

SCAN

Measuring Light Curtains



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Optoelectronic measurement technology does not have to be complicated. Consisting of a transmitter and a receiver, SCAN light curtains operate much like a light barrier. Infrared beams projected from the transmitter to the receiver produce a grid-type measurement field. The status of the individual light axes ("light path unobstructed" or "light path interrupted") is stored in the receiver. This data is then transmitted via serial interface and an PLC driver program directly into the working memory of the connected PLC control, where it can be further processed depending on the requirements of the application. For performing simple detection tasks, the presence of objects in the measurement field is indicated by means of a pnp output.

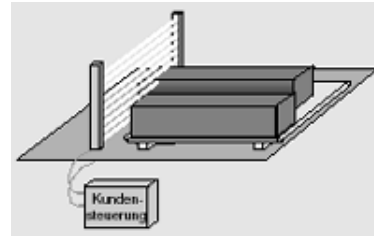
Advantages

- Measurement field up to 6 m wide, from 900 mm to 3000 mm high
- 30 mm resolution at every position of the measurement field
- Can be connected directly to the PLC control (e.g. Siemens S7-200)
- pnp switch output for measurement field status
- Simple connection due to M12 connector
- Possible to link measurement fields by cascading devices
- Contamination and error signal output to the PLC
- Compact design (17 mm x 33 mm)

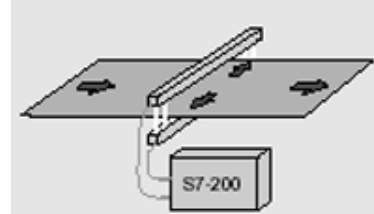
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Areas of application

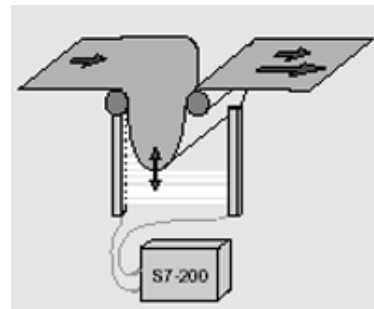
- Projection control



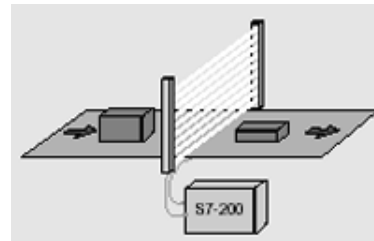
- Width measurement



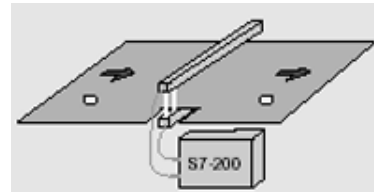
- Sagging control



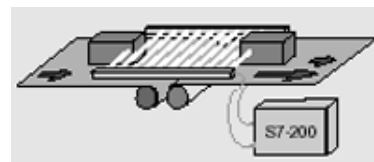
- Height measurement



- Hole Detection



- Interval or distance measurement



- Contour or form gauging



SCAN Function



Cascading

If measurement is to take place in different geometric planes, SCAN master and slave units can be switched in succession via a plug-in connector cable.

S7-200 Driver Program

The driver program, available as an accessory, captures the measurement data via Port 0 of the S7-200 control and deposits them in one of the two working buffers. When required driver programs for other PLC controls are available.

SCAN as a Stand-alone Unit

SCAN can independently perform simple detection tasks, such as controlling projection or the presence of an object, with its pnp output "measurement field status".

Plug and scan

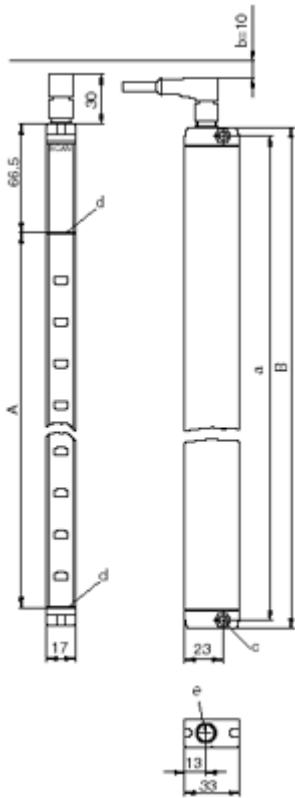
Convenient M12 plug-in connections and the pre-installed driver program allow for a quick start-up. Plug in SCAN, load the driver program, and get started!



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Dimensional Drawings

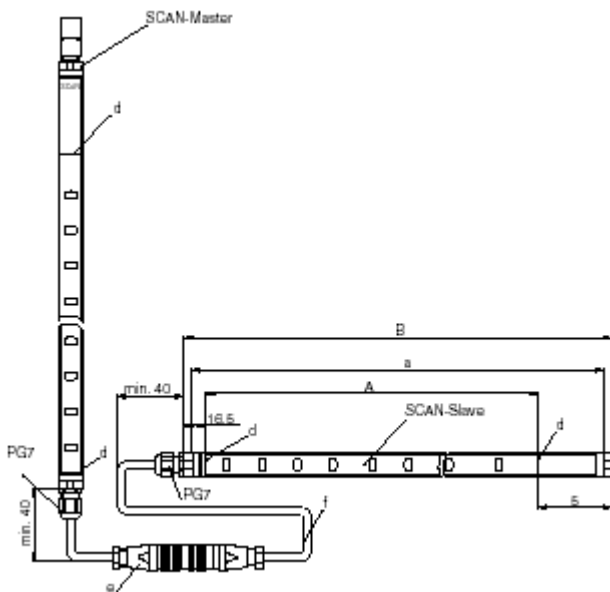
Dimensions, weights and sampling rates of the SCAN light curtains



Device Type	Measurement height = Mea. A (mm) *	Mea. B [mm]	Mounting measurement a [mm]	Weight [kg]	Time/Scan [ms]
S30-150	170,5	248,5	238,5	0,156	7,2
S30-225	245,5	323,5	313,5	0,198	10,8
S30-300	320,5	398,5	388,5	0,24	14,6
S30-450	470,5	548,5	538,5	0,324	10,8
S30-600	620,5	698,5	688,5	0,408	14,4
S30-750	770,5	848,5	838,5	0,492	18
S30-900	920,5	998,5	988,5	0,576	14,4
S30-1050	1070,5	1148,5	1138,5	0,66	16,8
S30-1200	1220,5	1298,5	1288,5	0,745	19,2
S30-1350	1370,5	1448,5	1438,5	0,83	21,6
S30-1500	1520,5	1598,5	1588,5	0,913	24
S30-1650	1670,5	1748,5	1738,5	0,997	26,4
S30-1800	1820,5	1898,5	1888,5	1,08	28,8
S30-2100	2120,5	2198,5	2188,5	1,2	32,4
S30-2400	2420,5	2498,5	2488,5	1,36	38,4
S30-2700	2720,5	2798,5	2788,5	1,52	43,2
S30-3000	3020,5	3098,5	3088,5	1,68	48

- a) Mounting measurement
- b) Clearance for removing the connector
- c) Screws M4 or M5
- d) Border of protective field

Dimensioned drawing of SCAN "cascading model"



Device Type	Slave Mea. A	Slave Mea. B
S30-150	180	248,5
S30-225	225	323,5
S30-300	330	398,5
S30-450	480	548,5
S30-600	630	698,5
S30-750	780	848,5
S30-900	930	998,5
S30-1050	1080	1148,5
S30-1200	1230	1298,5
S30-1350	1380	1448,5
S30-1500	1530	1598,5
S30-1650	1680	1748,5
S30-1800	1830	1898,5

The overall measurement time for master and slave devices consists of the sum of the partial scan times.