

ZLM1-B1451A10

ZoneControl

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
ZLM1-B1451A10	1052126

Other models and accessories → www.sick.com/ZoneControl

Detailed technical data

Features

Actuator	Pneumatic, valve on board
Max. number of sensors	Approx. 30 ¹⁾ Approx. 50 ²⁾
Logical principle of operation	Single accumulation
Type of Release	Single release, block (slug) release
Dimensions (W x H x D)	31 mm x 110 mm x 83 mm
Special applications	ZoneControl

¹⁾ When powerd from the end of the IR daisy chain.

²⁾ When powerd from center of the IR daisy chain.

Mechanics/electronics

Supply voltage U_B	$\geq 21.6 \text{ V DC}$ ¹⁾
Ripple	$< 5 \text{ V}_{pp}$ ²⁾
Current consumption	60 mA ³⁾
Switching output	PNP
Signal voltage PNP HIGH/LOW	Approx. $V_S - 0.5 \text{ V} / 0 \text{ V}$
Output current $I_{max.}$	$\leq 100 \text{ mA}$
Response time	2.5 ms
Switching frequency	200 Hz
Connection type	Cable with female connector, M12 push-on, 4-pin, 500 mm ⁴⁾

¹⁾ Limit values.

²⁾ May not fall below or exceed U_V tolerances.

³⁾ Without load and valve deenergized.

⁴⁾ Do not bend below 0 °C.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ D = outputs overcurrent and short-circuit protected.

⁸⁾ Reference voltage: 50 V DC.

⁹⁾ Other valve types available on request.

Connection type for daisy chain	Cable with push-on connector M12, 4-pin 1.2 m
Cable material	Plastic, PVC
Circuit protection	A ⁵⁾ C ⁶⁾ D ⁷⁾
Protection class	III ⁸⁾
Housing material	Plastic, ABS
Enclosure rating	IP40
Shock and vibration resistance	According to IEC 68
Ambient operating temperature	-10 °C ... +55 °C
Ambient temperature, storage	-40 °C ... +75 °C
Medium for valves	Compressed air or neutral gases filtered, non-lubricated or lubricated
Design solenoid valve	3/2-way valve ⁹⁾
Mode of operation solenoid valve	Air to Drive (NC)
Connection type solenoid valve	Compressed air 3/8 " diameter, control line 1/4 " diameter
Coil ratings	24 V DC 1 W
Air flow rate	40 NI/min
Ventilation capacity	40 NI/min
Operating pressure range	0 bar ... 4.5 bar
Response time solenoid valve	Partially open, 10 ms Open, 23 ms Close, 21 ms

¹⁾ Limit values.

²⁾ May not fall below or exceed U_y tolerances.

³⁾ Without load and valve deenergized.

⁴⁾ Do not bend below 0 °C.

⁵⁾ A = V_S connections reverse-polarity protected.

⁶⁾ C = interference suppression.

⁷⁾ D = outputs overcurrent and short-circuit protected.

⁸⁾ Reference voltage: 50 V DC.

⁹⁾ Other valve types available on request.

Pneumatic

Coil ratings	24 V DC 1 W
Medium for valves	Compressed air or neutral gases filtered, non-lubricated or lubricated
Design solenoid valve	3/2-way valve ¹⁾
Connection type solenoid valve	Compressed air 3/8 " diameter, control line 1/4 " diameter
Air flow rate	40 NI/min
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Operating pressure range	0 bar ... 4.5 bar
Response time solenoid valve	Partially open 10 ms Open 23 ms Close 21 ms

¹⁾ Other valve types available on request.

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528


The diagram illustrates the M12 connector wiring for the valve assembly. It shows two M12 connectors: an 'M12 female upstream' and an 'M12 male downstream'. The upstream connector has pins 1 (+V DC), 2 (NC), 3 (0 DC), and 4 (Output). The downstream connector has pins 1 (L+), 2 (M), 3 (E), and 4 (Vt). The wiring connects the upstream pins to the downstream pins: 1 to 1, 2 to 2, 3 to 3, and 4 to 4. The downstream pins are then connected to the valve assembly. The valve assembly has two sections: 'Release control' and 'Air supply'. The 'Release control' section has pins for 'Single release*' and 'Slug release'. The 'Air supply' section has pins for 'Valve' and 'Output to conveyor'. The 'Single release*' pin is connected to the 'Release in' pin of the valve assembly. The 'Slug release' pin is connected to the 'Logic out' pin of the valve assembly. The 'Air supply' pin is connected to the 'Valve' pin of the valve assembly. The 'Output to conveyor' pin is connected to the 'Output' pin of the valve assembly. A note at the bottom states: '*Single accumulation models only'.

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- ① ZLM series connection, male connector
- ② Exhaust
- ③ Output port (x1)
- ④ Media connector (x2)
- ⑤ Manual override switch
- ⑦ Daisy chain connector, male or female
- ⑧ Sensor connection cable, female
- ⑨ Mounting stud
- ⑩ Anti-rotation stud
- ⑪ Mounting clip

Recommended accessories

Other models and accessories → www.sick.com/ZoneControl

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none">• Description: Mounting bracket• Material: Steel• Details: Steel, zinc coated• Items supplied: Mounting hardware included	BEF-WN-RT/IRT	2074621
	<ul style="list-style-type: none">• Description: Mounting bracket• Material: Steel• Details: Steel, zinc coated• Items supplied: Mounting hardware included• Usable for: WTR/WLR, IRT	BEF-WK-WTR	2051786

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com