

# IDEM Type HLM Explosion-Proof Safety Limit Switches



IDEM's range of explosion-proof limit switches has been developed to satisfy the latest IECEx and ATEX standards and provide explosion-proof switching for use in hazardous locations created within the oil, chemical, pharmaceutical, food processing, packaging and other hazardous industries.

These switches provide positively operated switching contacts. They combine explosion-proof protection and high functional safety requirements.

These switches are manufactured with ATEX Exd IIC T6 certified explosion-proof contact blocks. All electrical switching elements are fully encapsulated.

IDEM limit switches are designed to be mounted for position sensing applications, such as guard doors, conveyors, machine beds, elevators, etc.

The stainless steel switches have an IP69K rating, which makes them suitable for high-temperature washdown with detergent.

## Features

- 3m [9.84 ft] prewired pigtail cable
- Heavy-duty die-cast aluminum or stainless steel 316 bodies
- Industry standard mounting to EN50041
- Slow-action break-before-make contacts



**Side rotary lever**  
**HLM-EX-174015**  
**HLM-SS-EX-175015**



**Plunger with roller**  
**HLM-EX-174065**  
**HLM-SS-EX-175065**



**Plunger**  
**HLM-EX-174115**  
**HLM-SS-EX-175115**



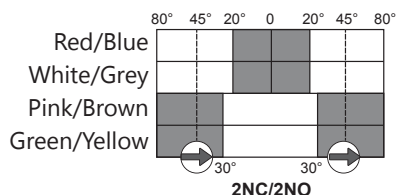
**Adjustable side rotary**  
**HLM-EX-174315**  
**HLM-SS-EX-175315**

## IDEM Type HLM (Die-Cast Metal Body) Safety Limit Switches

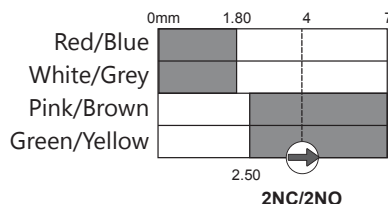
| Part Number                             | Price    | Body Material   | Type                   | Contacts                                         | Connection                             | Force Required          | Bar Chart | Drawings                   |
|-----------------------------------------|----------|-----------------|------------------------|--------------------------------------------------|----------------------------------------|-------------------------|-----------|----------------------------|
| <a href="#"><u>HLM-EX-174015</u></a>    | \$568.00 | Die-cast zinc   | Side rotary lever      | 2 NC safety contacts<br>2 NO monitoring contacts | 3m [9.84 ft]<br>prewired pigtail cable | 0.4 N•m<br>[0.30 ft•lb] | A         | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>HLM-EX-174065</u></a>    | \$561.00 | Die-cast zinc   | Plunger with roller    | 2 NC safety contacts<br>2 NO monitoring contacts | 3m [9.84 ft]<br>prewired pigtail cable | 2N<br>[0.45 lbf]        | B         | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>HLM-EX-174115</u></a>    | \$561.00 | Die-cast zinc   | Plunger                | 2 NC safety contacts<br>2 NO monitoring contacts | 3m [9.84 ft]<br>prewired pigtail cable | 2N<br>[0.45 lbf]        | B         | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>HLM-EX-174315</u></a>    | \$572.00 | Die-cast zinc   | Adjustable side rotary | 2 NC safety contacts<br>2 NO monitoring contacts | 3m [9.84 ft]<br>prewired pigtail cable | 0.4 N•m<br>[0.30 ft•lb] | A         | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>HLM-SS-EX-175015</u></a> | \$693.00 | Stainless steel | Side rotary lever      | 2 NC safety contacts<br>2 NO monitoring contacts | 3m [9.84 ft]<br>prewired pigtail cable | 0.4 N•m<br>[0.30 ft•lb] | A         | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>HLM-SS-EX-175065</u></a> | \$686.00 | Stainless steel | Plunger with roller    | 2 NC safety contacts<br>2 NO monitoring contacts | 3m [9.84 ft]<br>prewired pigtail cable | 2N<br>[0.45 lbf]        | B         | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>HLM-SS-EX-175115</u></a> | \$686.00 | Stainless steel | Plunger                | 2 NC safety contacts<br>2 NO monitoring contacts | 3m [9.84 ft]<br>prewired pigtail cable | 2N<br>[0.45 lbf]        | B         | <a href="#"><u>PDF</u></a> |
| <a href="#"><u>HLM-SS-EX-175315</u></a> | \$697.00 | Stainless steel | Adjustable side rotary | 2 NC safety contacts<br>2 NO monitoring contacts | 3m [9.84 ft]<br>prewired pigtail cable | 0.4 N•m<br>[0.30 ft•lb] | A         | <a href="#"><u>PDF</u></a> |

## Bar Charts

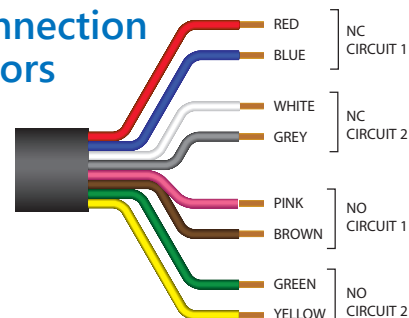
**A**



**B**



## Connection Colors



# IDEM Explosion-Proof Safety Switches Specifications



| Specifications                             |                                                                                  |                                                   |                                       |                                                |                                                     |
|--------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------|---------------------------------------|------------------------------------------------|-----------------------------------------------------|
|                                            | HLM-EX / HLM-SS-EX                                                               | KM-EX / KM-SS-EX                                  | KP-EX / K-SS-EX                       | GLS-EX / GLS-SS-EX                             | GLHx-EX                                             |
| Safety Classification and Reliability Data |                                                                                  |                                                   |                                       |                                                |                                                     |
| Switching Reliability (B10 <sub>d</sub> )  | 2.5 x 10 <sup>6</sup> operations at 100mA load                                   |                                                   |                                       | 1.5 x 10 <sup>6</sup> operations at 100mA load |                                                     |
| ISO 13849-1                                | Up to PLe depending upon system architecture                                     |                                                   |                                       |                                                |                                                     |
| EN 62061                                   | Up to SIL3 depending upon system architecture                                    |                                                   |                                       |                                                |                                                     |
| Safety Data - Annual Usage                 | 8 cycles per hour / 24 hours per day / 365 days                                  |                                                   |                                       |                                                |                                                     |
| MTTF <sub>d</sub>                          | 356 years                                                                        |                                                   |                                       | 214 years                                      |                                                     |
| Agency Approvals                           | ATEX, IECEx, CE<br>The contact block is cURus Hazardous Location rated (E358295) |                                                   |                                       |                                                |                                                     |
| Electrical and General Specifications      |                                                                                  |                                                   |                                       |                                                |                                                     |
| Utilization Category                       | B300 (pilot duty)                                                                |                                                   |                                       |                                                |                                                     |
| Minimum Switch Current                     | 5mA, 5VDC                                                                        |                                                   |                                       |                                                |                                                     |
| Thermal Current                            | 2.5 A max                                                                        |                                                   |                                       |                                                |                                                     |
| Maximum Switching Current                  | 250VAC/DC, 2.5 A maximum                                                         |                                                   |                                       |                                                |                                                     |
| Maximum Approach/Withdrawal Speed          | 600mm/s [23.6 in/s]                                                              |                                                   |                                       | NA                                             |                                                     |
| Enclosure Protection                       | IP67 (IP69K on all models with both stainless steel head and body)               |                                                   |                                       |                                                |                                                     |
| Operating Temperature                      | -20°C to 60°C [-4°F to 140°F]                                                    |                                                   |                                       |                                                |                                                     |
| Vibration                                  | IEC 68-2-6, 10Hz to 55Hz<br>0.35mm [0.01 in]                                     | IEC 68-2-6, 10Hz to 55Hz + 1Hz                    |                                       |                                                |                                                     |
| Lid Screws/Torque                          | Plated brass<br>1 N•m [0.74 lb•ft]                                               | Stainless steel<br>T20 Torx<br>1 N•m [0.74 lb•ft] | Stainless steel<br>1 N•m [0.74 lb•ft] |                                                | Stainless steel<br>T20 Torx<br>1.5 N•m [1.11 lb•ft] |
| Recommended Mounting Screws/Torque         | M4<br>2 N•m [1.48 lb•ft]                                                         | M5<br>4N•m [2.95 lb•ft]                           |                                       |                                                |                                                     |
| Head Screws/Torque                         | Stainless steel, except snap (plated brass)<br>1 N•m [0.74 lb•ft]                | Stainless steel<br>T20 Torx<br>1 N•m [0.74 lb•ft] | Stainless steel; 1 N•m [0.74 lb•ft]   |                                                |                                                     |

# Safety Products



*Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.*

*AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.*