Solution Profile

Safety Shower and Eye Bath

Customer

Industry – Manufacturing facilities, laboratories, process plants

Goal – Increase safety for employees by decreasing response time in emergency situations. Provide for documentation of the maintenance/ testing of safety equipment in a plant. Provide for documentation in the event of an occurrence.

Background – It has been noted that up to 80% of all installed safety showers and eye bath stations are not alarmed. While alarming is currently not mandated, it is highly recommended by ANSI. Critical question: If you personally experienced an event requiring the use of a safety shower or eye bath, would you not wish that others were notified immediately to render aid?

Challenges

- Traditional monitoring using a flow switch is flawed. If a valve is turned off or has no pressure, there is no flow to detect!
- Many units are in remote areas, causing an increased response time
- Documentation of periodic testing per OSHA is done manually with no time stamping
- Expensive to retrofit

Wireless Solution

The Q45RDNL sensor is attached to the supply pipe of the shower and/or eye bath. In each case, water flow is facilitated by the pull of the lever or the push of a paddle to open the valve. By attaching a magnet to the lever and the paddle, when the valve is actuated, the magnet passes within range of the Q45RDNL and contact closure occurs. Closing the valve returns the switch back to its normally open condition. Switch status changes are transmitted wirelessly to a DXM Controller or DX80 Gateway. Alarms can trigger wireless tower lights or indicators and emails or texts can be sent to facilities personnel.

Why Banner?

Value – Emergency Response

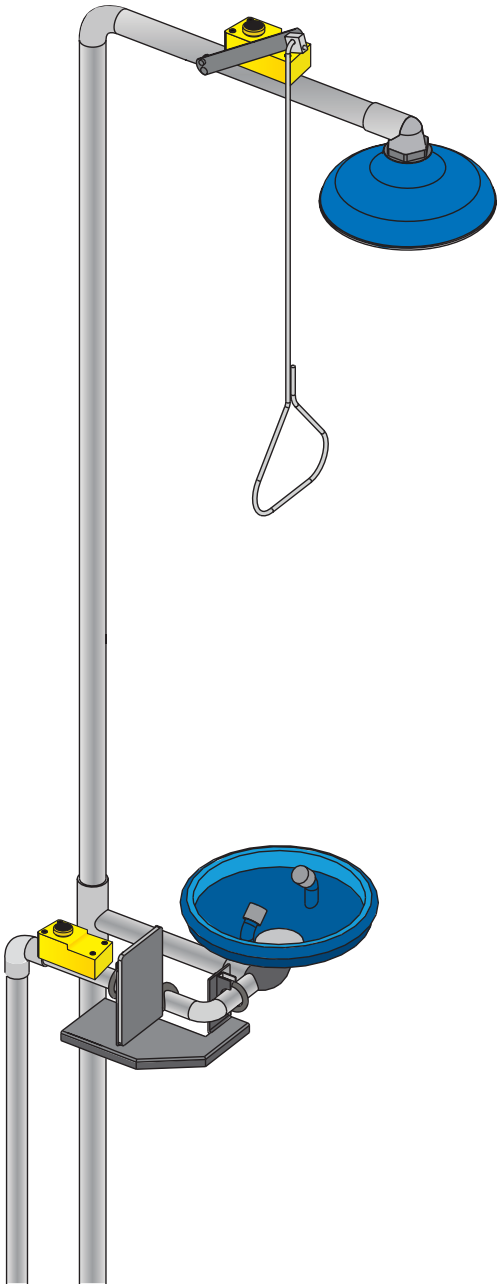
- Emergency Response – Alarming solicits assistance, ability to tag locations facilitates faster response.
- Time stamping provides for enhanced incident reporting, electronic record of OSHA required testing.
- Low installed cost and scalability.

Customer Benefits

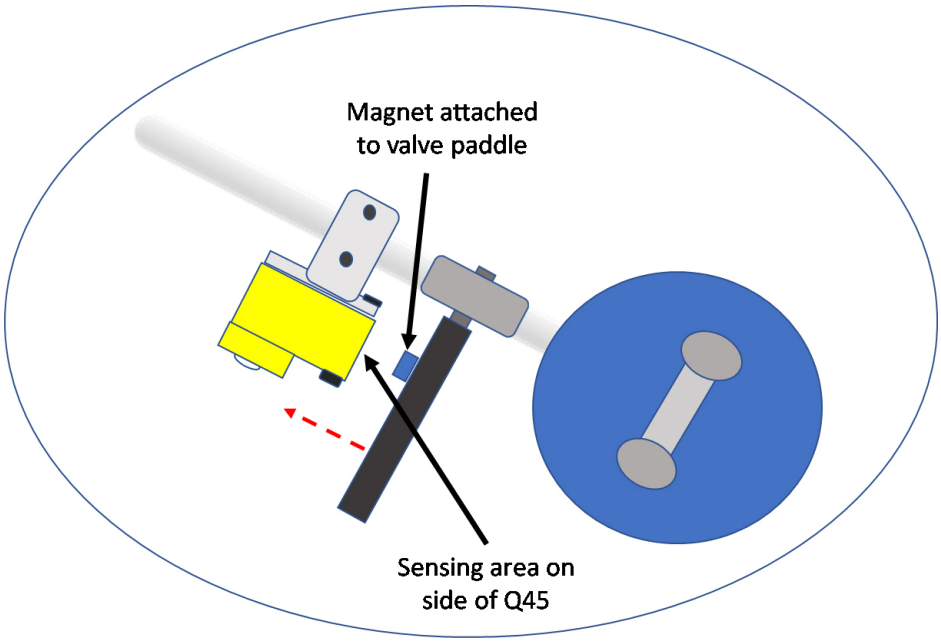
- Enhanced employee safety – Fast emergency response is critical in minimizing injury.
- Certification – Eliminates need for manual logging for certification; accurate time and date for testing of each unit can be stored electronically.
- Event logging – Accurate time and dates can be stored and reported electronically; track if the employee has been flushed for the required time.
- Ease of retrofit – No need to run separate power or control wires; Nodes and magnets can be mounted with simple clamps and epoxy.

Typical Mounting Configurations

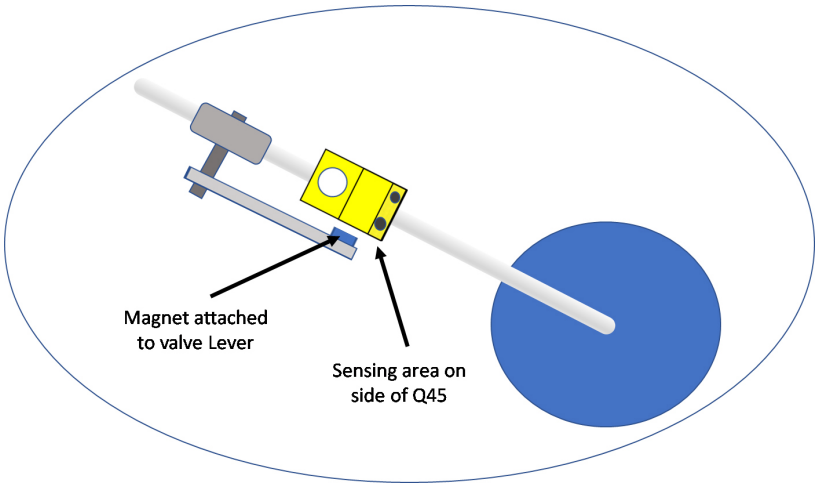
Mounting configurations vary by type and style of shower and eye wash station.



Mount the sensor so that when the valve lever is fully actuated downward, the magnet is within sensing range (switch closure).



Mount the sensor so that when the valve paddle is fully actuated forward, the magnet is within sensing range (switch closure).



Model	Description	Radio	Inputs	Outputs
DX80N9Q45RDNL-NH (two magnet types included or use customer supplied magnet)	Performance Node	900 MHz	Non-contact magnetically operated NO reed switch	One four-color LED indicator
DX80N2Q45RDNL-NH (two magnet types included or use customer supplied magnet)		2.4 GHz		

Other Options: Other devices such as limit switches, pressure switches, Namur proximity sensors, thermistors, or even flow switches can also be used and connected to a Q45RDL or various DX80 Nodes for wireless connectivity,