

SCAPE Mini 3D Scanner™

Product Option OP13-20/21/22



Introduction

The SCAPE Mini series is part of the SCAPE hand-eye 3D sensor system, which uses a high-power laser light source and offers strong resistance to ambient light interference. It is also rugged, compact, and lightweight, making it easy to install directly on a robot arm for high-precision tasks such as guidance, grasping, welding position detection, and more. The Mini series features a large field of view, which is within the reach of the robot and is not constrained by the number or position of boxes, offering high flexibility for integrated systems.

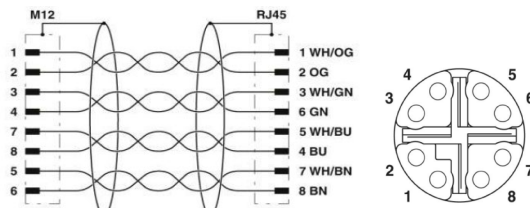
Technical Performance Specifications

The SCAPE Mini Industrial 3D Scanner comes in 3 different options: Mini Pro-700 which is extremely compact and can work at close range, Mini Pro C-700 and Mini Pro C-1000 which include color camera but have two different scan volumes. All models generate up to 1.3 M points and use blue laser light (447 nm).

Model	Mini Pro-700 (OP13-20)	Mini Pro C-700 (OP13-21)	Mini Pro C-1000 (OP13-22)
Working Range (Z-direction)	400-700 mm	400-700 mm	380-1000 mm
Field of View (see plots on page 2) ¹	700 x 600 mm	700 x 620 mm	650 x 640 mm
Lateral Resolution (XY-plane) ¹	0.55/0.59 mm	0.55/0.61 mm	0.51/0.63 mm
Min Surface Area for Scanning ¹	2.0 x 2.0 mm	2.0 x 2.0 mm	2.0 x 2.0 mm
Depth Uncertainty RMS Closest to/Furthest from Scanner	0.4/0.7 mm	0.4/0.7 mm	0.38/1.0 mm
Baseline	80 mm	125 mm	125 mm

Electrical Connections

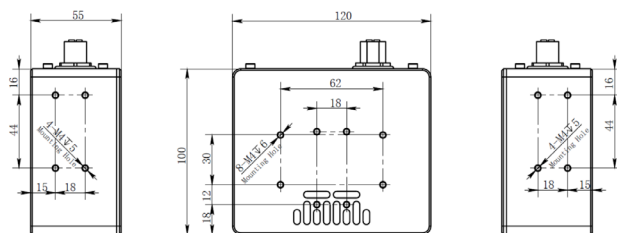
Ethernet port



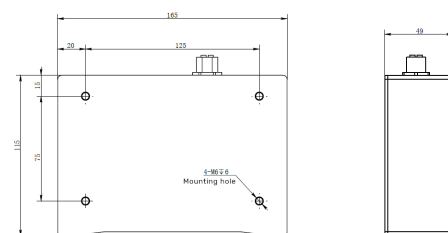
Connect 1 Gbps POE ethernet cable with RJ45/M12-X connector (supplied with scanner). If supplying own cables: Use category Cat5e or better ethernet cables (cables capable of 1 Gbps or 10 Gbps transfer rate).

Mounting (all models):

SCAPE Mini Pro-700



SCAPE Mini Pro C-700, SCAPE Mini Pro C-1000



¹ At max. distance

HARDWARE SPECIFICATION

LED Status	Red	Green	Yellow
On	Power available through ethernet cable (POE)	Connecting	Continuously on, it indicates a short circuit in the network cable
Off	No power available through ethernet cable	Connected, normal operation	No communication
Flashing	-	-	Signal is normal, and communication is ongoing

Physical Specifications

Dimensions and Weight

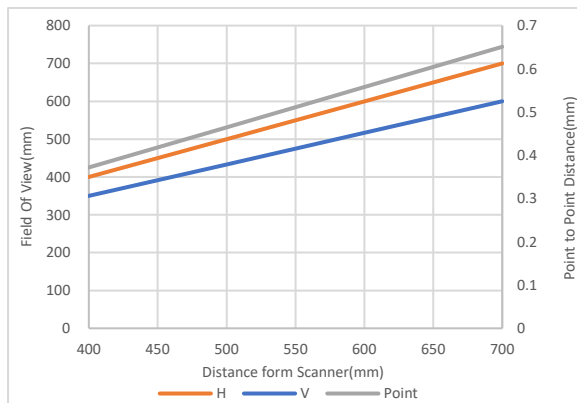
Mini Pro-700: 120 x 100 x 55 mm 780 g
 Mini Pro C-700: 165 x 115 x 49 mm 1030 g
 Mini Pro C-1000: 165 x 115 x 49 mm 1030 g

Safety Classification (EN 62471) and Protection

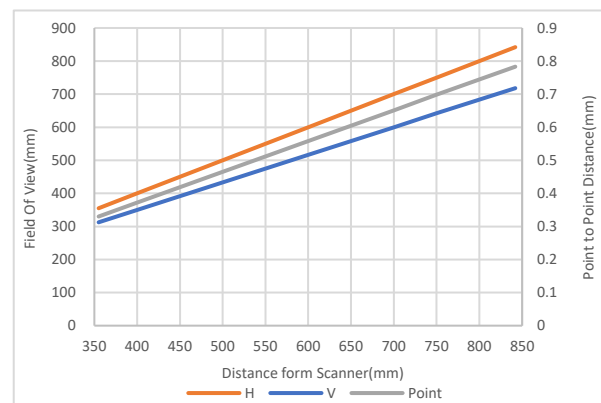
Class 3R. Class 3R lasers are considered safe when handled carefully. Avoid direct eye exposure. IP65.

Field of View and sensor resolution as a function of scanning distance

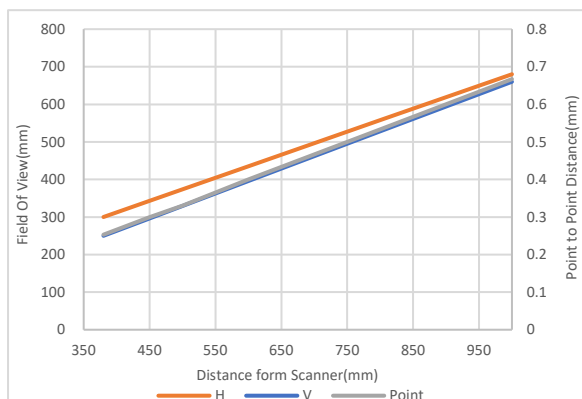
Mini Pro-700



Mini Pro C-700



Mini Pro C-1000



SCAPE Mini Box Content

- SCAPE Industrial 3D Scanner (Mini Pro-700, Mini Pro C-700 or Mini Pro C-1000)
- Ethernet cable RJ45/M12 X-coded 5 m (between SCAPE Controller PC and scanner)
- Power supply injector for POE

SCAPE Controller PC Extra Requirements

1 Ethernet connector, 1 Gbit