



2D vision
Inspector, Inspector PI-series, Inspector PI50
EtherCAT

VSPP-5F2134



Model Name > [VSPP-5F2134](#)
Part No. > [1056394](#)



At a glance

- High-speed positioning and inspection
- Expanded toolbox for locating taught-in and free-form objects
- Multiple, simultaneous inspection of blobs, patterns, edges and pixel counting
- Easy device cloning via the web interface
- Image calibration, including mm output
- Configurable communication through real-time EtherCAT
- HMI integration via web API
- Simple, out-of-the-box web server

Your benefits

- Powerful yet simple tools enable flexibility in various positioning and inspection applications
- EtherNet communication and web API gives excellent control and freedom to customize user's HMI in integrated machine environments
- EtherCAT connectivity provides microsecond level real time control, allowing ultra-precise timing control of in-motion inspection and positioning solutions
- Web interface enables import/export of unlimited number of reference objects, increasing production flexibility
- The built-in web server is an easy and cost-efficient way to monitor the production process
- The image calibration ensures reliable inspection results on moving and rotated objects in tilted setups, or when using wide angle lenses
- Result calibration gives easy-to-use mm data, simplifying alignment and gripping



Features

Task:	Inspection Positioning
Technology:	2D Image analysis Snapshot
Toolset:	Pattern Blob locator Object locator Polygon Edge pixel count Pixel count
Focus:	Adjustable focus (manually)
Sensor:	CMOS matrix sensor, gray scale values

Sensing distance:	≥ 50 mm
Working distance internal illumination:	50 mm ... 200 mm
Field of view internal illumination:	22 mm x 15 mm ... 79 mm x 58 mm
Spectral range:	Ca. 400 nm ... 750 nm
LED class:	Risk group 1 (low risk, IEC62471 : 2006)
Focal length:	10 mm
Offline support:	Emulator
Calibration:	Perspective and lens distortion correction, mm results
Sensor resolution:	640 px x 480 px
Internal lighting:	White
Robot coordinate alignment:	-

Performance

Maximum performance:	200 fps
Typical performance:	40 fps
Number of inspections:	32
Reference images:	32 objects

Interfaces

Operator interfaces:	Inspector Viewer, Web server
Data store and retrieve:	Record images on PC Store images to FTP 30 images device log
Ethernet communication:	CoE, DC, Dual port, EoE, FoE, Web API
Digital inputs:	4 inputs (24 V)
Configurable inputs:	Reference object selection Encoder input External trigger External teach
Digital outputs:	3 outputs, 24 V (B-type)
Configurable outputs:	Output by logical expressions, Store images to FTP overflow
Output current:	100 mA
Default outputs:	All pass Any fail No object detected
Maximum encoder frequency:	40 kHz
Control of external illumination:	5 V TTL
Serial (RS-232, RS-422):	-
Ethernet:	✓
Data transmission rate (Ethernet):	100 Mbit/s
Protocol (Ethernet):	TCP/IP, EtherCAT
Configuration software:	SOPAS

Mechanics/electronics

Connectors:	M12, 12-pin male connector M12, 4-pin female connector
Supply voltage:	24 V DC± 20 %
Power consumption:	< 450 mA Without output load
Ripple:	< 5 Vpp
Enclosure rating:	IP 67
Housing material:	Aluminum
Window material:	PMMA
Dimensions (L x W x H):	100 mm x 53 mm x 38 mm
Optics:	Exchangeable (M12-mount)

Weight:

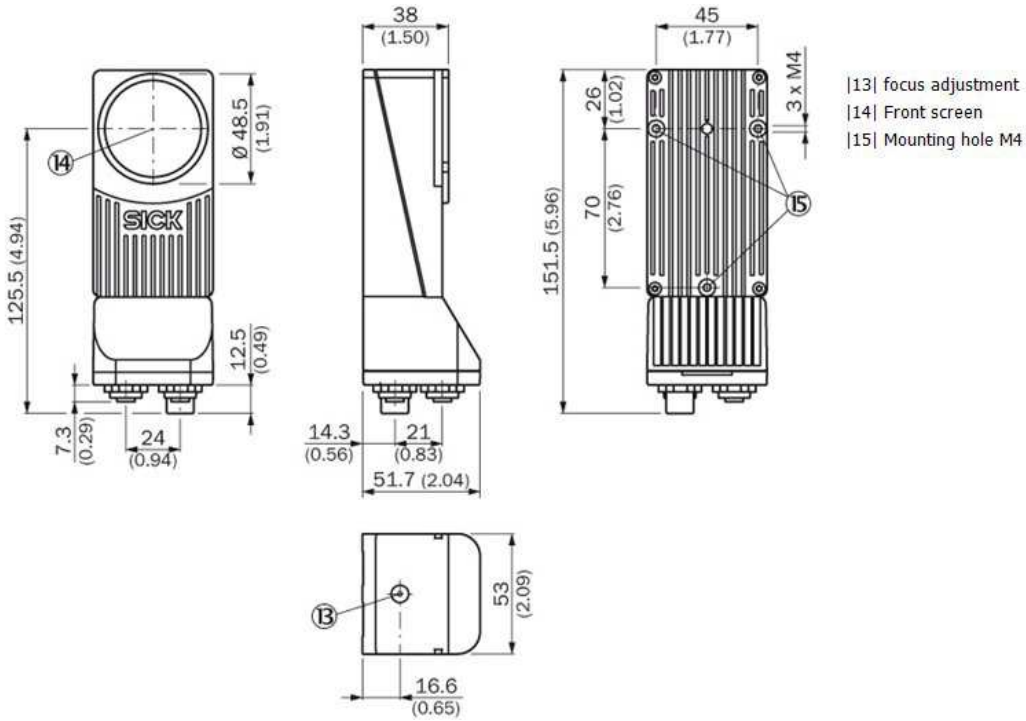
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Ambient data

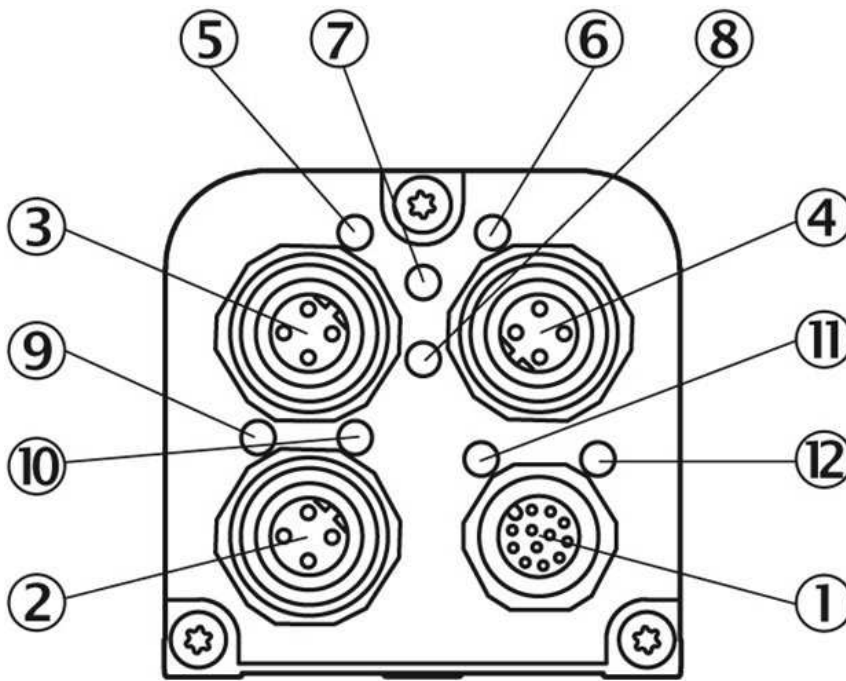
Shock load: EN 60068-2-27
Vibration load: IEC 60068-2-6
Ambient operating temperature ¹⁾: 0 °C ... +45 °C
Ambient storage temperature ²⁾: -20 °C ... +70 °C

^{1) 2)} Relative humidity: 35 % ... 85 %, 95 % at operation

Dimensional drawing

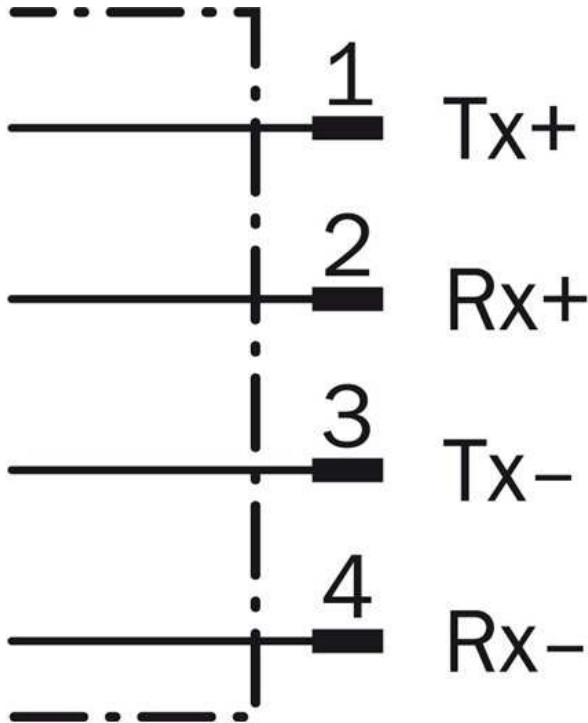


Connection type

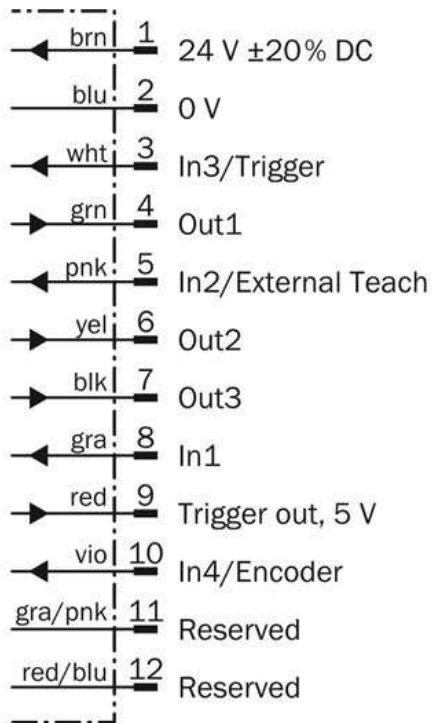


- |1| Power I/O: M12, 12-pin
- |2| EtherNet, socket M12, 4-pin
- |3| EtherNet X1: socket M12, 4-pin
- |4| EtherNet X2: socket M12, 4-pin
- |5| EtherCAT link/activity
- |6| EtherCAT link/activity
- |7| EtherCAT run indicator
- |8| EtherCAT error indicator
- |9| EtherNet data
- |10| Ethernet link
- |11| Function LED
- |12| Power on

Connection diagram Ethernet



Connection diagram M12, 12-pin



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