TP9313

1.3 MP Industrial Code Reader

Introduction

TP9313 industrial code reader can read different types of codes with reading speed up to 84 codes/sec. It adopts Hikrobot's deep learning algorithm to process images with good robustness, and can recognize various complex codes.

Key Features

- Adopts built-in deep learning algorithm to read codes with good robustness.
- Adopts multiple I/O interfaces for input and output signals.
- Adopts 14 LED lights to provide light source.
- Supports polarized and non-polarized modes.
- Adopts 2 LED aiming lights for easy installation and code aiming.
- Indicators on device display device status and code reading results.

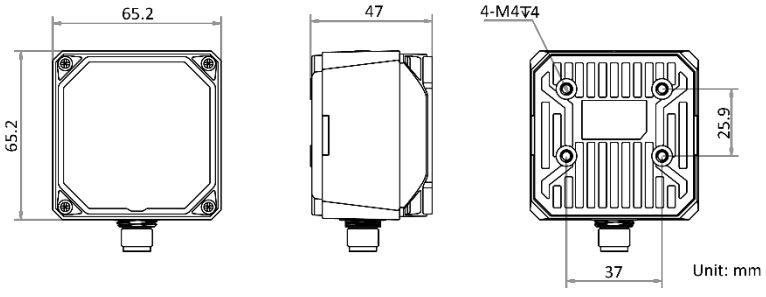
Applicable Industry

Consumer electronics, PCB, lithium battery, automobile, photovoltaic industry, etc.

Available Model

- 6 mm focal length: TP9313-06M-WBN
- 12 mm focal length: TP9313-12M-WBN
- 14.8 mm focal length: TP9313-15M-WBN

Dimension



Specification

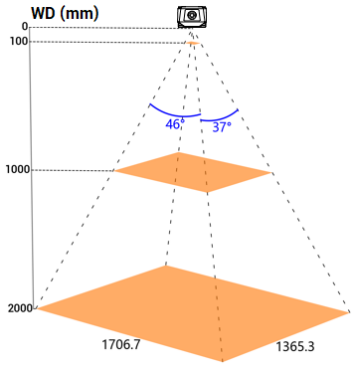
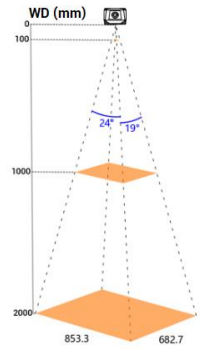
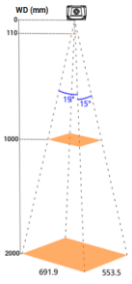
Model	TP9313-06M-WBN	TP9313-12M-WBN	TP9313-15M-WBN
Performance			
Symbologies	1D codes: Code 39, Code 93, Code 128, CodaBar, EAN 8, EAN 13, UPCA, UPCE, ITF 14, ITF 25, Matrix 25, MSI, China Post, Code 11, and Industrial 25 2D matrix codes: QR Code (GS1-QR included), Data Matrix (GS1-DM included), MicroQR, AZTEC, HanXin, Maxi code Stacked codes: PDF417, MicroPDF417		
Max. frame rate	60 fps		
Max. reading speed	84 codes/sec		
Sensor type	Global shutter, mono, 1/2.7", 4 μ m × 4 μ m		
Resolution	1280 × 1024		
Exposure time	35 μs to 1 sec		
Gain	0 dB to 28 dB		
Electrical feature			
Data interface	Fast Ethernet (100 Mbit/s)		
Communication protocol	SmartSDK, TCP Client, TCP Server, Serial, FTP, Profinet, Ethernet/IP, MELSEC/SLMP, ModBus, UDP, Fins, Modbus RTU		
Digital I/O	V3.0: 17-pin M12 connector provides power and I/O, including isolated input (LineIn 0/1/2) × 3, isolated output (LineOut 3/4/5) × 3, RS-232 × 1. Supports device triggering via pressing button on top. V2.0: 17-pin M12 connector provides power and I/O, including non-isolated input (LineIn 0/1/2) × 3, non-isolated output (LineOut 3/4/5) × 3, RS-232 × 1. Supports device triggering via pressing button on top.		
Power supply	24 VDC		
Power consumption	Avg.: 9 W @ 24 VDC (light source enabled) Max.: 48 W @ 24 VDC (light source enabled)		
Mechanical			
Focal length	6 mm	12 mm	14.8 mm
Field of view	46° (H) × 37° (V)	24° (H) × 19° (V)	19° (H) × 15° (V)
Lens mount	M12-mount, mechanical focus supported		
Lens cap	Half-polarized lens cap by default. Transparent, fully-polarized, diffused, and long-wave IR lens caps are optional.		
Light source	White light by default. Red/blue/IR/UV light is optional.		
Indicator	Power indicator (PWR), network indicator (LNK), status indicator (STS), result indicator (OK/NG)		
Shell material	ADC12		
Dimension	65.2 mm × 65.2 mm × 47 mm (2.6" × 2.6" × 1.9")		
Weight	Approx. 280 g (0.6 lb.)		
Ingress protection	IP67 (under proper installation of waterproof lens cap)		
Temperature	Working temperature: 0 °C to 50 °C (32 °F to 122 °F) Storage temperature: –30 °C to 70 °C (–22 °F to 158 °F)		
Humidity	20% RH to 95% RH (no condensation)		
Vibration resistance	Device only: 10 Hz to 55 Hz, 1.5 mm full amplitude, 2 hours per axis (X/Y/Z) (IEC 60068-2-6:2007\GB/T 2423.10-2019)		

Shock resistance	Device only, 30 g / 11 ms, half-sine wave, 500 shocks per axis (6 directions) (IEC 60068-2-27\GB/T 2423.5-2019)
General	
Client software	IDMVS
Certification	CE, RoHS, KC

Note

TP9313 V3.0 and TP9313 V2.0 differ in wiring. Refer to the user manual for details.

Detection Range

TP9313-06/12/15M-WBN (Unit: mm)						
Lens Focal Length	**Working Distance**	**Field of View**		**1D Min. Resolution***	**2D Min. Resolution****	**Diagram of Field of View**
		H	**V**			
6	30	25.6	20.5	0.020	0.060	
	100	85.3	68.3	0.067	0.200	
	200	170.7	136.5	0.133	0.400	
	300	256.0	204.8	0.200	0.600	
	600	512.0	409.6	0.400	1.200	
	1000	853.3	682.7	0.667	2.000	
	2000	1706.7	1365.3	1.333	4.000	
12	60	25.6	20.5	0.020	0.060	
	100	42.7	34.1	0.033	0.100	
	200	85.3	68.3	0.067	0.200	
	300	128.0	102.4	0.100	0.300	
	600	256.0	204.8	0.200	0.600	
	1000	426.7	341.3	0.333	1.000	
	2000	853.3	682.7	0.667	2.000	
14.8	110	38.1	30.4	0.030	0.089	
	200	69.2	55.4	0.054	0.162	
	300	103.8	83.0	0.081	0.243	
	600	207.6	166.1	0.162	0.486	
	1000	345.9	276.8	0.270	0.811	
	2000	691.9	553.5	0.541	1.622	

1D Min. Resolution (mm)*: Field of view (long side) / resolution (long side) × 1.

2D Min. Resolution (mm)**: Field of view (long side) / resolution (long side) × 3.

Accessories

Included

Cable	Bracket	Screws
		

Required

AC Power Cable	Power Adapter
	

Optional

Cable with Network Interface	Light Board	Lens Cap	I/O Box
• Cable with male header for static scenes: 3 m/5 m/7 m/10 m/15 m • Cable with male header for static scenes (angled): 3 m/10 m • Cable with female header for static scenes (angled): 5 m • Cable with female header for static scenes: 5 m • High-flex cable with male header: 3 m/5 m/7 m/10 m/15 m • High-flex cable with male header (angled): 3 m • High-flex cable with female header: 3 m • Super-flex cable with male header: 5 m	Red/white/blue/IR/UV/two-color (red/blue) light	Transparent/fully-polarized/half-polarized/diffused/long-wave IR lens caps/accessories of ultra-small code	/