

BC 1060

Black Carbon Monitor



The BC 1060 Channel Black Carbon Monitor from Met One Instruments, powered by Acoem, measures brown and black carbon concentrations with user-selectable time resolutions as short as one minute. Using dual-wavelength illumination (UV 370 nm and IR 880 nm), it enables effective source apportionment for fossil fuel and biomass combustion. Portable and easy to deploy, it supports long-term monitoring, continuously sampling for up to six months per filter roll, making it ideal for roadside and emergency applications.

The combination of portability and dual-wavelength illumination permits rapid, easy deployment on a broad scale for source apportionment (fossil fuel vs. biomass combustion) determination, roadside monitoring, and emergency responder applications.

The BC 1060 employs a standard tape measurement system using a 25-m long roll of glass-fiber tape. Operating at a continuous sampling rate of 2 LPM, up to 6 months of uninterrupted operation between filter tape replacement may be expected.

The BC 1060 is self-contained within its own weatherproof enclosure containing its pump, making it ideal for quick deployment. It may be operated indoors or outdoors.

For operation in highly polluted environments the BC 1060 is supplied with a flow dilution system which may extend the required frequency of tape replacement by up to a factor of five.

The BC 1060, all inclusive, weighs approximately 35 lb. (16 kg) and has a small footprint making it easy to transport. It may be operated from either household power or may be battery powered.

Applications

- Air quality surveillance
- Rapid source apportionment determination
- Saturation studies
- Emergency responder applications
- Particulate emissions studies
- Near-roadside monitoring
- Climatological studies



Specifications

Measurement principle:	Dual Wavelength Optical Absorption.
Measurement range:	Near Infrared (880 nm LED) for elemental carbon.
Data display resolution:	Ultraviolet (370 nm LED) for elemental and organic carbon.
Ldl (2σ):	<1 ng/m ³ - >100,000 ng/m ³ (effective) 0.1 ng/m ³ < 8 ng/m ³ with 1 minute sample time < 1 ng/m ³ with 1 hour sample time
Measurement interval:	1, 5, 10, 15, 30, or 60 minutes.
Flow rate:	2 LPM
Pump type:	Internal DC Powered Pump
Filter tape:	Reinforced glass fiber
Power supply:	12V DC. Universal 100-240 VAC 50/60Hz input, 12 VDC 8.5A output supply included
Ambient/operating temperature:	-50°C to +70°
Ambient humidity range:	0 to 90% RH, non-condensing
Internal data storage:	4 MB internal memory. 108,134 data records
External data storage:	One USB Flash Drive Port
Data collection interface:	Single serial output through either RS - 232, USB, or Ethernet port. 1200 to 115200 baud.
Compatible software:	Comet™ software and USB / Ethernet driver CD included
User interface:	Menu-driven interface with 4x20 character backlit LCD display & dynamic keypad
Inlet:	PM _{2.5} or PM ₁ cyclonic separator, 2 LPM flow rate
Unit weight:	Approximately 35 lbs (16 kg)
Deployed dimensions:	Height: 30.5 cm Width: 35.6 cm Depth: 36.8 cm



Specifications subject to change without notice.

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