



IV3-G120

Compact model sensor amplifier



*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

Specifications

Model		IV3-G120
Tools	Available modes	Standard mode / Sorting mode
	Tool with standard mode	Learning, Outline, Color area *1, Area *2, Edge pixels, Color average *1, Brightness average *2, Width, Diameter, Edge presence, Pitch, OCR, Color prohibit *1, Brightness prohibit, Position adjustment, High-speed position adjustment (1-axis edge/2-axis edge), Blob count
	Number of tools	Total: 65 tools *3
Switch settings (programs)		128 programs (when using SD card) / 32 programs (when not using SD card)
Image history	Number of storable images	100 images *4
	Save conditions	Selectable between NG only, NG and OK near threshold *5, and All *4
Image data transfer	Transfer destination	Selectable between SD card, FTP server, and SFTP server
	Transfer format	Selectable between bmp, jpeg, iv3p, and txt, and file names can be modified
	Transfer conditions	Selectable between NG only, NG and OK near threshold *5, and All
Analysis information	RUN display	Tools list (Judgment results, degree of similarity, or degree of similarity bar display) *6
	RUN information	Switchable between OFF, histogram, processing time, count, and output monitor Histogram: Histogram, degree of similarity (Max., Min., Ave.), Number of OKs, Number of NGs Processing time: Processing time (latest, Max., Min., Ave.) Count: Trigger numbers, Number of OKs, Number of NGs, Trigger errors Output monitor: ON/OFF status by output *6
Other functions	Image capture function	Digital zoom (2×, 4×), HDR, High gain, Color filter *1, White balance *1, Brightness correction, AI capture
	Tool functions	Additional learning, Mask outline, Masking function, Color extraction/exclusion *1 Color histogram function *1, Monochrome histogram function *2, Scaling function
	Utilities	Failing sensor list, Failure hold, Test run, I/O monitor, Security settings (Two-factor password), Simulator *7, Additional FTP/SFTP Image Information, Multi-position adjustment, Multi-master image registration, High-speed program switching, Auto program switching, Auto setting backup/restore, Threshold changing in RUN
Indicators		PWR/ERR, OUT, TRIG, STATUS, LINK/ACT, SD
Input	Type	Switchable between non-voltage input and voltage input For no-voltage input: ON voltage 2 V or lower, OFF current 0.1 mA or lower, ON current 2 mA (short circuit) For voltage input: Maximum input rating 26.4 V, ON voltage 18 V or higher, OFF current 0.15 mA or lower, ON current 2 mA (for 24 V)
	Number of inputs	8 (IN1 to IN8)
	Function	IN1: External trigger, IN2 to IN8: Enable by assigning optional functions Assignable functions: Program switching, Clear error, External master image registration, SD card save cancel
Output	Type	Photo MOS relay output, N.O./N.C. Switchable Maximum rating 26.4 V 50 mA, residual voltage 1.5 V or less *8
	Number of outputs	8 (OUT1 to OUT8)

	Function	Enable by assigning the optional functions Assignable functions: Total judgment (OK/NG), Run, Busy, Position adjustment result, Judgment result of each tool, Result of the logical operation of each tool, Error, SD card error, Variety discrimination result, Master judgment result
Ethernet	Standard	1000BASE-T/100BASE-TX
	Connector	RJ-45 8pin connector
Network function		FTP client, SFTP client
Interface compatibility	Built-in Ethernet	EtherNet/IP™, PROFINET *9, TCP/IP non-procedure communication
	Communication unit	EtherCAT®, CC-Link, DeviceNet®, RS-232C, PROFIBUS *10
Expanded memory		SD card (SD/SDHC) *11
Ratings	Power voltage	24 VDC ±10% (including ripple)
	Current consumption	2.2 A or less (including a communication unit, without the AI Lighting unit, and including the output load) 3.4 A or less (including a communication unit, with the AI Lighting unit, and including the output load)
Environmental resistance	Ambient temperature	0 to +50°C 32 to 122°F (No freezing) *12
	Relative humidity	35 to 85%RH (No condensation)
Material		Main unit case: PC I/O terminal block: PA Ethernet connector: Copper alloy + Ni plating Main unit rear DIN rail fixing tab: POM Power connector: PA/POM Sensor head connector: Zinc + Ni plating/PA Main unit rear heat sink: Aluminum Nameplate: PC
Weight		Approx. 300 g 10.59 oz

*1 Color type only.

*2 Monochrome type only.

*3 Tools can be installed by programs. This is the number of detection tools and position adjustment tools. Up to 64 detection tools can be set. The number of detection tools in Sorting mode are eight tools.

*4 Saves to the sensor amplifier's internal memory. The images saved to the sensor amplifier can be backed up to a USB memory stick inserted into the control panel (IV3-CP50) or to the PC where the software for the IV3 Series (IV3-H1) is being used.

*5 Learning tool only.

*6 Can also be displayed on the control panel (IV3-CP50) or the software for the IV3 Series (IV3-H1).

*7 Usable on the software for the IV3 Series (IV3-H1).

*8 Make sure to keep a total of each output with 160 mA or less.

*9 Conformance Class B, Applicable protocol: LLDP, SNMP.

*10 When a communication unit (DL Series) is connected.

*11 Use only products recommended by KEYENCE.

*12 For situations where the operating ambient temperature will exceed 40°C 104°F, follow KEYENCE's specified heat dissipation measures to ensure the case temperature does not exceed the rated maximum temperature (65°C 149°F). Check the instruction manual for more information.

Dimensions

* Download CAD file or product manual for larger image/text and more detail.

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