# TUNNEL SYSTEM SOLUTION



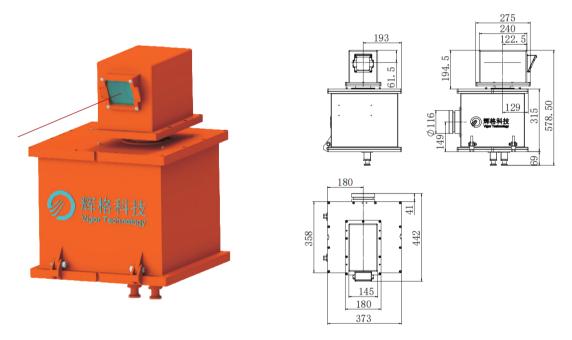
### SSH0801 Series 3D Laser Scanner for Mine

### **Function description**

- · Dual-axis structure, automatic continuous scanning;
- · 21-bit high-precision encoder, the servo control accuracy reaches 0.01°, and the max scanning resolution is 5mm @ 30m distance ;
- · Infrared ranging, max ranging distance 100 m, commonly measuring range 6 ~ 40 m;
- · Vertical installation, convenient and stable, with good anti-vibration, suitable for working environment of mining equipment;
- · No need for human intervention after measurement begins;
- · Standard Ethernet communication protocol, 8 m power supply mine explosion-proof cable and 8 m communication mine explosion-proof cable.

## **Product description**

- The product is designed in accordance with the standard of class I flameproof D equipment for mining, and is suitable for the working environment of underground coal mine;
- · It can realize high-precision scanning measurement of tunnel and three-dimensional point cloud modeling;
- · Independent and modular products, with versatility, suitable for system integration needs;
- · Meet the continuous long-term measuring needs.



### **Structure**

Adopt the design of explosion-proof box. The overall volume and weight are optimized on the basis of standard of class I explosion-proof D equipment for mining, and it is easy to install and maintain on the premise of meeting the standard for mining.

# **Typical applications**

- · Intelligent wet spraying machine for mine
- · Intelligent scaling jumbo for mine
- · Drilling jumbo for mine

# SSH0801 Series 3D Laser Scanner for Mine

SSH0801 adopts double cables for data interaction and power supply. The double cables meet the mining explosion-proof standard.

The power cable is mobile Light dual core flexible cable used in coal mine :

No	wire colour	Definition
1	Brown	+24VDC
2	Blue	Power GND

Signal cables are polyethylene insulated braided shielded PVC sheathed communication soft cables used in coal mines. Network communication protocol is used for data exchange.

	Parameter	Specific index
	3D scanning	Scanning mode: vertical equidistant step Horizontal direction: continuous scanning Infrared ranging: resolution 0.1mm, repeatability≤±1mm, Measurement error: ±2mm Ranging measurement time: 0.5ms Angular measurement time: 0.5ms Spot diameter: 23cm@30m Data interface: Ethernet Output data: 3D point cloud (Standard) Three-dimensional model (Optional)
Equipment overall	Angle adjustment	Horizontal axis : +150° Vertical axis : -220°~+150°
	Protection level	IP66
	Operation temperature	-20~65°C
	Power consumption	24VDC , max power 200W
	Shock	50g@11ms , three-axis ( half-sine )
	Vibration	4grms , 20 ~ 2000Hz
	Dimensions(mm)	primary box : 188*180*280 secondary box : 320*385*400
	Protection	With anti-polarity power supply protection, over-current self-recovery protection, automatic lock-in protection after power failure, position memory
	Horizontal axis rotation angle range	±150°
	Vertical axis rotation angle rang	-220°~+150°
	Horizontal axis rotation speed	≤30°/s
Biaxial	Vertical axis rotation speed	≤5°/s
characteristics	Angular acceleration	≤10°/s²
	Quadrature error	≤0.1°
	Servo control accuracy	0.01°
	Absolute encoder	21-bit single-loop absolute value
Ranging laser	Laser class	class 1
	Spot diameter	230mm @ 30m distance
Indicator laser	Laser class	class 2
	Spot diameter	40mm @ 30m distance

