

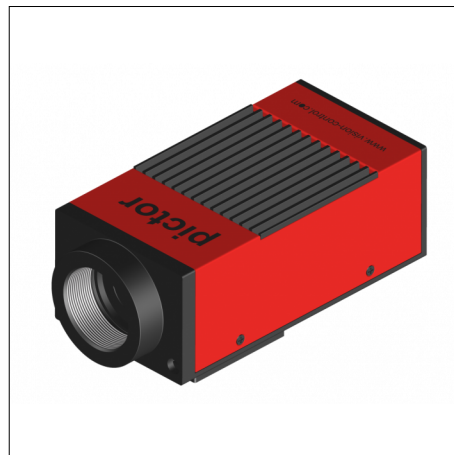
## Intelligent Cameras

pictor® M

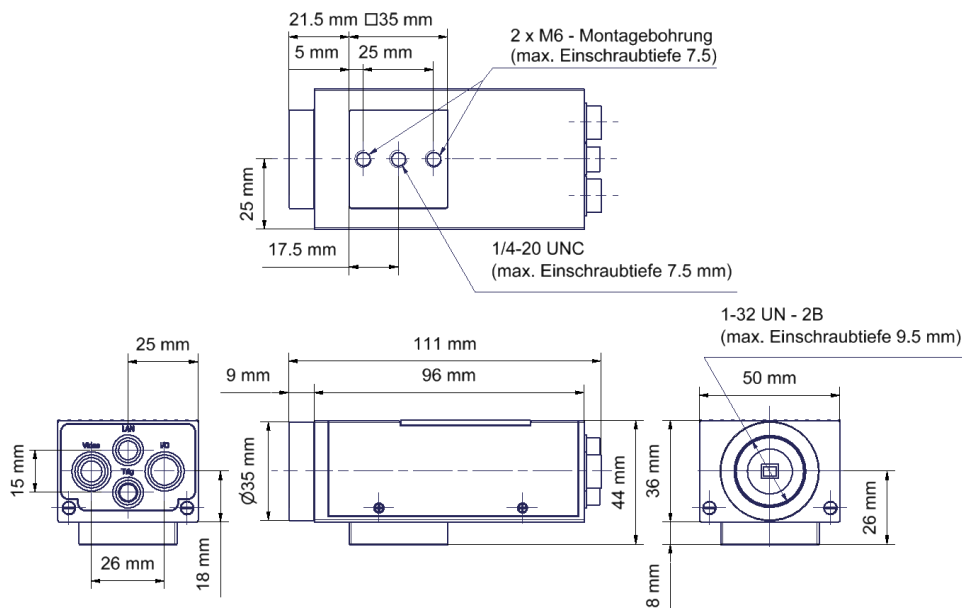
pictor® M18xx series

### Product features

- Stand-alone solution for industrial machine vision tasks
- Sensor, framegrabber, image processor, communication interfaces and software on board
- High End Machine Vision with 1 GHz DSP on industrial platform
- Extended storage capacity for large data packs
- Compact and robust construction
- Extremely rapid image acquisition and processing
- SVGA output permits the output of test images to a monitor with no run time delay
- A large number of powerful algorithms for industrial Machine Vision
- The common industrial protocols for communication with other systems
- Graphic programming under Windows based on dialogues



### Engineering drawing



### Definition

Cameras of the M18xx series united Ethernet and RS232 interface in one unit.

The M18xx series is available as with IR-cut filter or Broadband filter.

The cameras of the series have a image sensors with standard resolution 640 x 480 pixels (VGA) or high resolution.

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pictor® M

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### General technical data

	pictor® M18xx series
Data interface	RS232 up to 115.200 Baud max. 100 Mbit Ethernet
Digital I/O	4 inputs / 4 outputs @ 24 V, outputs 4 x 500 mA
Trigger	In/Out, Switching time in the range of $\mu$
Video output	SVGA
Image display	Monochrome or pseudocolour from 3 x 8 bit RGB lookup table
Supply voltage	24 V +/-20 % DC, max. 300 mA
Electrical connections	I/O (DC In, PLC, 12-pin), V24 (6-pin), Trig (Trigger/Keypad, 6-pin), VGA Out (10-pin)
Dimensions	ca. 110 x 50 x 35 mm
Weight	ca. 400 g
Degree of protection	IP50
Operating temperature	0 .. 45 °C
Air humidity	max. 80 % not condensing
Lens mount	C-Mount

### Technical data

Name	pictor M1817/E	pictor M1821/E	pictor M1857/E	pictor M1857/E
Order no.	4-20-327	4-20-331	4-20-335	4-20-336
Sensor type	Sony ICX204 with HAD; microlens	Sony ICX274 with Super HAD; microlens	CMOSIS CMV300 IR cut filter	CMOSIS CMV300 broadband filter
Sensor technologie	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD	Progressive Scan CCD
Shutter type	Global Shutter	Global Shutter	Global Shutter	Global Shutter
Sensor size	1/3" 5.8 mm x 4.9 mm	1/1.8" 8.5 mm x 6.8 mm	1/3" 5.87 mm x 4.71 mm	1/3" 5.87 mm x 4.71 mm
Resolution	1024 x 768	1600 x 1200	640 x 480	640 x 480
Pixel size	4.65 $\mu$ m x 4.65 $\mu$ m	4.4 $\mu$ m x 4.4 $\mu$ m	7.4 $\mu$ m x 7.4 $\mu$ m	7.4 $\mu$ m x 7.4 $\mu$ m
Frame rate	20 fps	10 fps	312 fps	312 fps
Shutter (exposure time)	10 $\mu$ s ... 20 s, Auto Shutter	20 $\mu$ s ... 20 s, Auto Shutter	6 $\mu$ s ... 12 s, Auto Shutter	6 $\mu$ s ... 12 s, Auto Shutter
Power consumptione				
Processor	8000 MIPS, 1 GHz / Texas Instruments TMS320C64xx	8000 MIPS, 1 GHz / Texas Instruments TMS320C64xx	8000 MIPS, 1 GHz / Texas Instruments TMS320C64xx	8000 MIPS, 1 GHz / Texas Instruments TMS320C64xx
Image/ Data memory	64 MB SDRAM	64 MB SDRAM	64 MB SDRAM	64 MB SDRAM
Flash memory	4 MB Flash 512 MB User-ROM (SD-Card)	4 MB Flash 512 MB User-ROM (SD-Card)	4 MB Flash 512 MB User-ROM (SD-Card)	4 MB Flash 512 MB User-ROM (SD-Card)

### Notes

pictor® M1821E has a resolution of 1600 x of 1200 pixels, which does not scaled down at the SVGA output. The attached TFT monitor must control the resolution of 1600 x of 1200 pixels. Otherwise none or an incorrect picture is indicated. Alternatively a CRT monitor can be used.

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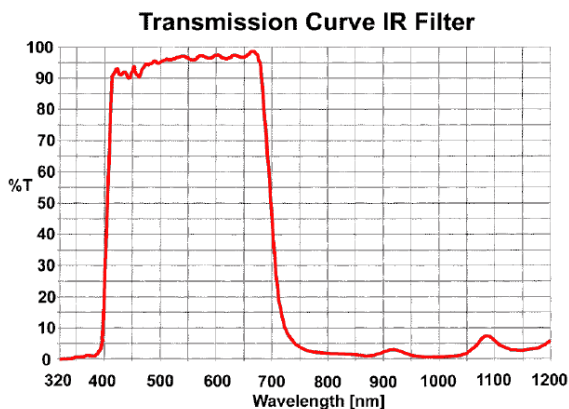
pictor® M18xx series

## Accessories

Order no.	Name	Description
4-40-223	PLC/power cable, 5m	accessory equipment for pictor M1xxx and Mxx/E
4-40-224	PLC/power cable, 10m	accessory equipment for pictor M1xxx and Mxx/E
4-40-225	PLC/power cable, 25m	accessory equipment for pictor M1xxx and Mxx/E
4-40-203	Ethernet cable, 5m	accessory equipment for pictor M1xxx/E and Mxx/E
4-40-204	Ethernet cable, 10m	accessory equipment for pictor M1xxx/E and Mxx/E
4-40-240	SVGA cable for monitor, 5m	accessory equipment for pictor M1xxx
4-40-241	SVGA cable for monitor, 10m	accessory equipment for pictor M1xxx
4-40-242	SVGA cable for monitor, 25m	accessory equipment for pictor M1xxx
4-40-181	V24 serial cable C4, 5m	accessory equipment for pictor M16xx/M18xx and Mxx/E
4-40-182	V24 serial cable C4, 10m	accessory equipment for pictor M16xx/M18xx and Mxx/E
4-40-183	V24 serial cable C4, 25m	accessory equipment for pictor M16xx/M18xx and Mxx/E
4-40-200	Trigger cable, 5m	accessory equipment for pictor M1xxx and Mxx/E
4-40-201	Trigger cable, 10m	accessory equipment for pictor M1xxx and Mxx/E
4-40-202	Trigger cable, 25m	accessory equipment for pictor M1xxx and Mxx/E
4-20-207	Key-Pad for pictor M16xx/18xx	incl. cable, 5m using the monitor menu
4-40-209	power supply, 24V DC/0.63 A	accessory equipment for pictor M1xxx and Mxx/E

## Technical diagram

IR-cut filter



Broadbad filter

