Anticollision Device User Manual
WSX Laser Drives the Future

Shenzhen Worthing Technology Co., Ltd.
www.wsxlaser.com

Contents

1. Product Overview

Product Name： Anticollision Device

Product Feature :

1. Pneumatic booster provides protection against accidental effects and unexpected event loads on industrial robots and tools.
2. Through sensing industrial robots and tools working geometry due to overworked torsion, torque or compressed axial forces and other events, and send out collision signals.
3. When the collision occurs, the internal movement of the device causes the normally closed dry contact switch to open.
4. The switch circuit can be stopped by the monitor robot controller before damage occurs to the robot or tool.
5. The separated load threshold may be controlled to regulate the air
6. pressure provided to the unit. All devices provide axial (compression only), torsional and torque event protection.

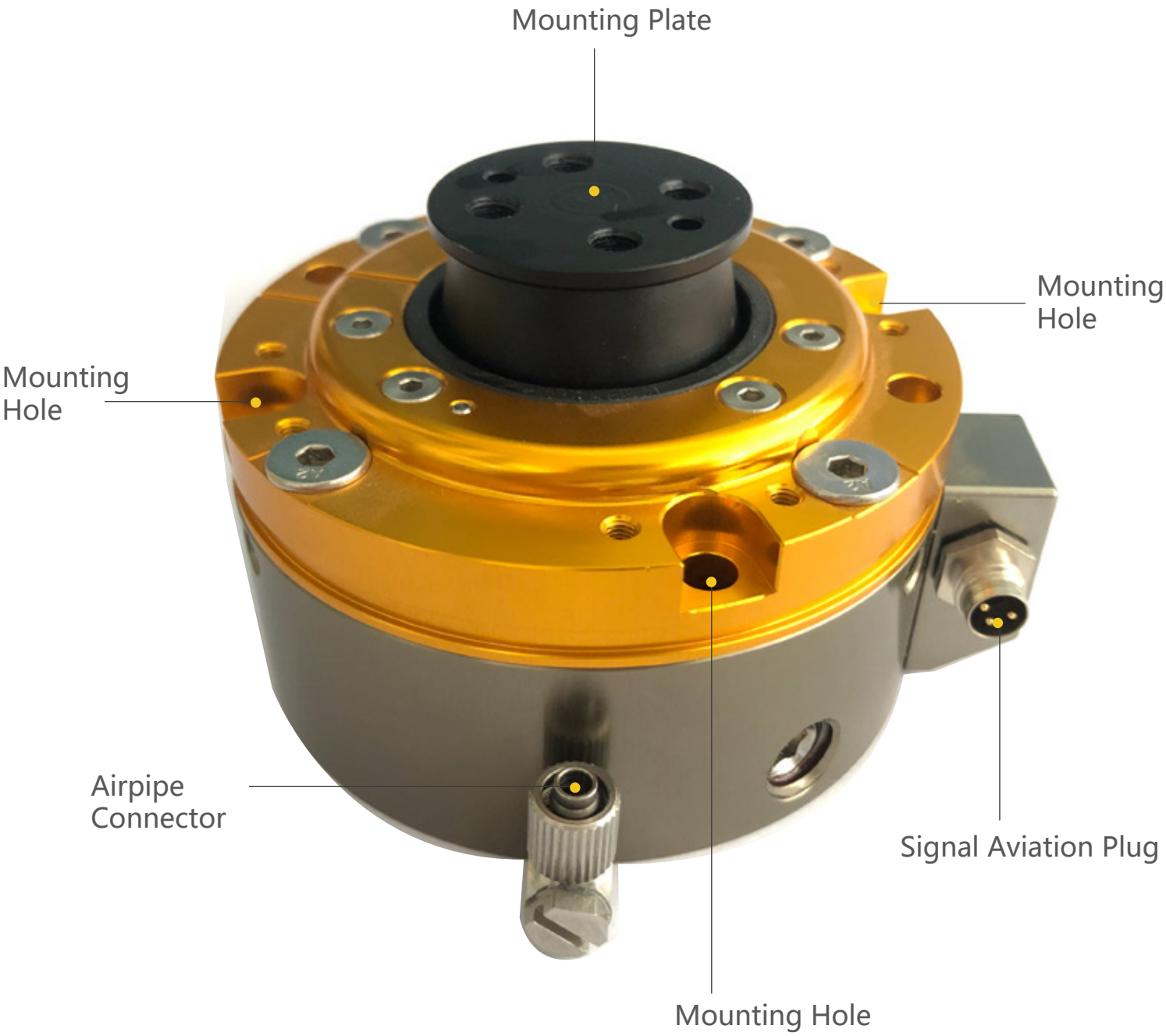
Warm Prompt

Before using this product,
please read this manual carefully and
make sure you understand its
contents!

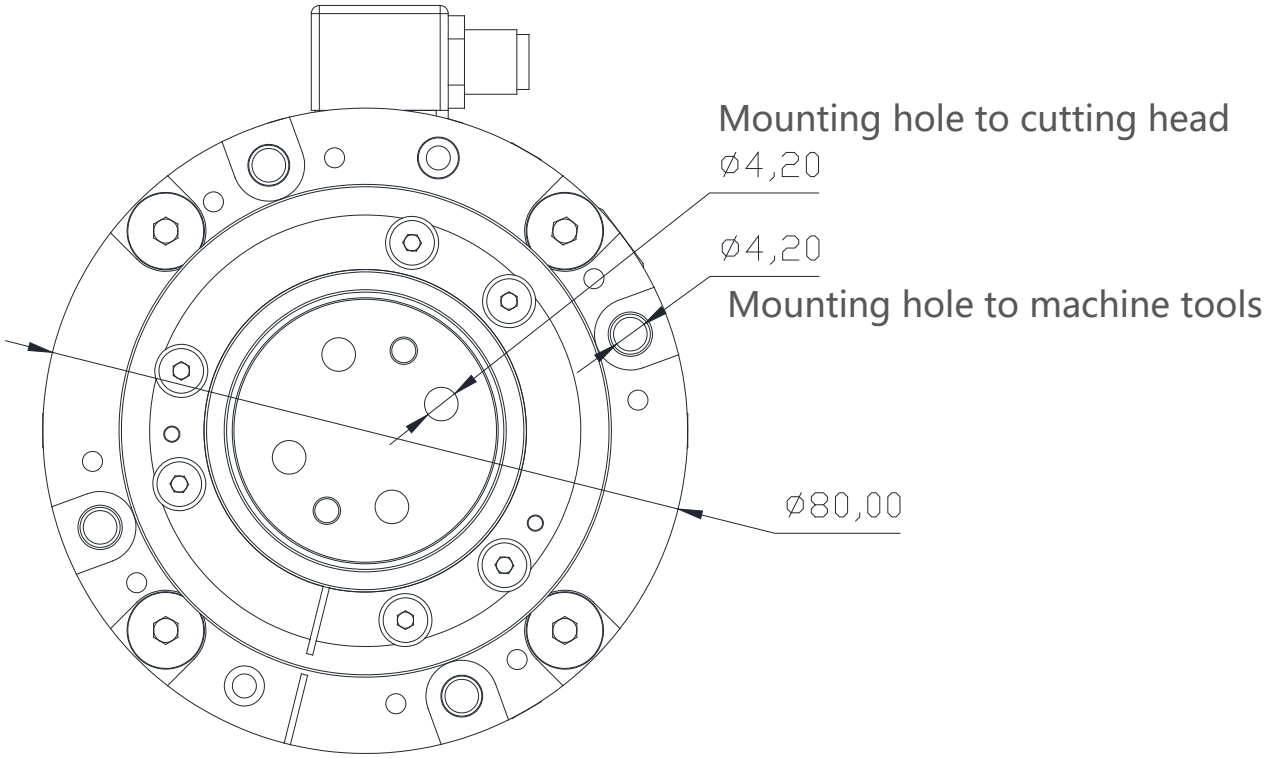
Please keep this manual properly for
future operation and maintenance

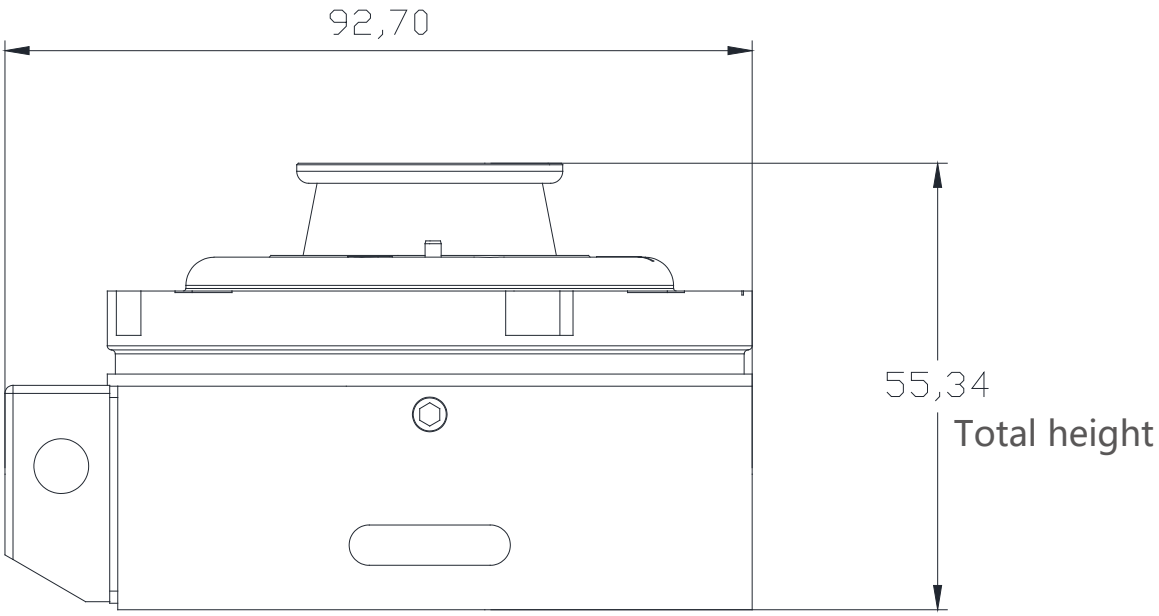
2.Structure Diagram

2.1 Introduction Diagram



2.2 Structure & Hole Diagram





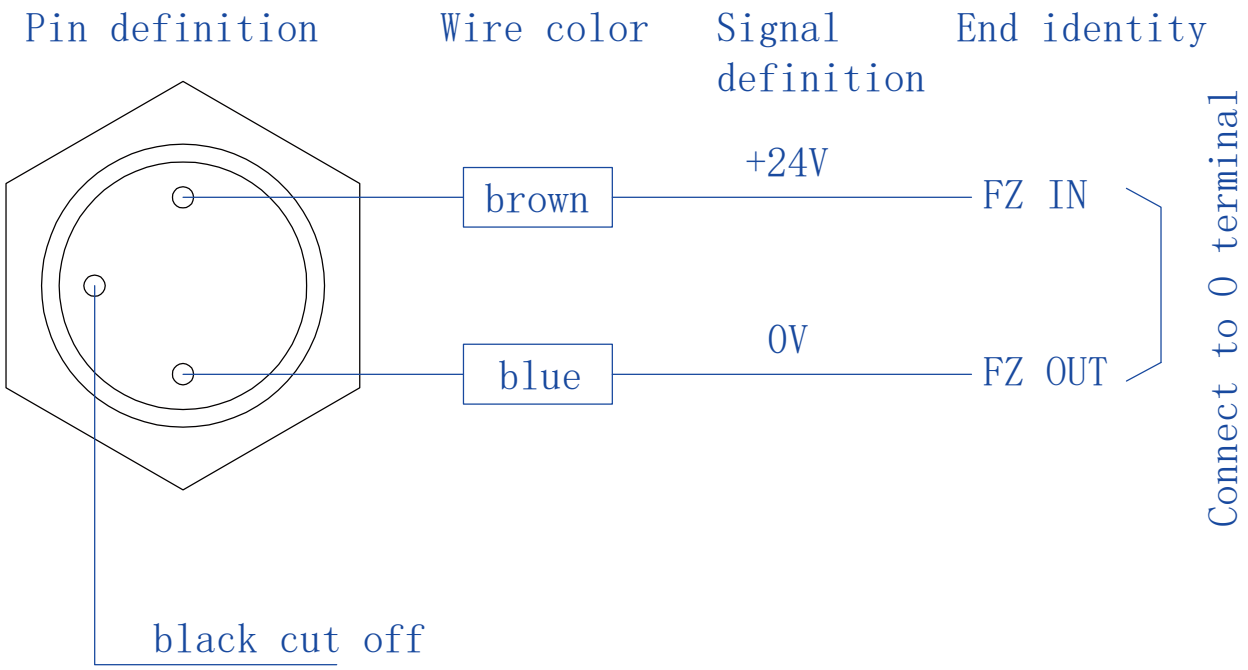
3.System composition

The anti-collision device is mainly composed of the anti-collision device body, laser head and cutting head installation plate, which is mainly used to prevent the damage of laser head and machine tool caused by collision in the process of processing.

When the sensor senses that the cutting nozzle is colliding, the internal movement of the anti-collision device will cause the normally closed dry contact switch to open, and the collision signal will be sent by sensing the torsion, torque or compression axial force of industrial robot and tool working geometry due to excessive work.

3.1 Aviation signal definition:

As the picture below:



3.2Technical specification

Technique Data

Item	Specification
Operating pressure	1.7-6.2Bar
Operating voltage	DC24V
Operating current	125mA
Angle movement upper limit	±13°
Axial load upper limit	1713N
Torsion load upper limit	1713N
Weight	0.58kg
Applicable power	≤1200W

3.3Parts list

Item	PCS
Anticollision device	1 set

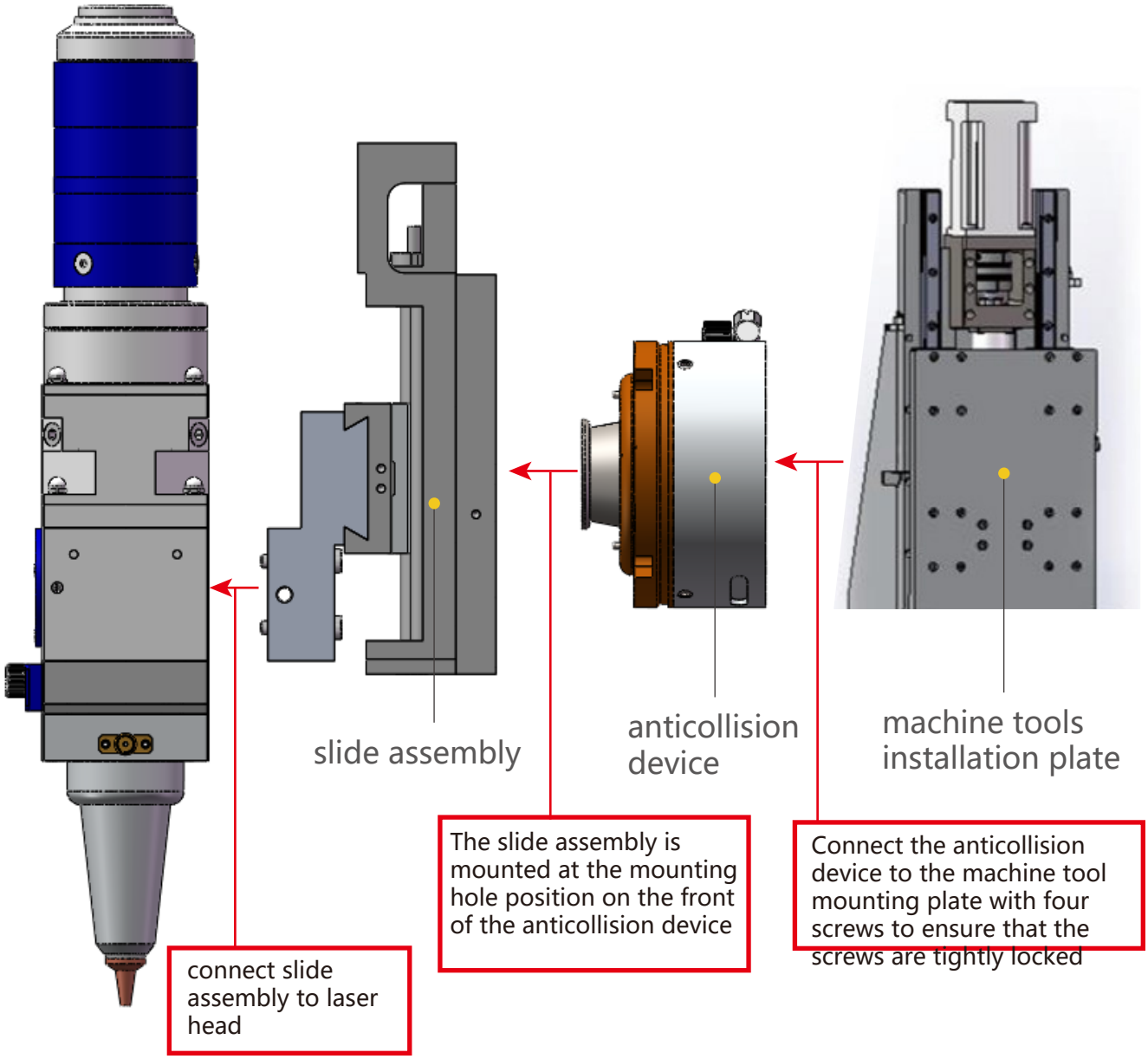
3.4 Application & Installation:

3.4.1 Connection and installation to cutting head :

1. Connect the anticollision device to the connecting plate of the slide assembly. After connecting the slide assembly to the laser head, install the collision preventer to the laser head installation plate of the machine tool correctly;

2. After installing the main body of the anticollision device, connect the aviation plug signal cable to ensure the transmission of signals;

3. Connect the anticollision device with the installation plate of the machine tools, be sure to lock the appropriate screws;



3.4.2 Selection of supporting parts ：

1. Choose different installation locations according to the requirements of work requirements.
2. Choose the fixed bracket according to different application scenarios.

3.4.3 Installation Notes ：

1. In any case, do not point to the human body to avoid accidental injury;
2. Make sure all electrical connections are correct before powering up;
3. Correct installation Angle;

Shenshen Worthing Technology Co., Ltd.
Website: www.wsxlaser.com
Email: info@wsxlaser.com
Address: Building 3, Langkou Industrial Zone, Dalang, Longhua District,Shenzhen, Guangdong, China