

ACR 300i

Vision Sensor



50136796 14.07.2017-00
www.leuze.com/en/usa

TECHNICAL DATA

Electrical data	
Operating voltage U_B	24 V DC, -25 % / +10 %
Residual ripple	< 5 Vss
Current consumption (no I/O)	≤ 200 mA
All inputs	2 pcs, PNP / NPN High > $U_B - 1 V$, Low < 3 V
Input resistance	> 20 kOhm
Encoder input	High > 4 V
Outputs	4 pcs, PNP / NPN
Inputs / Outputs selectable	4 pcs
Maximum output current (per output)	50 mA, Ejector (Pin 12 / RDBU) 100 mA
Short-circuit protection (all outputs)	Yes
Inductive load	Typ.: Relais 17 K / 2 H, Pneumatic valve 1.4 K / 190 mH
Reverse-polarity protection, U_B	Yes
Interfaces VISOR®	Ethernet (LAN), RS422 / RS232, depends on model
Power-on Delay	Typ. 13 s after Power on
Optical data	
Number of pixels, chip size, pixel size	ACR 300i...:1280 (H) x 1024 (V), 1/1.8", 5,3 μm square
Technology	CMOS (mono / colour)
Integrated scan illumination	8 LEDs (except C-Mount) White, Red (620 nm), IR (850 nm)
Integrated lens, focal length	12 mm, focal position adjustable
Lens (adjustable to infinity)	ACR 300i, 12 mm
Min. scan distance [mm]	30
Min. field of view X x Y [mm]	16 x 13
Mechanical data	
Length x width x height	65 mm x 45 mm x 45 mm (without plug)
Weight	Approx.. 160 g
Vibration / shock	EN 60947-5-2
Ambient operating temperature	0 °C 50 °C (80 % air humidity, noncondensing)
Storage temperature	-20 °C ... 60 °C (80 % air humidity, noncondensing)
Enclosure rating	IP 65/67
Plug connection	24V DC and I/O: M12 12-pin; LAN: M12 4-pin; Data: M12 5-pin
Housing material	Aluminium, plastic

SAFETY INSTRUCTIONS

Read operating instructions before start-up. Connection, assembly, setting and start-up only by trained personnel. No safety component according to EU machinery directives (not suited for the protection of personnel). Not for outdoor use. Adapters providing field wiring means are available from the manufacturer. Refer to manufacturers information.
The device shall be supplied from a class 2 rated power supply.

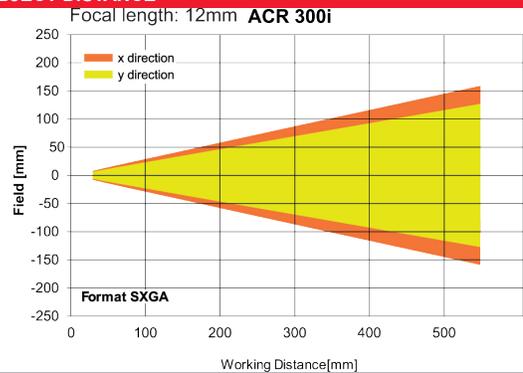
INTENDED USE

Sensor is used for the optical, non-contact detection of objects.

COMPONENTS SUPPLIED

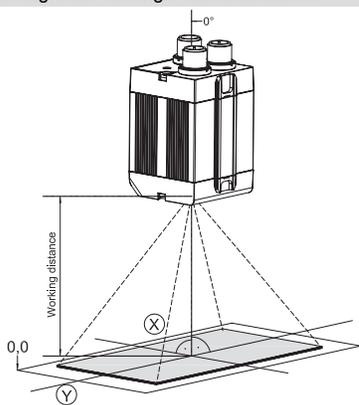
ACR 300i Vision Sensor, CD with PC software, installation guide, mounting clamp (MB-2 300), allen key, screwdriver, and protective cap for Ethernet plug.

FIELD OF VIEW / OBJECT DISTANCE

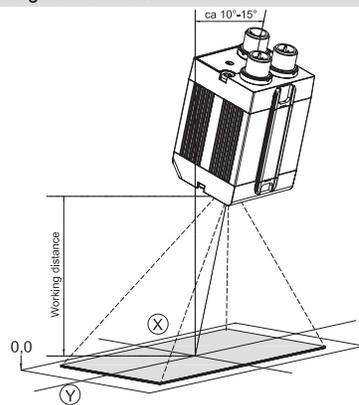


ALIGNMENT

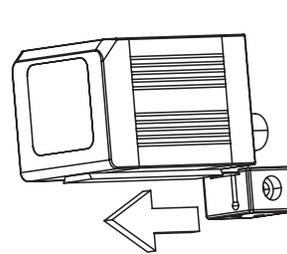
Arrangement for bright-field illumination



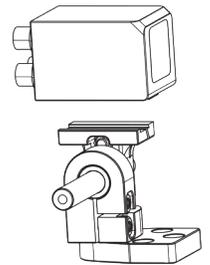
Arrangement for dark-field illumination



MECHANICAL INSTALLATION

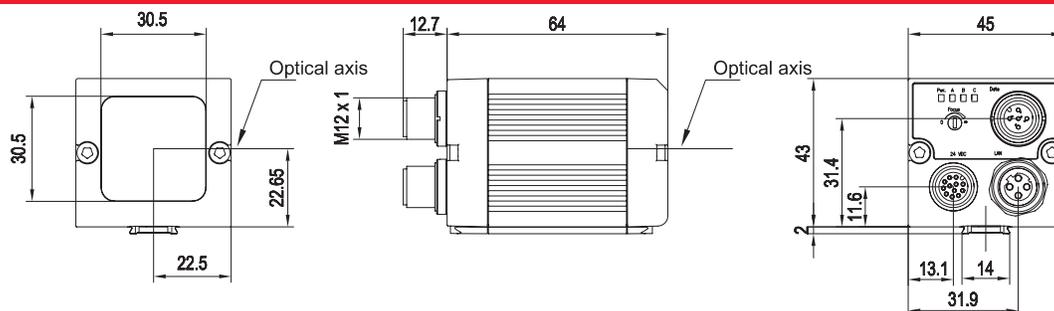


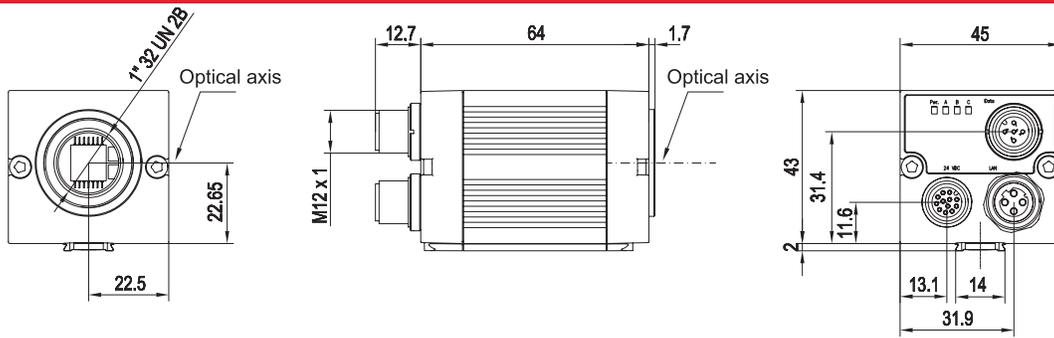
MB-2 300 (50136487)
(Content of delivery)



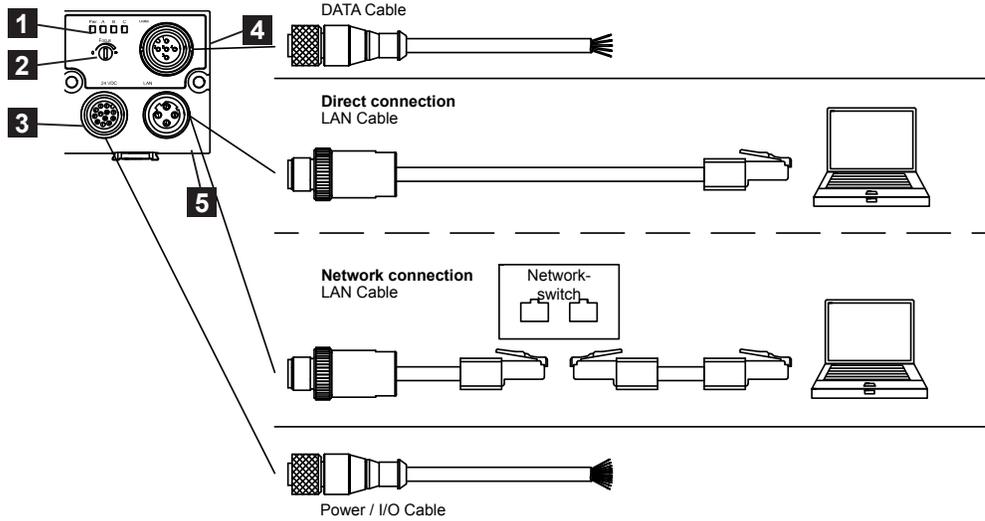
MB-1 300
(50136486)

VISION-SENSOR ACR 300i - ACR...





ELECTRICAL CONNECTION



1 LED DISPLAY	
Pwr	Green (Operating voltage)
A	Yellow (Result 1)
B	Yellow (Result 2)
C	Yellow (Result 3)

2 FOCUSING SCREW	
	Focus
	Clockwise = higher distance
	Counter Clockwise = lower distance

3 I/O CONNECTION SOCKET M12						
	PIN	COL.	USE	PIN	COL.	USE
<p>A - coded</p>	1	BN	+ Ub (24V DC)	7 ²	BK	IN / OUT, LED B ⁴
	2	BU	GND	8 ²	GY	IN / OUT, LED C ⁴
	3	WH	IN (external trigger)	9	RD	OUT (ext. illumination)
	4	GN	READY ¹	10	VT	IN (adv.: encoder A+)
	5 ²	PK	IN / OUT (advanced: encoder B+)	11	GYPK	VALID ³
	6 ²	YE	IN / OUT	12	RDBU	OUT (ejector, max. 100mA), LED A ⁴

*1 Ready: Ready for next ext. trigger.
 *2 Switchable input - output
 *3 VALID: shows available results
 *4 All LEDs are set without taking into account any timing function (e.g. trigger delay). For shielded cables use shield.

4 DATA (RS422) M12 CONNECTION SOCKET				
	PIN	COL.	USE	
			RS422	RS232
<p>A - coded</p>	1	BN	RxD+	Rx
	2	WH	RxD-	NC
	3	BU	TxD+	NC
	4	BL	TxD-	Tx
	5	GR	GND	GND

5 LAN M12 CONNECTION SOCKET		
	PIN	USE
<p>D - coded</p>	1	TxD+
	2	RxD+
	3	TxD-
	4	RxD-

