

IDEC Introduces Safety Interlock Switch

Maximum locking force and compact packaging combined with the industry's best strength-to-size ratio make this switch ideal for safeguarding machinery and equipment.



IDEC Corporation, Sunnyvale, CA, June 13, 2019 — IDEC Corporation announces the release of its new HS1T interlock switch with solenoid. This interlock switch delivers an industry-leading 5,000N of locking force, with many features included to maximize protection in machine and equipment guarding applications.

Compact and Adaptable

Interlock switches are incorporated into machinery and equipment to both monitor and lock gates, doors and similar access points. Many of these applications endure high vibration, thrown debris, physical abuse and even bypass attempts, so they must have a high locking force. Interlock switches are used to ensure guarded locations are secure before starting a machine and are also used to deny access to certain areas during operation, both critical for operator safety and protection. These devices must be strong, adaptable and secure.

IDEC's new HS1T improves performance in all these areas. Delivering 5,000N of locking force, the HS1T is much more powerful than comparably-sized devices. This is achieved in such a compact size due to a metal head integrating the locking and mounting functions, an improvement over older designs where the head could break away from the mounting body. Also, to maximize installation options, the remaining actuator portion can be independently rotated from the high-strength head using only one screw. With a slim form factor and so many mounting options, the HS1T can be installed virtually anywhere, providing greater flexibility for designers.

Simpler Wiring and Safer Operation

Much of the HS1T's strength is provided by the metal head, but cam design also plays an important role. IDEC has included three independent rotary cams, instead of the single cam used by conventional

devices. Two cams control the locking mechanism and one drives the door monitor contact. This arrangement provides redundancy, additional strength and ensures the monitoring function continues to work even if a locking cam is damaged.

The HS1T meets the requirements of ISO 14119:203 for Lock Monitoring and are marked as such. This means both the status of the position and the locking function of a protective door can be monitored through the lock monitoring contact. The net result is that fewer on-board contacts are needed to achieve redundant safety circuits and additional monitoring circuits, reducing the amount of wiring on the device. For additional integrity, the device structure is designed so the lock monitoring contact can never indicate closed if the door is not positively closed, thereby preventing the associated machine from being turned on with risks exposed.

Easy to Use and Efficient

Installers will appreciate the HS1T's multiple available cable entry ports, with faster and more reliable wiring connections made possible by spring clamp terminals. These connections offer excellent vibration resistance, prevent wires from loosening and never need tightening. Designers can choose from spring lock or solenoid lock styles, with several options for contact configurations. These flexible installation options are complemented by an IP67 and Type 4X indoor use only rating.

An energy-efficient solenoid consumes only 200mA while actuated, reducing electricity costs and allowing controls to activate the device directly without a relay. This is 25% less power compared to other models and among the lowest rating in industry.

Added Features

Structurally, the HS1T interlock switch can't be turned on unless the door lock is positively closed. As an additional protection against improper operation, designers can take advantage of the HS1T's compact size and mounting options to install it in normally unreachable, covered or hidden locations to minimize defeat possibilities.

Mechanical durability has been improved to two million operations, double that of other models to ensure a long operating lifetime. An optional manual rear-side unlock button allows personnel to release the device if they are inside a guarded area and need to exit. A rear unlock mechanical indicator, a first in the industry, allows the lock status to be identified from the front and the back.

The HS1T interlock switch provides safety, performance and cost advantages for equipment manufacturers, machinery builders, packaged system designers, robotics implementations and OEMs of all types. The device is suitable for many industries and can serve as the preferred model for many applications.

As with all its products, IDEC offers free tech support for the HS1T, with no service or support contract required. For complete specifications or additional information, please contact IDEC Corporation at 800-262-IDEA (4332), or visit us online at <http://us.idec.com/HS1T>.

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