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PICTOR[®] MxxE Sensors– Data Sheet

The smart cameras PICTOR[®] M48E, respectively M48EC and PICTOR[®] M58E (M58EC respectively) feature a small, handy size and an extensive functionality. PICTOR[®] MxxE smart cameras are operated via the graphical user interface VCWin or the standardized remote code VICOREM.

Common Data – all Pictor MxxE Smart Cameras	
Processor	TI-DSP 400 MHz, 3200 MIPS
Memory	32 MB-RAM, 3 MB Flash
Video out	no
Data interface	Ethernet (max. 16 connections), RS232 (up to 115 kbaud/s)
Process interface	each 4 I/O, 24 VCD, opto-decoupled
Fast TTL Trigger	In/Out, switching time < 0,5 μ s
Objective connection	C-Mount
Power supply	12 ... 24 VCD, max 130 mA
Weight	260 g
Dimensions	91 x 50 x 45 mm ³
Grade of protection	IP 50
Operating temperature	0 ... 45 °C
Air humidity	max. 80 %, not condensing
Analog-digital converter	10 bit

Specific Data for Pictor MxxE Smart Cameras				
Model	Pictor M48/E	Pictor M48/EC	Pictor M58/E	Pictor M58/EC
Sensor	1/3" Sony CCD, grayscale, progressive scan	1/3" Sony CCD, color , progressive scan	1/3" Sony CCD, grayscale, progressive scan	1/3" Sony CCD, color , progressive scan

Pixel	640 x 480	640 x 480	1024 x 768	1024 x 768
Bildfrequenz	32 Hz	32 Hz	16 Hz	16 Hz
Shutter	33 μ s ... 2s	33 μ s ... 2s	46 μ s ... 2s	46 μ s ... 2s

PICTOR® – Functionality Overview

Command categories

The following overview contains the available commands available for PICTOR sorted by category. Using VCWin you can compose your needed program.

Image commands

Aquisition of images and associated tasks

- Videomode
- Grab image
- Image preprocessing
- Delete image
- Asynchronous flash
- Configure shutter

Locate commands

Determine and test the characteristics of the test objects comparing them with nominal values

- Locate point
- Locate line
- Locate circle
- Blob analysis
- Search / save pattern
- Locate contour
- Count pixels
- Test color
- Inspect surface
- Test gray value
- Brightness offset
- Brightness percentage
- Angular position
- Focus
- Locate edges on circle
- Transition at line
- Set character set
- Read character
- Data Matrix Code
- Teach in objects
- Search and identify object

Evaluation commands

Create new geometrical elements, check, evaluate and send results

- Define point
- Best fit line
- Best fit circle
- Center of gravity of contour

Control commands

Control and manipulate the test programs, calibrate, send and edit directly

- Branch
- Port control
- Indexed branch
- Line I/O

- Extreme points of contour
- Contour distance
- Contour curvature analysis
- Contour comparison / contour angle
- Distance
- Angel
- Combine results
- Evaluate string
- Superimpose
- Evaluate results
- Port I/O
- Gateway field bus
- Robot communication
- Sending measuring values
- Send image
- Save image
- Stopwatch
- Wait
- Counter
- Save system time
- Calibrate
- Geometry sets
- Coordinate transformation
- Copy geometry variables
- Direct code input

Scope of Delivery

- Smart-camera with preinstalled image processing software
 - Cable, lenses, lighting and other components are not included and can be ordered separately

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