Model Number

ODT-MAC400-ND-RD

Stationary high-speed read device for code speeds up to 20 m/s and 60 fps, Data Matrix ECC 200 Code, straight line of sight, VGA resolution, Ethernet, RS 232

Features

- Up to 60 readings per second
- Movement speeds of up to 20 m/s
- Omni-directional reading
- Evaluation of up to 256 gray values with adaptive gray value threshold
- VGA output
- Simple focussing via laser pointers
- Integrated error image memory

Function

The stationary reader is a reading system for the recognition of data matrix codes.

With a powerful signal processor and optimized decoding algorithms, the device delivers delivers extremely high reading speeds.

The configuration is easy and comfortable via the standard Ethernet interface using a standard web browser or via serial port.

The device is supported by an integrated laser pointer and the VGA video output. In addition, the device has an integrated error image memory.

Typical operative range of stationary readers are:
- Document handling
- Printing machines
- Identification in packaging and warehousing technology
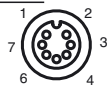- Detection of PCBs

Indicating / Operating means
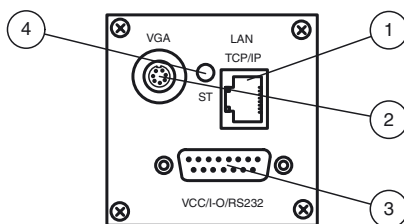
1	Socket LAN	
2	Socket VGA	
3	Plug 24VDC + IO	
4	Status LED	yellow/red/green

Electrical connection

VGA

Pin	Signal
1	OUT VSYNC
2	GND
3	OUT R
4	OUT G
5	GND
6	OUT B
7	OUT HSYNC

LAN

Pin	Signal
1	TX+ Ethernet
2	TX- Ethernet
3	RX+ Ethernet
4	NC
5	NC
6	RX- Ethernet
7	NC
8	NC

VCC/I-O/RS232
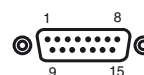
Pin	Signal	Pin	Signal
1	GND	9	OUT 1
2	GND	10	OUT 2
3	GND IO	11	IN 1
4	+UB	12	NC
5	+UB	13	TX RS232
6	+UB IO	14	RX RS232
7	NC	15	IN 3
8	IN 2		

Technical data

General specifications

Light type		Integrated LED lightning (red)
Laser nominal ratings		
Note		LASER LIGHT , DO NOT STARE INTO BEAM
Laser class		2
Wave length		650 nm
Beam divergence		< 1.5 mrad
Maximum optical power output		0.5 mW
Symbologies		Data Matrix ECC 200
Read distance		60 mm
Depth of focus		± 5 mm
Reading field		30 mm x 20 mm
Modul size		≥ 0.2 mm
Sensor principle		Camera system
Evaluation frequency		max. 60 Hz
Target velocity		triggered ≤ 20 m/s
Data Matrix		
Symbol size		rectangular up to 48 x 48 modules rectangular up to 16 x 48 modules
Data format		ASCII, C40, Text, X12, Edifact, Base 256 , all according to ISO 646
Data capacity		348 numerical, 259 ASCII, 172 Byte
Orientation		omnidirectional

Nominal ratings

Camera		
Type		CMOS , Global shutter
Number of pixels		752 x 480 pixels
Gray scale		256
Image recording		real-time , Program-controlled or triggered externally

Indicators/operating means

LED indicator		for good/poor reading

Electrical specifications

Operating voltage	U_B	24 V DC ± 15% , PELV
No-load supply current	I_0	max. 250 mA
Power consumption	P_0	6 W

Interface

Physical		RS 232
Protocol		ASCII
Transfer rate		9600 ... 115200 Bit/s
Cable length		max. 30 m

Interface 1

Interface type		Ethernet
Protocol		TCP/IP
Transfer rate		100 MBit/s
Cable length		max. 30 m

Input

Input voltage		to be applied externally 24 V ± 15% PELV
Number/Type		1 trigger input optional up to 4 inputs
Input current		approx. 5 mA at 24 V DC
Cable length		max. 30 m

Output

Number/Type		2 electronic outputs, PNP , optically decoupled optional up to 4 outputs
Switching voltage		to be applied externally 24 V ± 15 % PELV
Switching current		100 mA each output
Cable length		max. 30 m

Output 1

Output type		Video output, RGB (75 Ohm), 1 Vpp
Resolution		VGA, 800 x 600 pixels

Ambient conditions

Ambient temperature		0 ... 45 °C (32 ... 113 °F)
Storage temperature		-20 ... 60 °C (-4 ... 140 °F)

Mechanical specifications

Protection degree		IP20
Connection		Video: 7-pin socket Power supply/interfaces/inputs and outputs: Sub-D 15-pin UNC LAN : RJ-45 socket, 8-pin
Material		
Housing		powder coated diecast zinc
Mass		approx. 730 g

Compliance with standards and directives

Directive conformity		

Accessories

ODZ-MAC-CAB-VIDEO
Video cable VGA

ODZ-MAC-CAB-24V-R2-2M
Connecting cable for power
supply/RS 232

ODZ-MAC-CAB-15POL-2,5M-FEMALE
Connecting cable Sub-D jack, 15-pin

ODZ-MAC-CAB-15POL-5M-FEMALE
Connecting cable Sub-D jack, 15-pin

ODZ-TRIGGERBOX-SK
Trigger box for fixed mounted readers

V45-G-10M-V45-G
Network cable RJ-45, Category 5

ODZ-MAC-PWR-24V
24 V DC power supply

Other suitable accessories can be found at
www.pepperl-fuchs.com

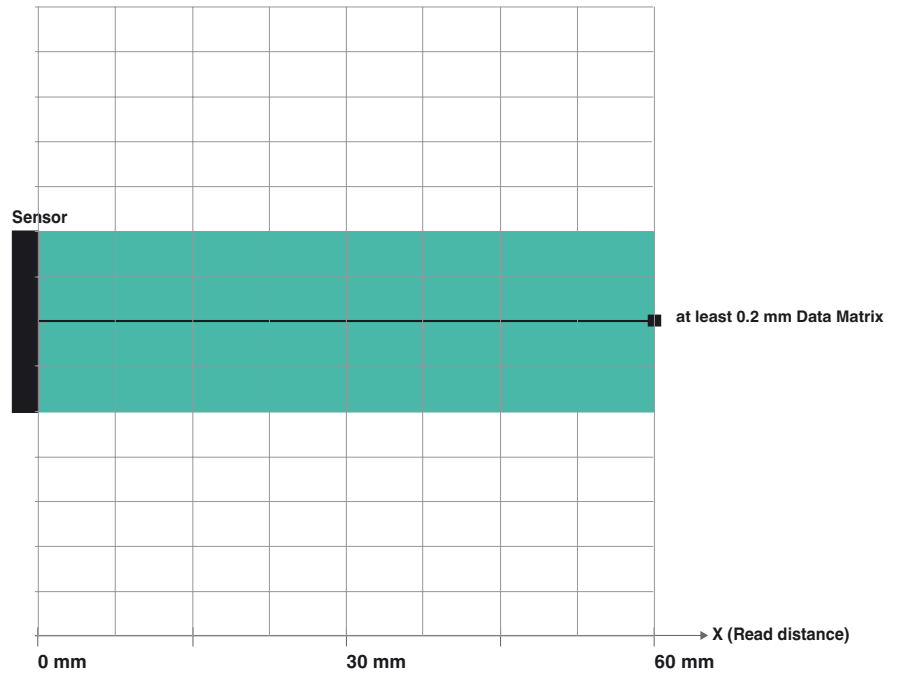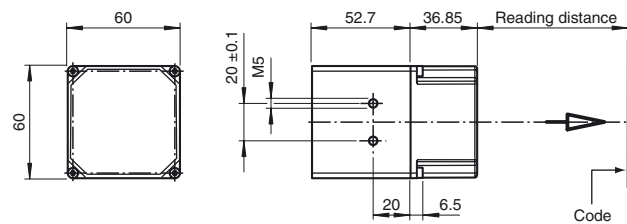| EMC Directive 2004/108/EC	EN 61326-1 , EN 61000-6-4
Standard conformity	
Noise immunity	EN 61326-1
Emitted interference	EN 61000-6-4
Protection degree	EN 60529
Laser class	IEC 60825-1:2007 Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007

Read range for various symbologies

Sensor

at least 0.2 mm Data Matrix

X (Read distance)

0 mm   30 mm   60 mm

Dimensions

60

60

20 ±0.1

M5

52.7   36.85   Reading distance

20   6.5

Code

Laser notice laser class 2

- The irradiation can lead to irritation especially in a dark environment. Do not point at people!
- Caution: Do not look into the beam!
- Maintenance and repairs should only be carried out by authorized service personnel!
- Attach the device so that the warning is clearly visible and readable.
- Caution – Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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