

OC539721 CAMERA SENSORS • CAMERA SENSORS

Camera sensors are used to simultaneously check various properties of objects (e.g., completeness, dimensional accuracy, position, damages, labeling). This takes place independent of the component position virtually in real time. Camera sensors are image processing systems that combine image sensor and image processing computer with image processing software in a metal housing. Depending on the version, lens and illumination unit are also integrated in the housing or must be additionally mounted. The camera sensors are set using an intuitive software program. On the device, object-specific check programs can be stored that contain the respective feature checks. These programs can be activated depending on the object that is to be inspected. The rugged housing design makes possible use under harsh environmental conditions.



MECHANICAL FEATURES

Ambient temperature5 °C 50 °CDegree of protection (P)P67Housing coatingWith power coatingHousing materialAluminumMaterial of optical surfacePMMASensor height113 mmSensor height50 mmSensor width53 mmSensor width53 mmELECTRICAL FEATURES*Error image memory8For interchangeable lens (C-mount)+Input voltage at DC80 v 30 VIntegrated flash controller for external illumination+Masoutput current100 mANumber of digital inputs5Number of digital inputs5Number of digital outputs5Number of pins of the communication interface4Number of switching outputs5Property picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection4String ortput5String ortputs5String ortputs5St	MECHANICAL FEATURES	
Housing coatingWith powder coatingHousing materialAluminumMaterial of optical surfacePMMASensor height113 mmSensor length50 mmSensor width53 mmEtECTRICAL FEATURESError image memory8For interchangeable lens (C-mount)+Input voltage at DC8 V 30 VIntegrated flash controller for external illumination+Max. output current208 mANumber of digital inputs5Number of digital inputs5Number of pins of the communication interface4Number of pins of the communication interface4Number of pins of the communication+Reverse polarity protection+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Number of pins of therafee120Number of pins of the communication interface4Setting procedure5 WProperty picture systemBlack and whiteSetting procedureApplication softwareShort-circuit protection+Type of plug-in contact, communication interfaceFemale (socket)	Ambient temperature	5 °C 50 °C
Housing materialAluminumMaterial of optical surfacePMMASensor height113 mmSensor height50 mmSensor surdth50 mmSensor width53 mmELECTRICAL FEATURESError image memory8For interchangeable lens (C-mount)+Input voltage at DC8 V 30 VIntegrated flash controller for external illumination+Max. output current100 mAMax. output current208 mANumber of digital outputs5Number of digital outputs5Number of digital outputs5Number of spins of the communication interface4Number of surfulting outputs5 WOperating voltage5 WProperty pitcure systemBlack and whiteQR code and barcode identification+Reverse polarity protection4Setting procedureApplication sftwareType of ommunication interfaceMaplication sftwareType of ping rotection100 mASetting procedure5 WProperty pitcure systemBlack and whiteQR code and barcode identification+Setting procedureApplication sftwareShort-circuit protection+Type of ommunication interfaceConnector M12Type of opplug-in contact, communication interfaceFemale (socket)	Degree of protection (IP)	IP67
Naterial of optical surfacePMMASensor height113 mmSensor length50 mmSensor width53 mmELECTRICAL FEATURESError image memory8For interchangeable lens (C-mount)+Input voltage at DC8 V 30 VIntegrated flash controller for external illumination+Max. output current00 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins12Number of soft the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protectionMay Connector M12Type of electrical connectionFemale (socket)	Housing coating	With powder coating
Sensor height113 mmSensor length50 mmSensor width53 mmELECTRICAL FEATURESError image memory8For interchangeable lens (C-mount)+Input voltage at DC8V 30 VIntegrated flash controller for external illumination+Max. output current000 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins12Number of pins of the communication interface44Operating voltage18 V 30 VPower consumption5Operating voltage18 V 30 VPower consumption5Qie code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareType of communication interfaceConnector M12Type of plug-in contact, communication interfaceFemale (socket)	Housing material	Aluminum
Sensor length50 mmSensor width53 mmELECTRICAL FEATURESError image memory8For interchangeable lens (C-mount)+Input voltage at DC8 V 30 VIntegrated flash controller for external illumination+Max. output current100 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins of the communication interface4Number of pins of the communication interface18 V 30 VPower consumption5Operating voltage18 V 30 VPower consumption5Property picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of electrical connectionM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Material of optical surface	PMMA
Sensor with53 mmELECTRICAL FEATURESError image memory8For interchangeable lens (C-mount)+Input voltage at DC8V 30 VIntegrated flash controller for external illumination+Max. output current100 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins of the communication interface4Number of pins of the communication interface4Number of switching outputs5Operating voltage18K 30 VProperty picture systemBlack and whiteQued and barcode identification+Reverse polarity protection4Stort-circuit protection4Type of electrical connection interfaceConnector M12Type of electrical connectionFinale (socket)	Sensor height	113 mm
ELECTRICAL FEATURESError image memory8For interchangeable lens (C-mount)+Input voltage at DC8 V 30 VIntegrated flash controller for external illumination+Max. output current100 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of spins12Number of pins12Number of switching outputs5Operating voltage8 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceFornector M12Type of plug-in contact, communication interfaceFemale (socket)	Sensor length	50 mm
Error image memory8For interchangeable lens (C-mount)+Input voltage at DC8 V 30 VIntegrated flash controller for external illumination+Max. output current100 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of spins12Number of pins Oth communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5Property picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Stort-circuit protection+Type of communication interfaceConnector M12Type of plug-in contact, communication interfaceFemale (socket)	Sensor width	53 mm
For interchangeable lens (C-mount)+Input voltage at DC8 V 30 VIntegrated flash controller for external illumination+Max. output current100 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage5 WPower consumption5 WPower consumption5 WQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceM12-connectorType of plug-in contact, communication interfaceFemale (socket)	ELECTRICAL FEATURES	
Input voltage at DC8 V 30 VIntegrated flash controller for external illumination+Max. output current100 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of electrical connectionFemale (socket)	Error image memory	8
Integrated flash controller for external illumination+Max. output current100 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceM12-connectorType of plug-in contact, communication interfaceFemale (socket)	For interchangeable lens (C-mount)	+
Max. output current100 mAMeasuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of digital outputs12Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Input voltage at DC	8 V 30 V
Measuring time for high speed25 fpsNo-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection4Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Integrated flash controller for external illumination	+
No-load current208 mANumber of digital inputs5Number of digital outputs5Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection4Short-circuit protection+Short-circuit protection+Type of communication interfaceConnector M12Type of plug-in contact, communication interfaceFemale (socket)	Max. output current	100 mA
Number of digital inputs5Number of digital outputs5Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protectionApplication softwareShort-circuit protection+Short-circuit protectionConnector M12Type of communication interfaceFemale (socket)	Measuring time for high speed	25 fps
Number of digital outputs5Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of electrical connectionFemale (socket)	No-load current	208 mA
Number of pins12Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection4Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of plug-in contact, communication interfaceFemale (socket)	Number of digital inputs	5
Number of pins of the communication interface4Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of plug-in contact, communication interfaceFemale (socket)	Number of digital outputs	5
Number of switching outputs5Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection4Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of plug-in contact, communication interfaceFemale (socket)	Number of pins	12
Operating voltage18 V 30 VPower consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of plug-in contact, communication interfaceFemale (socket)	Number of pins of the communication interface	4
Power consumption5 WProperty picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of plug-in contact, communication interfaceFemale (socket)	Number of switching outputs	5
Property picture systemBlack and whiteQR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of electrical connectionM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Operating voltage	18 V 30 V
QR code and barcode identification+Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of electrical connectionM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Power consumption	5 W
Reverse polarity protection+Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of electrical connectionM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Property picture system	Black and white
Setting procedureApplication softwareShort-circuit protection+Type of communication interfaceConnector M12Type of electrical connectionM12-connectorType of plug-in contact, communication interfaceFemale (socket)	QR code and barcode identification	+
Short-circuit protection+Type of communication interfaceConnector M12Type of electrical connectionM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Reverse polarity protection	+
Type of communication interfaceConnector M12Type of electrical connectionM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Setting procedure	Application software
Type of electrical connectionM12-connectorType of plug-in contact, communication interfaceFemale (socket)	Short-circuit protection	+
Type of plug-in contact, communication interface Female (socket)	Type of communication interface	Connector M12
	Type of electrical connection	M12-connector
Type of switching function Programmable/configurable	Type of plug-in contact, communication interface	Female (socket)
	Type of switching function	Programmable/configurable

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ELECTRICAL FEATURES

Type of switching output	PNP
With communication interface, Ethernet	+
With communication interface, RS-232	•
With communication interface, RS-485	•
With Ethernet/IP	+
With Profinet	-
With RS485	-

OPTICAL FEATURES

Resolution	1280x960
Focal distance	Variable
Image recorder	CCD(1/3")
Measuring time for high resolution	12 fps
Testing and sorting	+
Dimensional accuracy	+
Text identification (OCR)	+
Pick and place	+
Object evaluation regardless of position	+
Part location on contours	+
Part location on edges	+
Part location on circle	+
Part location on text line	+
Geometry - distance	+
Geometry - circle	+
Geometry - angle	+
Geometry - count edges	+
Geometry - point position	+
Feature comparison, count contour points	+
Feature comparison, contour comparison	+
Feature comparison, brightness	+
Feature comparison, contrast	+
Feature comparison, area size	+
Feature comparison, count areas	+
Feature comparison, pattern comparison	+
Geometry of edge contour	-

OTHER FEATURES

Air humidity	0 90% noncondensing
Shock resistance in acc. with EN 60068-2-27	+
Vibration resistance in acc. with IEC 60068-2-6 / IEC 60068-2-64	+

Other

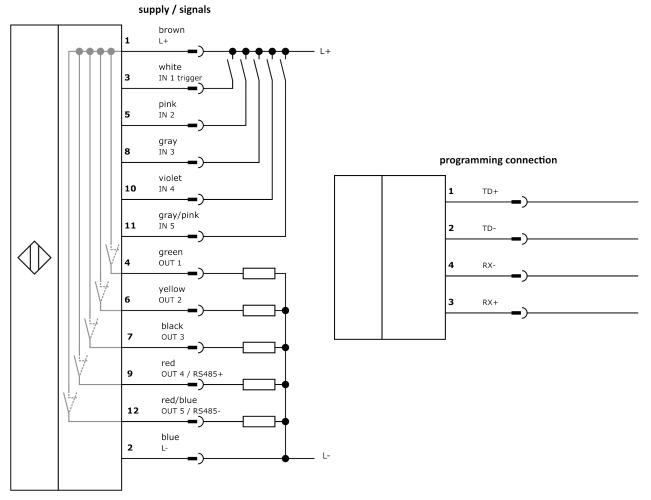
Packaging dimensions	140mm x 150mm x 200mm
Shipping weight	0.56kg
Tariff code	90314990



Classification

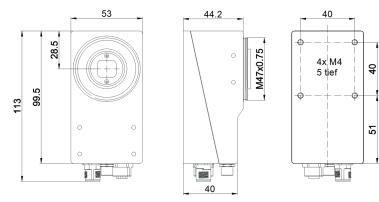
classification	
ipf product group	715
eClass 8.0	27310201
eClass 9.0	27310201
eClass 9.1	27310201
ETIM-5.0	EC001511
ETIM-6.0	EC001511
ETIM-7.0	EC001511

Connection



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Dimensional drawing



Installation



Mounting / installation may only be carried out by a qualified electrician!



Software

Please download the software or driver required for operating your new device on our homepage: www.ipf.de

Safety warnings

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information.

Never use these devices in applications where the safety of a person depends on their functionality.

LED lighting systems can generate intensive UV radiation, which can damage your eyes in case of improper use. The manufacturer cannot be held responsible for damages that result from improper use or connection.