Micro Working Distance Camera

Model Name: INS-CHVS-363-10GM Series

Change History			
Rev.	**Date**	**Author**	**Specification**
V1.0	Nov. 2022	INSNEX	Original

Contact Us
If you have any doubts or suggestions during the use of the software, please contact us promptly: Insnex Technologies Co.,Ltd Address: Building R, No. 218 Xingming Street, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone Postal Code：215000 Website：http://www.insnex.com/ Telephone：(86) 0512-67159489 E-mail：Services@Insnex.com

1. Product Outline

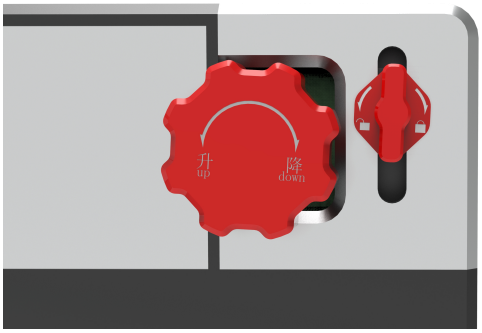
Item	INS-CHVS-363-10GM-BB	INS-CHVS-363-10GM-AA	INS-CHVS-366-10GM-CC	Note
Control board	CIS-MAIN	CIS-MAIN	CIS-MAIN	1PCS
Digital data output	10GigE	10GigE	10GigE	1PCS
Command communication	Serial interface	Serial interface	Serial interface	
Scanning width	363	363	366	mm
Sensor element density	600	300	1200	DPI
Number of sensor element（Effective）	8589	4305	17280	Pixels
Scanning speed (Frequency)	66	110	11	kHz
Scanning speed	2.8	9.3	0.23	m/s
Data speed	10	10	10	Gbps
Power supply	+24V×2A	+24V×2A	+24V×2A	To control boards
	+24V×3A	+24V×3A	+24V×3A	To LED boards
Dimension	Figure 1	Figure 1	Figure 1	
Focus (From glass surface)	15	15	15	mm
Image format	Mono8	Mono8	Mono8	
Color of frame	Black	Black	Black	

2. Operating Instructions

2.1 Focus Adjustment

(1) Follow the text prompts. Turn the left knob counterclockwise to go down and clockwise to go up.

(2) Follow the text prompts. Turn the right knob counterclockwise to to go up and clockwise to go down.

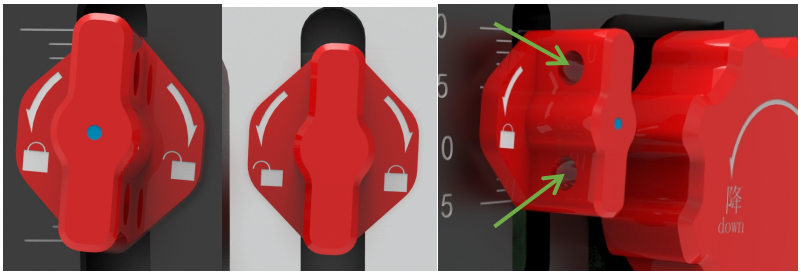


2.2 Locking Device

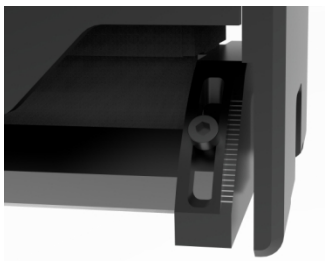
(1) Rotate the left circular handle clockwise and tighten it to lock the focus adjustment device. There are prompts for locking and loosening the signs.

(2) Rotate the right circular handle clockwise and tighten it to lock the focus adjustment device. There are prompts for locking and loosening the signs.

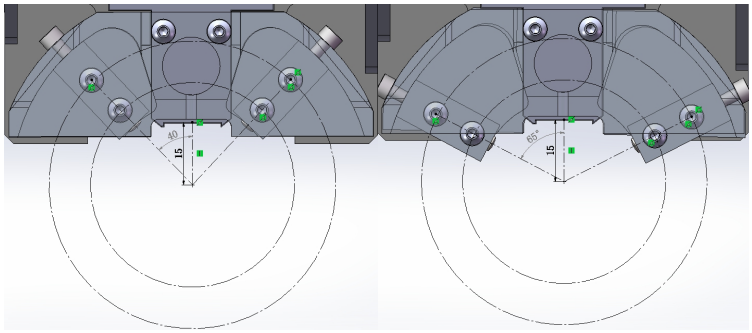
(3) If there is a need for locking requirements, a long-handled tool can be used to reach into the small hole and extend the torque to lock or loosen.



2.3 Adjustable Light Source Device

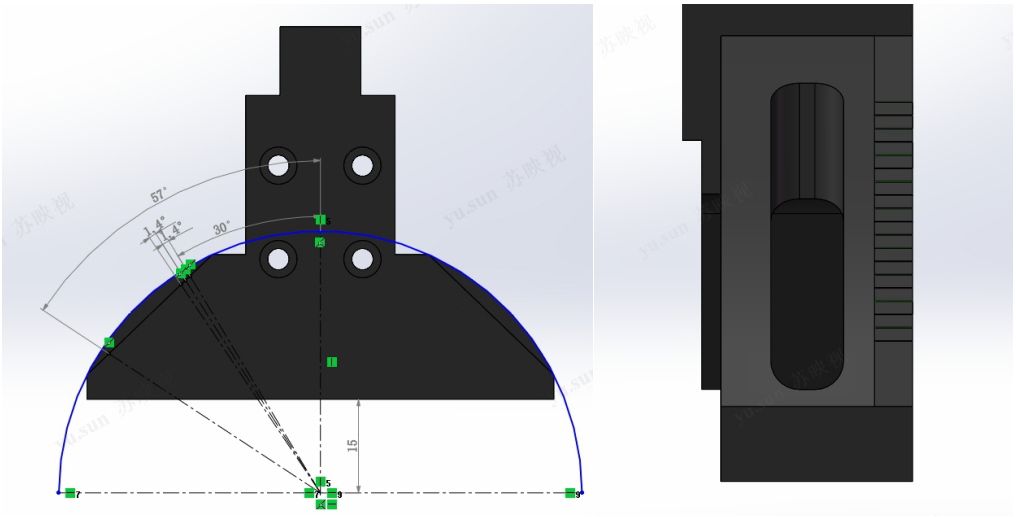


Adjust scale reference



Focal length 15mm;

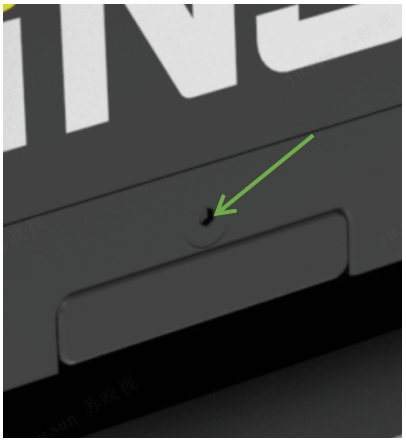
Single side adjustment of light source 40 ° - 65 °



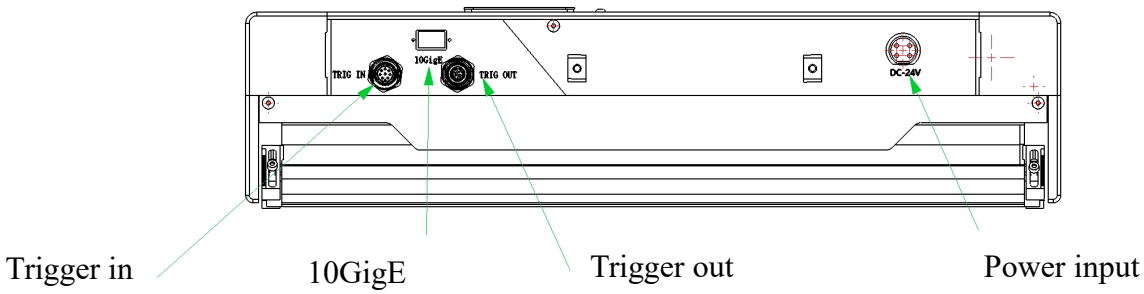
Light source adjustment scale line with a scale spacing of 1mm (1.4 °)

2.4 Light Source Cable Cover

After plugging in the front and rear light source power supply lines, cover the light source cover and tighten the corresponding screws to prevent loosening (symmetrical front and rear).

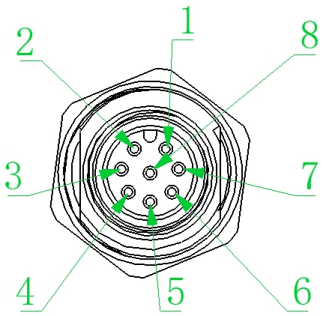


3. Description of Interface



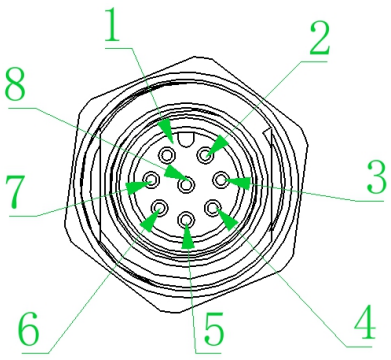
3.1 Trigger In

Pin	Name	I/O	Color	Description
1	A+	I	White	Shaft encoder phase A+
2	A-	I	Brown	Shaft encoder phase A-
3	B+	I	Green	Shaft encoder phase B+
4	B-	I	Yellow	Shaft encoder phase B-
5	I1+	I	Grey	External trigger input 1 +
6	I1-	I	Pink	External trigger input 1 -
7	I2+	I	Blue	External trigger input 2 +
8	I2-	I	Red	External trigger input 2 -



3.2 Trigger Out

Pin	Name	I/O	Color	Description
1	O1+	O	White	External trigger output 1 +
2	O1-	O	Brown	External trigger output 1 -
3	O2+	O	Green	External trigger output 2 +
4	O2-	O	Yellow	External trigger output 2 -
5	O3+	O	Grey	External trigger output 3 +
6	O3-	O	Pink	External trigger output 3 -
7	O4+	O	Blue	External trigger output 4 +
8	O4-	O	Red	External trigger output 4 -

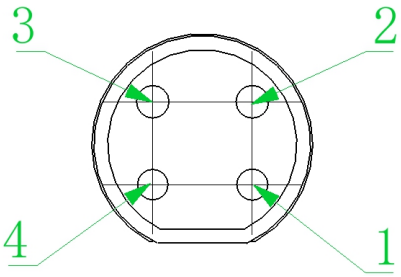


3.3 10GigE

Use 10GigE network to transmit commands and data. Please use Category 7 network cable.

3.4 Power Input

Pin	Signal	I/O	Color	Description
1	+24V_C	I	Brown	Control board DC 24V +
2	GND_C	I	Blue	Control board DC 24V-
3	+24V_L	I	White	Light source DC 24V +
4	GND_L	I	Black	Light source DC 24V -



4. Serial Interface

This serial interface uses hex code.

Item	Value
Baud rate	115200
Start bit	1
Data bit	8
Parity bit	None
Stop bit	1
Flow control	None

5. Maximum Rating

Item	Symbol	Specification	Note
DC supply voltage	Control boards	+24V±1V	
	LED boards	+24V±1V	
Ambient temperature	Ta	0~+40℃	Operating
		-20~60℃	Storage
Ambient humidity		10%~90%RH	

6. Connector Plug/Unplug

Unplug & plug the cable number should be less than 50. The connector will be ineffective if it is extracted and inserted over that number.

7. Stable Operation

(1) The connector pins should not be touched by bare hands or electrostatic charge materials.

(2) Latch-up

When the supply voltage exceeds the absolute maximum, Latch-up will occur. Latch-up will cause the sensor to be broken, even if the voltage is caused by a surge. If the current varies rapidly in the external circuit, or when the power is switched on and off very frequently, ensure that the voltage of each terminal does not exceed the values indicated in below.

(3) Absolute maximum rating

Item	Specification		Unit
	Min.	Max.	
Control boards supply voltage	-0.3	+25.0	V
LED boards supply voltage	-0.3	+25.0	
Shaft encoder input voltage	-0.3	5.5	
External trigger input voltage	-0.3	25	
External trigger output voltage	-0.3	25	

8. Reliability

Please operate Micro Working Distance Camera under INS operating conditions, which is specified in section 5.

Figure 1. Dimensions