



Aquadopp Profiler Z-Cell 600kHz - Legacy



This version of the Aquadopp Profiler Z-Cell is no longer available.

Please see the [Aquadopp Profiler Z-Cell Generation 2](#).

This version of the Aquadopp remains functional and supported. Please visit our [support center](#) if you require assistance.

Highlights

Applications

Technical specifications

| Water velocity measurements | |
|--------------------------------|------------------------------------------------|
| Maximum profiling range | 30-40 m |
| Cell size | 1-4 m |
| Minimum blanking | 0.50 m when profiling; 0 m when Z-Cell enabled |
| Maximum number of cells | 96 |
| Measurement cell position | N/A |
| Default position (along beam) | N/A |
| Velocity range | ± 10 m/s |
| Accuracy | $\pm 1\%$ of measured value ± 0.5 cm/s |
| Velocity precision | Consult instrument software |
| Maximum sampling rate (output) | 1 Hz |
| Internal sampling rate | 3 Hz |

| Z-Cell option | |
|------------------------------|-----------|
| Cell zero acoustic frequency | 2 MHz |
| Maximum profiling range | 0.4-0.9 m |
| Number of beams | 2 |

| Echo intensity (along slanted beams) | |
|--------------------------------------|------------------|
| Sampling | Same as velocity |
| Resolution | 0.45 dB |
| Dynamic range | 90 dB |
| Transducer acoustic frequency | 600 kHz |

Echo intensity (along slanted beams)

| | |
|-----------------|------|
| Number of beams | 3 |
| Beam width | 3.0° |

Sensors

| | |
|---------------------------|--------------------------------|
| Temperature: | Thermistor embedded in head |
| Temp. range | -4 to +40 °C |
| Temp. accuracy/resolution | 0.1 °C/0.01 °C |
| Temp. time response | 10 min |
| Compass: | Magnetometer |
| Accuracy/resolution | 2°/0.1° for tilt < 20° |
| Tilt: | Liquid level |
| Accuracy/resolution | 0.2°/0.1° |
| Maximum tilt | 30° |
| Up or Down | Automatic detect |
| Pressure: | Piezoresistive |
| Range | 0-100 m (inquire for options) |
| Accuracy/precision | 0.5% FS / 0.005% of full scale |

Data recording

| | |
|--------------------|---------------------------------------|
| Capacity | 9 MB, can add 4/16 GB |
| Data record | 9*Ncells + 32 bytes |
| Diagnostics record | N/A |
| Wave record | Nsamples * 24 + 60 bytes |
| Mode | Stop when full (default) or wrap mode |

Real-time clock

| | |
|----------------------------|-------------|
| Accuracy | ±1 min/year |
| Backup in absence of power | 4 weeks |

Data communications

| | |
|-----------------------------|---------------------------------------------------------------------------------------------------------------|
| I/O | RS-232 or RS-422 |
| Communication baud rate | 300-115200 Bd |
| Recorder download baud rate | 600/1200 kBd for both RS-232 and RS-422 |
| User control | Handled via "Aquadopp" software, ActiveX® function calls, or direct commands with binary or ASCII data output |

Software

| | |
|-----------|---------------------------------------------------------------------------------------------|
| Functions | Deployment planning, instrument configuration, data retrieval and conversion (for Windows®) |
|-----------|---------------------------------------------------------------------------------------------|

Power

| | |
|------------------------|-------------------------------|
| DC input | 9-15 V DC |
| Maximum peak current | 3 A |
| Avg. power consumption | 0.06 W |
| Sleep current | < 100 µA |
| Transmit power | 0.3-20 W, 3 adjustable levels |

Batteries

| | |
|---------------------|--------------------------------------------------------------|
| Battery capacity | 50 Wh (alkaline or Li-ion), 165 Wh (lithium), Single or dual |
| New battery voltage | 13.5 V DC |

Environmental

| | |
|-----------------------|---------------|
| Operating temperature | -5 to +40 °C |
| Storage temperature | -20 to +60 °C |
| Shock and vibration | IEC 721-3-6 |
| EMC approval | IEC 61000 |
| Depth rating | 300 m |

Connectors

| | |
|----------|---------------------------------------|
| Bulkhead | MCBH-8-FS |
| Cable | PMCIL-8-MP on 10 m polyurethane cable |

Materials

| | |
|----------------|-------------------------------------------------------|
| Standard model | POM and polyurethane plastics with titanium fasteners |
|----------------|-------------------------------------------------------|

Dimensions

| | |
|------------------|------------------------------------------------------------------------------------|
| Maximum diameter | 100 mm |
| Maximum length | ~550 mm (single battery), +110 mm (double battery) depending on head configuration |

Weight

| | |
|-----------------|--------|
| Weight in air | 2.9 kg |
| Weight in water | 0.4 kg |