CASE STUDY

PRESSURE SWITCH SOLUTION FOR OEM DAIRY COOLING EQUIPMENT

Industry

AGRICULTURE EQUIPMENT OEM

CUSTOMIZED 10 SERIES PRESSURE SWITCH

CHALLENGE:

A manufacturer of dairy cow cooling systems designs and builds ceiling-mounted, fan-like structures that combine directed airflow with water misting to create evaporative cooling inside cow pens. These systems are commonly deployed in warm-climate regions, where maintaining cow comfort within the optimal 40°F–65°F range is critical for animal welfare and milk production.

In one of the manufacturer's system designs, a pressure switch sourced from a competing supplier had become obsolete, creating supply risk and long-term support concerns. The application also presented several technical challenges:

- Mineral-rich water supplies that can clog misting lines and gradually reduce system pressure
- The need to prevent end-user tampering with critical pressure set points
- Low-current electrical switching requirements in a humid, corrosive agricultural environment

Without reliable pressure monitoring, restricted flow could go undetected, leading to reduced cooling effectiveness, increased maintenance, or pump damage.

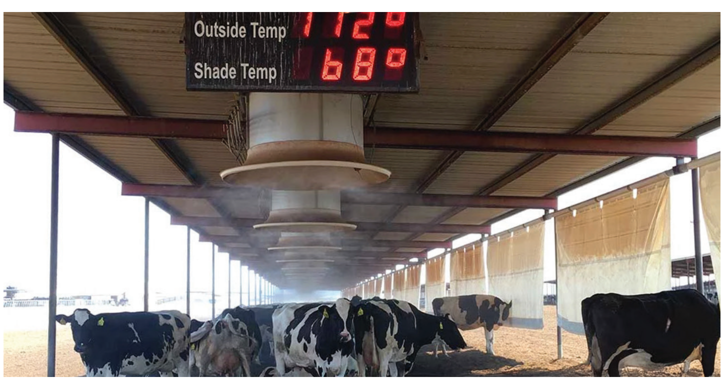
SOLUTION:

The cooling-system manufacturer partnered with UE to develop a customized pressure-switch solution for its water misting systems.

UE's sales and engineering teams worked closely with the Original Equipment Manufacturer (OEM) to tailor the 10 Series pressure switch to the application's specific electrical, environmental, and operational requirements. The team configured a tamper-resistant set point, selected gold-plated contacts optimized for low-current switching, and adapted the wiring to the OEM's requirements.

Installed on the water supply line feeding the misting system, the customized 10 Series continuously monitors pressure. If mineral buildup restricts flow and causes pressure to fall below the defined threshold, the switch opens and automatically shuts down the water mist pump, protecting equipment and alerting operators to required maintenance.

The result is a standardized, reliable pressure-monitoring solution that replaces the obsolete component without requiring a system redesign.



OEM STANDARDIZATION

COST EFFECTIVE CUSTOMIZATION

RELIABILITY IN HARSH ENVIRONMENT