

ParticleTrack G400

Real-Time Particle Characterization



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1 Introduction

This manual covers specific safety and quality information relating to the ParticleTrack™ G400 with FBRM® (Focused Beam Reflectance Measurement) technology. Throughout this manual, the system is referred to by the name: ParticleTrack G400 or FBRM G400. The ParticleTrack G400 system includes the base unit and probe connected by a flexible armored conduit.

ParticleTrack G400 is a probe-based instrument that is inserted directly into laboratory reactors to track changing particle size and count in real time at full process concentrations. Particles, particle structures, and droplets are monitored continuously, as process parameters vary, providing scientists with the evidence required to deliver consistent particles with the required attributes. A ParticleTrack G400 system has fixed or interchangeable probe options and includes options for a single or dual-system configuration. ParticleTrack G400 dual-system configurations can simultaneously measure two small-scale vessels or points in a process stream. Click the link to see the [FBRM Method of Measurement](#) video (requires internet connection).

www.mt.com/ParticleTrack G400

2 Intended Use

The system includes a power supply, laser and detector modules, and PCBs. The base unit is fitted with a permanently attached flexible armored conduit, which is connected to the process probe. The ParticleTrack G400 system is designed for indoor use.

The system may only be used in safe locations and is not certified for use in hazardous locations.

3 Technical Data

| | |
|----------------------------------|--|
| System certifications | CE/NRTL-C Approved, Class 1 Laser Device, Compliant with 21CFR1040.10 and 1040.11 and IEC 60825-1; IPX0 |
| Functional specifications | |
| Method of Measurement | Focused Beam Reflectance Measurement (FBRM®) |
| Measurement range | 0.5 to 2,000 µm |
| Scan speed | 2 m/s (14 mm probe: 125 Hz) 1.2 m/s (19 mm probe: 75 Hz) |

Table 1. System certifications and functional specifications

Base Unit Specifications

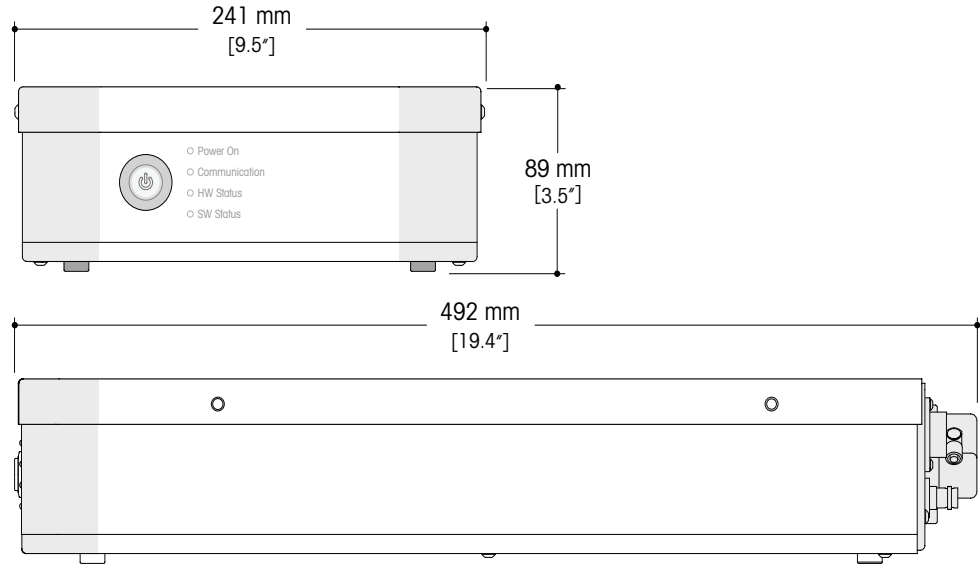


Figure 1. System Dimensions—Base unit

| | |
|-------------------------------------|---|
| Environmental | |
| Operating humidity range | 0 to 85% |
| Operating temperature range | 5 to 35 °C |
| General | |
| Material of construction | 14 ga Aluminum with Class 3 RoHS-compliant chemical film |
| Ingress protection | IPX0 |
| Power | 100-240 VAC, 50/60 Hz, 1.2A |
| Weight | 3.25 kg [7.17 lb] |
| Communication interface | USB, 3 m [10 ft] cable |
| Pollution degree | 2 |
| Installation (overvoltage) category | II |
| PCBs | Fr-4 |

Table 2. Base unit specifications

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