

110KV BLISTER

NON-CONTACTING BLISTER VERIFICATION

- Inductive Eddy Current principle - Non-contacting verification of blister strips in sealed packages
- Up to 10 aluminum foil blister strips in a package, programmable for 255 different package sizes
- Max. package height 100mm (4in.), min. blister size 30x60mm (1.2 x 2.4in.)
- High conveyor speed of up to 90 m/min (270ft/min), equals 600 to 1000 packages per minute
- Data communication via opto coupled RS232 interface



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Description

During filling tablet packs with blister strips automatically, underfilling or overfilling may occur. A content check is therefore absolutely necessary.

Benefits

In contrast to the customarily used check weighers the eddy current sensor system is based on a measuring principle which is free of inertia. This results in very high inspection velocities with only minimal space requirements of about 100 mm within the transportation line.

Function

For the correct verification procedure it is necessary that the blisters - made partially or fully of aluminum foil - are stacked properly inside the sealed package. The sealed package travels on the conveyor belt through an alternating magnetic field, which is generated by the transmitter underneath the conveyor. The receiver is mounted above the space where the package passes. The receiver captures the signals generated by the transmitter and transmits an electrical signal to the control unit.

Electrically conductive material within the package such as aluminum foil creates changes in the magnetic field by generating eddy currents when passing between the transmitter and receiver. The parameters for each type of package are established through a Teach-In procedure and stored as parameter sets within the control unit.

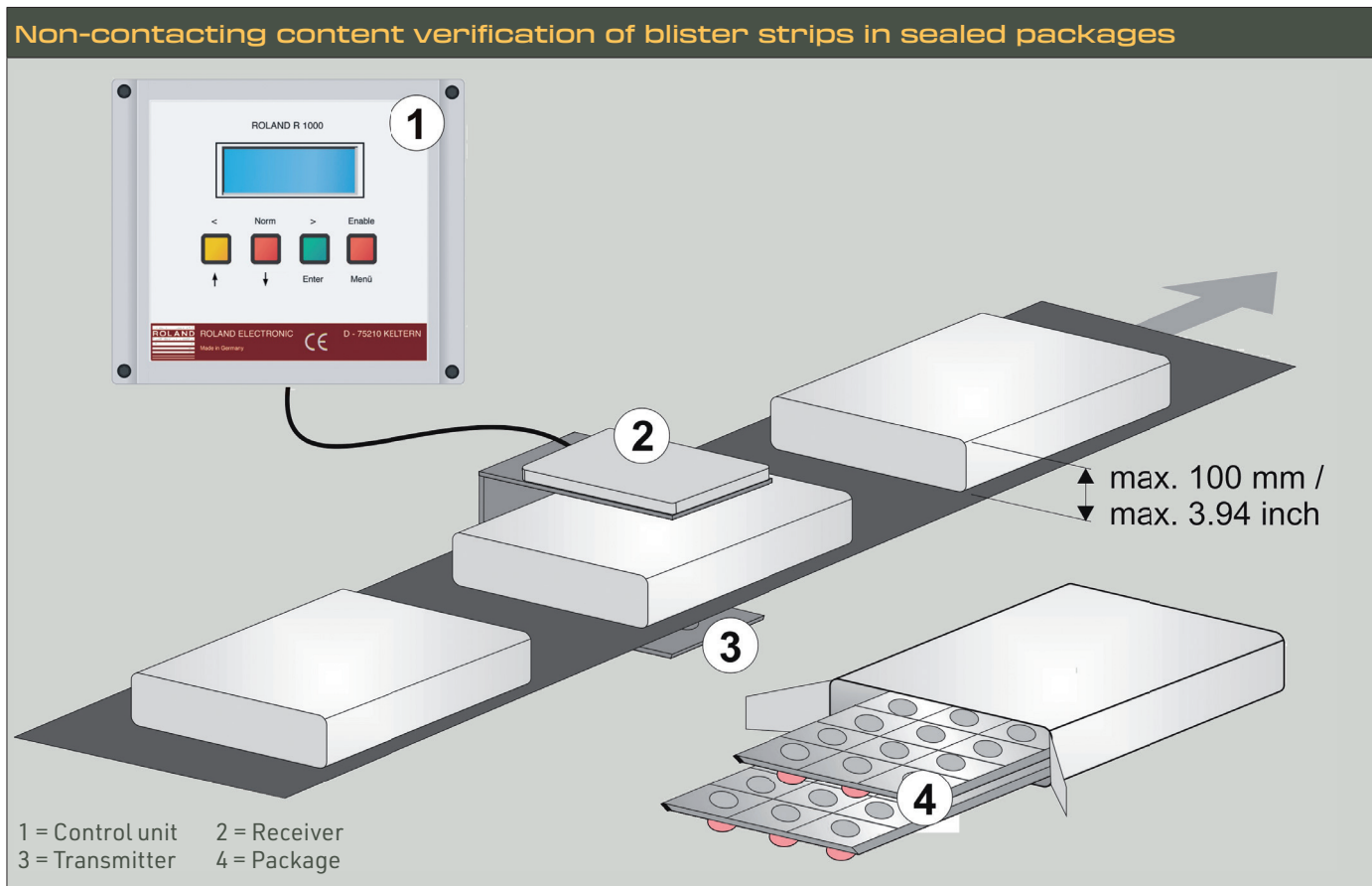
Depending on the number of blisters, individual thresholds are established and also stored as parameters in the control unit. Under normal operating conditions the PLC command selects the stored parameter sets applicable to each product.

The actual measurement values of the inspected packages are compared to the stored parameters. Approx. 1 millisecond after the package passes the sensor system the PLC receives the information whether the monitored package was within or outside the tolerance range.

Teach-In

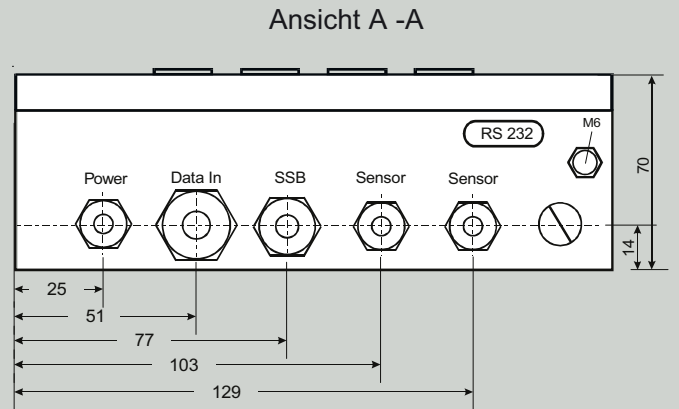
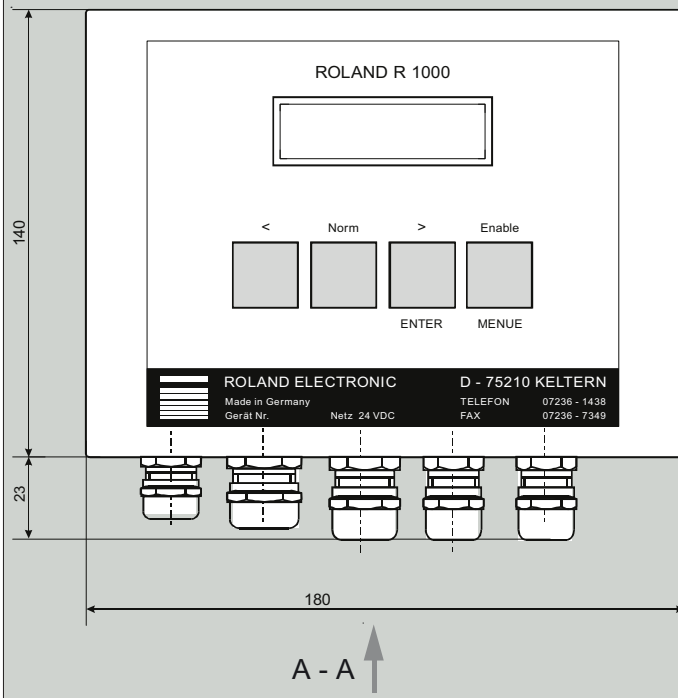
Up to 255 sets of product parameters can be stored in the control unit. Within the teach procedure, the switching thresholds for underfill and overfill are calculated. Thresholds should be checked and optimized by using underfilled and overfilled packages. Before teaching, the system (and the blister-machine) should be warmed up for 30 minutes.

The receiver has to be positioned closely above the package and the zero adjust procedure has to be executed.

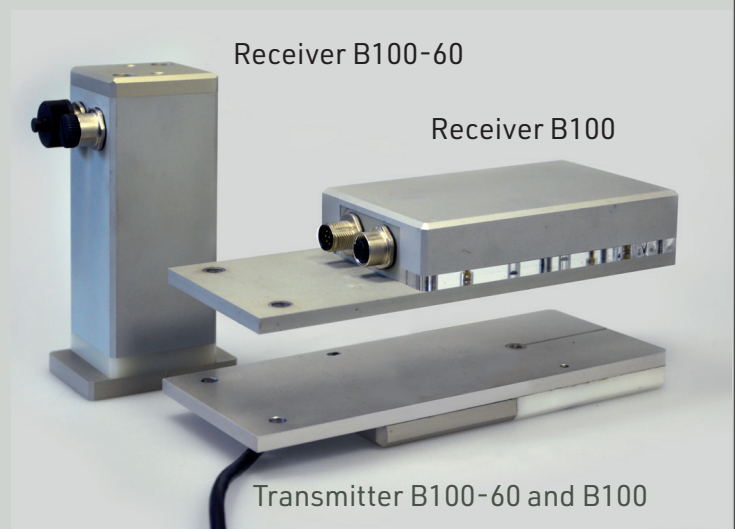
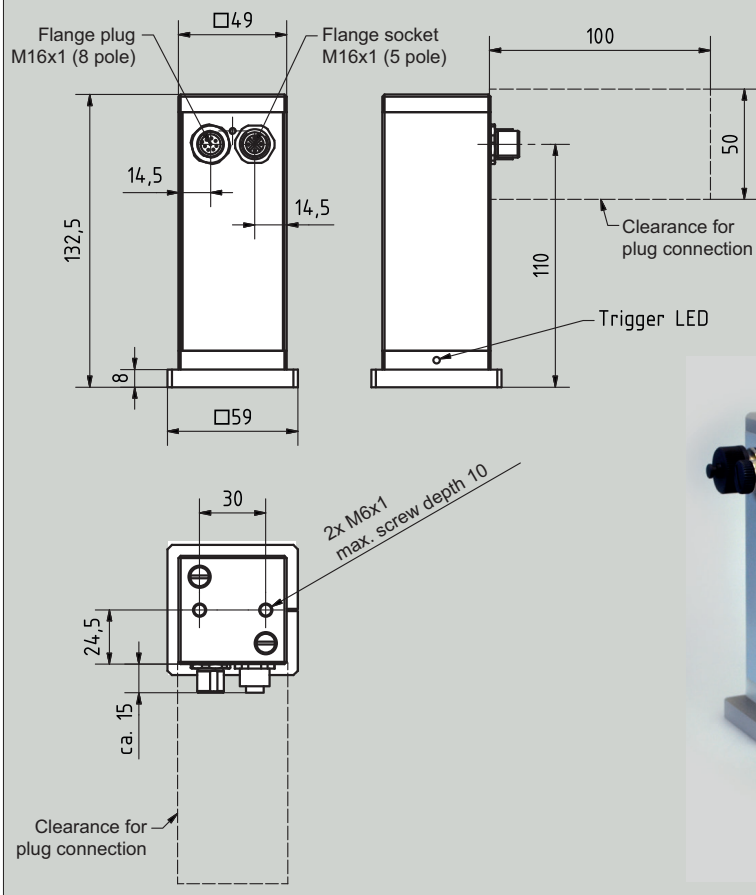


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Dimensions of control unit 110KV / CO

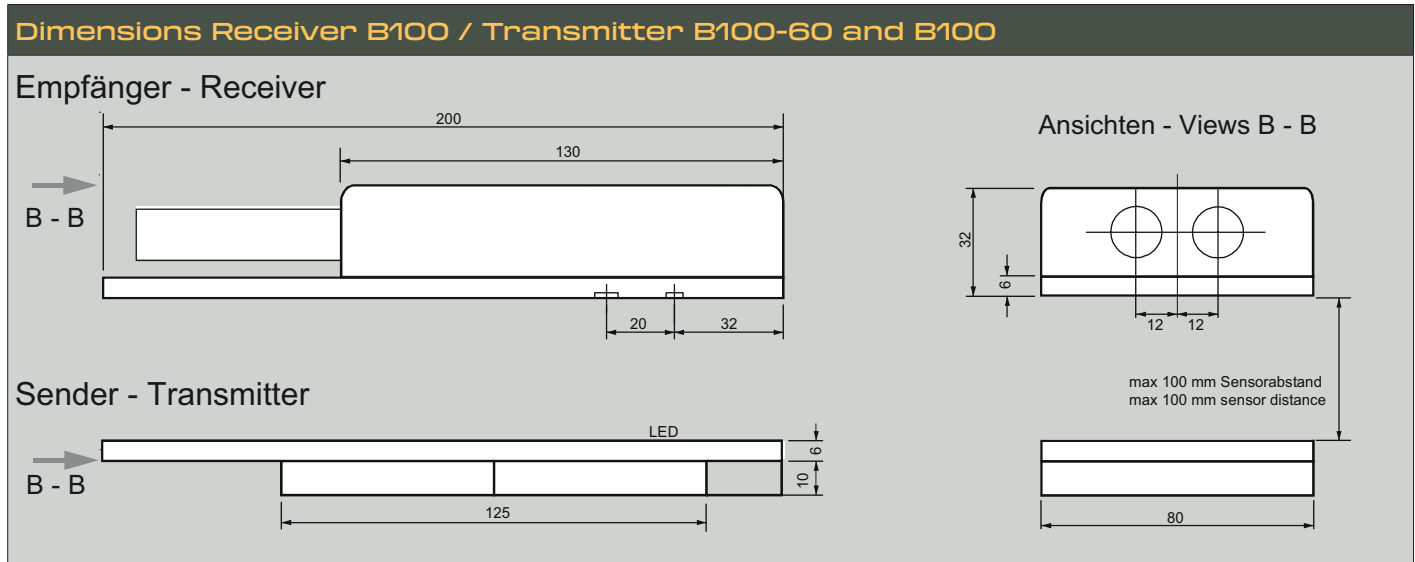


Dimensions of receiver B100-60



Technical Data

I10KV		
Operating voltage		24VDC \pm 4V
Power consumption		< 17W
Protection class	Enclosure	IP65
	Sensor	IP54
Display		LCD, 2 rows with each 16 digits
Ambient temperature		0 - 50°C / 32 - 122°F during operation
Weight	Enclosure	approx. 1.6kg (3.5lbs)
	Sensor	approx. 1.0kg (3.0lbs)
Signal outputs		4 Optocoupler unconnected
Max. switching voltage		50VDC
Max. switching current		150mA
Max. switching capacity		100mW
Signal inputs		12 potential free control inputs 24 VDC with common potential, for addresses and functions
		1 potential free RS232 interface for measuring value output and parameter backup



Revision 1.5, March 2024 - Subject to technical modification and error

Order Information

Blister Comparator	
Part no.	Description
I10KV/C-0	Blister Package Comparator with optocoupler output and RS232 Interface
S/E B100	Eddy current sensor for blister package
S/E B100-60	Eddy current sensor for blister package
KB100S-G	Connection cable between control unit I10KV-C-0 and sensor S/E B100 or S/E B100-60, length 5m

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