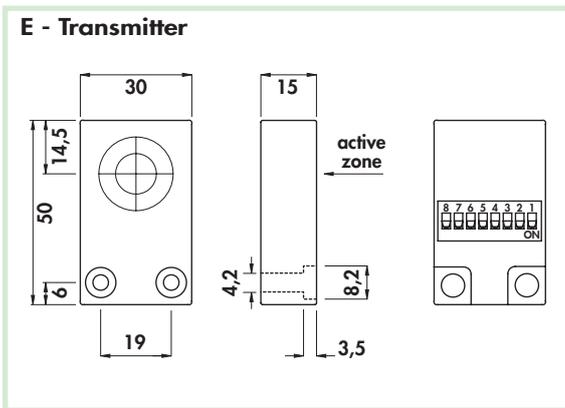
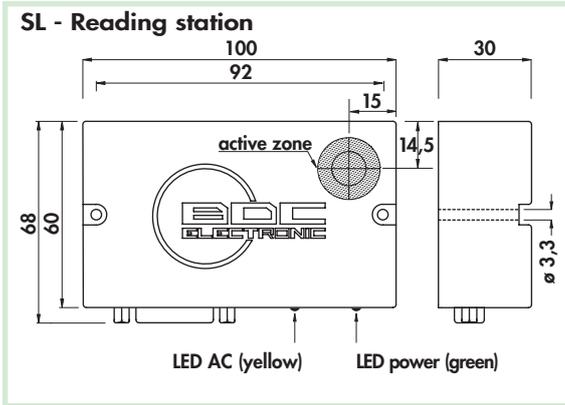


**ERB 1 •**  
**Fixed code identification system •**



**General Features:**

This system allows to assign an identification code to the fixed or mobile parts. The code holder is the transmitter and it works with no need of power supply. The code reading is done by the reading station, which makes it available on the parallel port, allowing an easy and cheap connection to any PLC.

The transmitted word is of 8bit (for a total of 256 codes) and the transmission happens when the two parts face together. This code is single and it can be set up using the dip-switches on the back of the transmitter. On the parallel port we have the code read in binary code. The parallel port holds the output data even when the transmitter is gone and is cleared only by sending a reset signal or detecting another transmitter. Thanks to the open collector outputs, it is possible to connect in parallel different reading stations enabling them one at a time with the ABU signal (output enable). The reading station is furnished with the female connector type D with 15 poles. Mostly used in: truck identification, pallets, automatic warehouse drawers, etc.

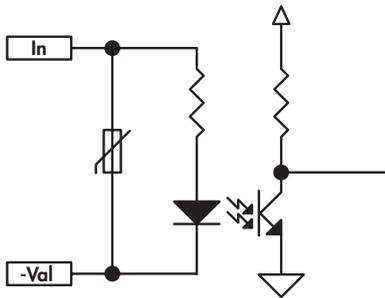
**Technical data:**

- Temperature range: - 20° ÷ + 70° C
- Sensing distance max: 12 mm at 25° C
- Working distance suggested: 7,5 mm
- Maximum speed during the transmission at 6 mm: 40 m/min
- Misalignment max (stopped position): 9 mm
- Misalignment max (at max speed): 6 mm
- Facing direction: possible in all directions
- Word format: binary 8 bit
- Protection against reversal polarity
- Protection against load inductive peak
- Protection against short circuit and overload
- Electromagnetic compatibility (EMC) according to EN61000-6-2/-4

Figure	Power supply	Power consumption	Weight	Transmission code	Connector terminations	INPUTS			OUTPUTS			ORDERING REFERENCES
						Input resistance	Logical 0 Input	Logical 1 Input	Output current max	Power supply max	Output polarity	
SL - Reading station	20 ÷ 30	60	300	-	to solder	8,2	<12	>20	200	32	PNP open collector	<b>ERB1109500R</b>
E - Transmittor	-	-	32	selectable on dip-switch	-	-	off	on	-	-	-	<b>ERB1000200E</b>

- ERB 1
- Fixed code identification system
- Connections description

Fig. 1 - Input stage



**INPUTS:**

The inputs have to be driven by devices with output type PNP and they are optically insulated in order to assure the highest noise immunity level. If they are left disconnected they assume the "0" logical condition (see fig. 1).

• **ABU (output enable): pin 11**

This input allows you to connect the Un outputs of different reading stations in parallel, enabling only the ones of the desired receiver. Keeping this signal high, the outputs get a high impedance; bringing it to a low level it is possible to have the reading of the output port. The AC and ACM influenced outputs are not influenced by this command.

• **RES (output and ACM resetting): pin 12**

One logical condition "1" on this input "cancels" the data on the output, resetting it. With this "1" logical level input it is not possible to have the transmitter reading; to enable the reading conditions you have to put to "0" this input. The AC output is not controlled by this command.

**OUTPUTS:**

All the outputs are open collector PNP type, so they have to be charged toward the negative. The maximum current available is 200 mA (see fig. 2).

• **U1 ÷ U8 (outputs) pin 1 ÷ 8**

On these outputs we have the binary code read by the transmitter. The output 8 represents the most significant bit (MSB) and the output 1 the least significant bit (LSB).

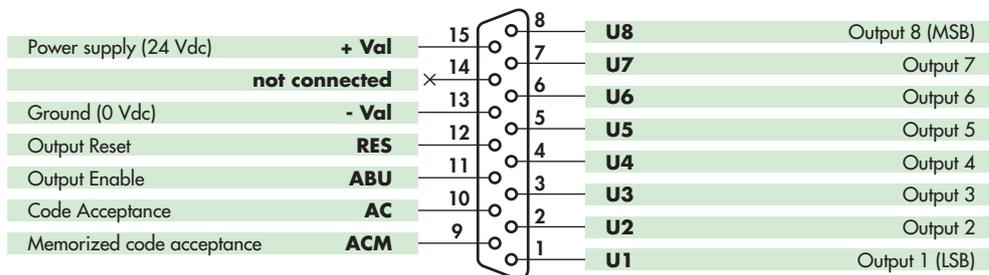
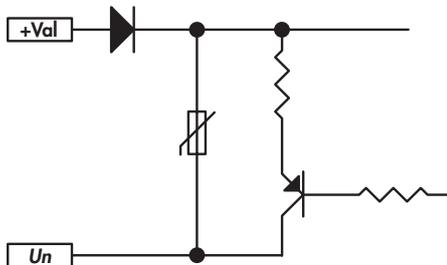
• **AC (Code acceptance): pin 10**

This output goes to a high level when it receives a correct code by the transmitter. The signal is shown by the yellow LED

• **ACM (Memorized code acceptance): pin 9**

This output goes to a high level when it receives a correct code by the transmitter. Differently by the AC signal this remains high even after the transmitter is removed. It can be cleared by a signal 1 on RES input.

Fig. 2 - Output stage



## Mounting precautions

Both units can be mounted on metallic surfaces, not surrounded, without any changes of the working distance. The communication between the two units happens when the two active zones are one in front of the other. In this position the two units can rotate 360° without compromising the perfect function. The maximum misalignment that the two units can have is 9 mm in all directions (18 mm camp) working at a 6mm distance between transmitter and reader station. It is recommended not to couple connection cable to other power conductors. If so use separate raceway. In highly disturbed places it is suggested the use of shielded cables connected to earth.