

# Quarryman® Pro

[www.renishaw.com/mining](http://www.renishaw.com/mining)

## Specification

		Quarryman Pro	Quarryman Pro LR (long range)
<b>Laser module</b>			
<b>Laser classification (BS EN 60825-1: 2007)</b> (21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser No. 50, dated 24 June 2007)		Class 2M*	Class 3R**
<b>Infrared laser module</b>			
<b>Type</b>		InGaAs laser diode	InGaAs laser diode
<b>Wavelength (typical)</b>		905 nm	905 nm
<b>Maximum energy per pulse</b>		2.88 µJ	4.81 µJ
<b>Beam divergence</b>		2.25 × 0.15 mrad	2.25 × 0.15 mrad
<b>Resolution</b>		1 cm	1 cm
<b>Maximum range to a passive target ***</b>		Up to 750 m	Up to 1200 m
<b>Minimum range</b>		10 m	10 m
<b>Lens aperture size and location</b>		46 mm (location at front of module)	46 mm (location at front of module)
<b>Visible laser module</b>			
<b>Type</b>		InGaAsP laser diode	InGaAsP laser diode
<b>Wavelength (typical)</b>		650 nm	650 nm
<b>Maximum power</b>		<0.6 mW (continuous wave)	<0.6 mW (continuous wave)
<b>Lens aperture size and location</b>		3 mm (location at front of module)	3 mm (location at front of module)
<b>Angle measurement</b>			
<b>Encoder type</b>		Opto-electronic encoder	Opto-electronic encoder
<b>Encoder accuracy</b>		0.02°	0.02°
<b>Encoder resolution</b>		0.01°	0.01°
<b>Range</b>	<b>Vertical</b>	-45° to +90°	-45° to +90°
	<b>Horizontal</b>	0° to 360°	0° to 360°
<b>Motion</b>		Stepper-driven worm and wheel drives in both axes with manual clutch override	Stepper-driven worm and wheel drives in both axes with manual clutch override
<b>Keyboard and display</b>			
<b>Display</b>		3.5-in, sun-readable TFT	3.5-in, sun-readable TFT
<b>Resolution</b>		320 × 240	320 × 240
<b>Keyboard</b>		17-button keypad	17-button keypad
<b>Data logging</b>			
<b>Supplied logging media</b>		8GB USB drive	8GB USB drive
<b>Compatibility</b>		USB 2.0 and 3.0	USB 2.0 and 3.0
<b>Power</b>			
<b>Supplied battery</b>		14.4 V Lithium-ion	14.4 V Lithium-ion
<b>Capacity</b>		6.2 Ah	6.2 Ah
<b>Scan time (typical)</b>		210 min	210 min
<b>Alternative power</b>		12 V dc lead acid	12 V dc lead acid
<b>Physical data</b>			
<b>Construction</b>		Machined aluminium	Machined aluminium
<b>Water and dust resistant</b>		IP66	IP66

		Quarryman Pro	Quarryman Pro LR (long range)
<b>Operating temperature range****</b>		-20 °C to +45 °C	-20 °C to +45 °C
<b>Weight</b>	Including tribrach	8 kg	8 kg
	Including tribrach and battery pack	8.6 kg	8.6 kg
	Including transit case and accessories	16.5 kg	16.5 kg

\* Viewing the laser output with certain optical instruments designed for use at a distance (for example, telescopes and binoculars) may pose an eye hazard.

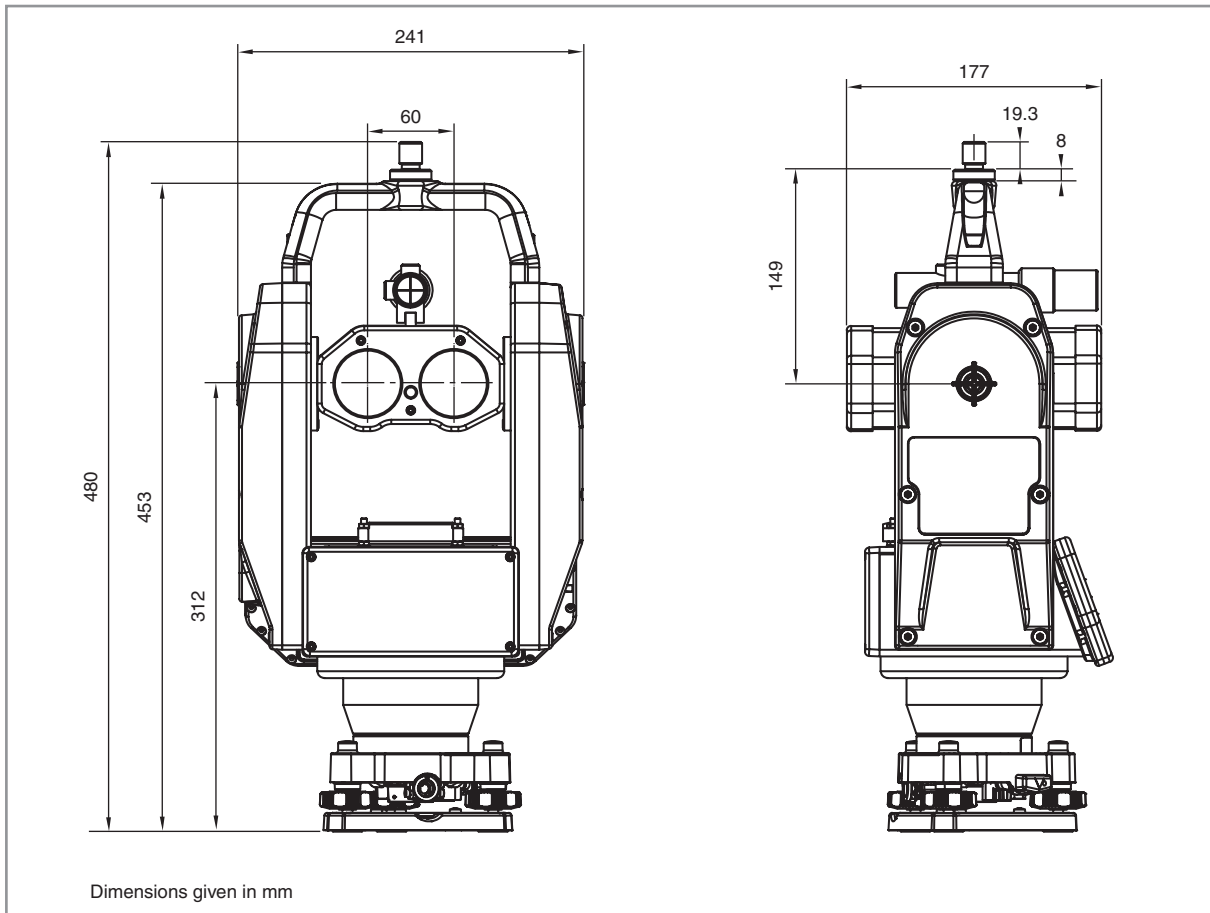
\*\* Visible and invisible laser radiation. Avoid direct eye exposure.

\*\*\* Max measuring ranges are recorded against Kodak white card (90% reflectivity).

\*\*\*\* Visible laser module operational -10 °C to +60 °C

For further information and the best possible application and performance support please contact Renishaw or visit [www.renishaw.com/mining](http://www.renishaw.com/mining)

### Quarryman Pro and Quarryman Pro LR dimensions



RENISHAW HAS MADE CONSIDERABLE EFFORTS TO ENSURE THE CONTENT OF THIS DOCUMENT IS CORRECT AT THE DATE OF PUBLICATION BUT MAKES NO WARRANTIES OR REPRESENTATIONS REGARDING THE CONTENT. RENISHAW EXCLUDES LIABILITY, HOWSOEVER ARISING, FOR ANY INACCURACIES IN THIS DOCUMENT.

