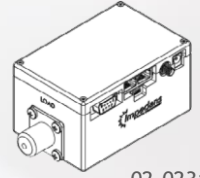
| | |
|---|--|
| Calibration Standard | NIST traceable [Power, Impedance] |
| Calibration Cycle | 1 year to maintain quoted accuracy |
| Sensor Characteristic Impedance | 50 Ohms as standard |
| RF Connectors | QC, EIA and custom options |
| RF Power Range @ 50 Ohms impedance | Standard: 12 kW typical (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: 30 kS/s or EtherCAT: 50 S/s |
| Sensor Pulse Synchronisation | External sync: TTL input Internal sync: Software level trigger |

Power, Voltage & Current Specifications

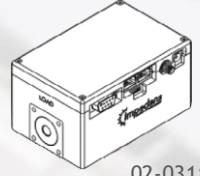
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|--------------------------------------|---|
| Power Dynamic Range | > 40 dB |
| Power Range | See model specifications |
| Power Resolution | 0.25 W |
| Power Uncertainty (95% confidence) | ±1% |
| Voltage Dynamic Range | 80 dB |
| Voltage Range (Typical) | 0.3 V to 3000 V _{RMS} , custom available |
| Voltage Resolution | 0.1 V _{RMS} |
| Voltage Uncertainty (95% confidence) | ±1% |
| Current Dynamic Range | 80 dB |
| Current Range | 2.5 mA _{RMS} to 25 A _{RMS} , custom available |
| Current Resolution | 2.5 mA _{RMS} |
| Current Uncertainty (95% confidence) | ±1% |

*Custom options available

Publication list available at: impedans.com/octiv-publications



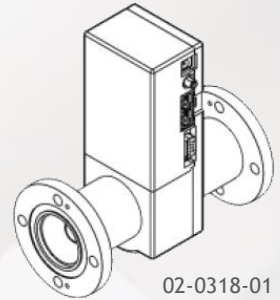
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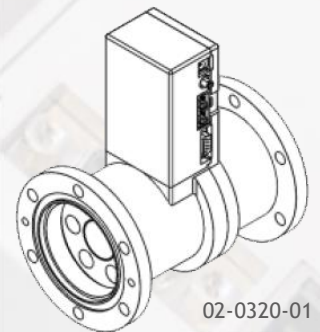
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