

1103-WLSB Wireless Leak Sensor Box



Description

Deublin patented SpindleShield® technology protects spindles by reliably warning users of internal leakage of coolant unions. **Deublin 1103-WLSB, Wireless Leak Sensor Box**, allows integration of leak sensor system with SpindleShield® technology. The system consists of a Wireless Leak Detection Unit mounted inside the CNC Machine cabinet adjacent to the Coolant Union and a Wireless Leak Alarm Unit mounted outside the cabinet. Upon leak detection at the Coolant Union, the inside unit will send a signal wirelessly to the outside unit and the appropriate light will be lit.

Model Family

1103

Industry

Machine Tool

Application

All application with water-based coolant through the spindle (TSC)

1103-WLSB Features

- 2 years battery life Alarm Unit
- Wireless communication
- ESD (Electrostatic Discharge) protection
- Visual and audible alert
- IPx7 rated Detection Unit
- Resistant to hydraulic oil and coolant
- Fail safe design, notify user when wires get disconnected
- Optional cloud monitoring feature available



Typical Coolant Union featuring SpindleShield® works in conjunction with Wireless Leak Sensor Box



Wireless Leak Sensor Box, Alarm Unit



Wireless Leak Sensor Box, Detection Unit

Parameters (Alarm Unit)	Min	Nominal	Max	Unit	Notes
Operating voltage (V _{in}), pin 1		3.3		V	4 x AA batteries
ESD protection on all pins			± 4	kV	
Operating temperature	0°		80°	C	

Parameters (Detection Unit)	Min	Nominal	Max	Unit	Notes
Operating voltage (V _{in}), pin 1	12	24	28	V	
ESD protection on all pins			± 4	kV	
Maximum output load current		21	53	mA	@ 24V supply
Operating temperature	0°		55°	C	

1103-WLSB Questions and Answers

- Q. Are Detection Unit and Alarm Unit one-to-one or many-to-one communication?**
– It is one-to-one communication. This is the only way to know when a specific union has leaked internally.
- Q. Does 1103-WLSB include a SpindleShield Union?**
– No, it does not. 1103-WLSB includes only the Alarm Unit and the Detection Unit.
- Q. Does 1103-WLSB function with all Deublin SpindleShield Unions?**
– Yes, it is compatible with all Deublin SpindleShield Unions.
- Q. How long does it take for Alarm Unit to trip after sensor has detected leakage?**
– Alarm Unit buzzer will sound as well as red LED will come on instantaneously.
- Q. Does Alarm Unit hold leakage signal when tripped?**
– Yes, Alarm buzzer sound along with red LED light when sensor is tripped and the only way to reset is to pull all the batteries.
- Q. Will it stop CNC machine when leakage is detected?**
– 1103-WLSB is independent of CNC machine operations so, it will **not** stop the machine. The operator will have to stop the machine.
- Q. What does “fail safe” design mean?**
– If SpindleShield Union M12 cable becomes loose from sensor Detection Unit or sensor inside union malfunctions, Alarm Unit will sound to notify operator that monitoring system is malfunctioning and needs inspection.
- Q. How will I know leak sensor inside is functional?**
– 1103-WLSB will automatically test leak sensor inside union daily to make sure it is functional. If leak sensor is not functional, alarm will sound to notify operator.
- Q. Is outside Alarm Unit IP rated?**
– No, it is not IP rated. Only inside Detection Unit is IPx7 rated.
- Q. What if I put AA batteries backward or supply 24V backwards, will it damage units?**
– No, it will not damage units. Fix the polarity and it will function again.
- Q. What kinds of certifications have been obtained?**
– Radio module is FCC (USA) / IC (Canada) / CE (EU) / TELCE (JAPAN) / NCC (Taiwan) / RCM (Australia / New Zealand) / SSRC (China) compliant.
– End product (1103-WLSB) is USA and Canada compliant for sales and operation.
– End product (1103-WLSB) is ROHS and REACH compliant.
– End product (1103-WLSB) is CE (EU) compliant for sales and operation.
- Q. Are there any CNC machines in the field being monitored by 1103-WLSB?**
– Yes, at Deublin Chicago, we have a CNC machine with SpindleShield® Union and it is being monitored by 1103-WLSB system.
- Q. Is there a chance 1103-WLSB units can start a fire?**
– Both units are IEC 62368-1 ES1 / PS1 category certified and there are no risks of fire hazards.