# Guard Locking Switch Metal  Type: RAMZLOCK KLTM
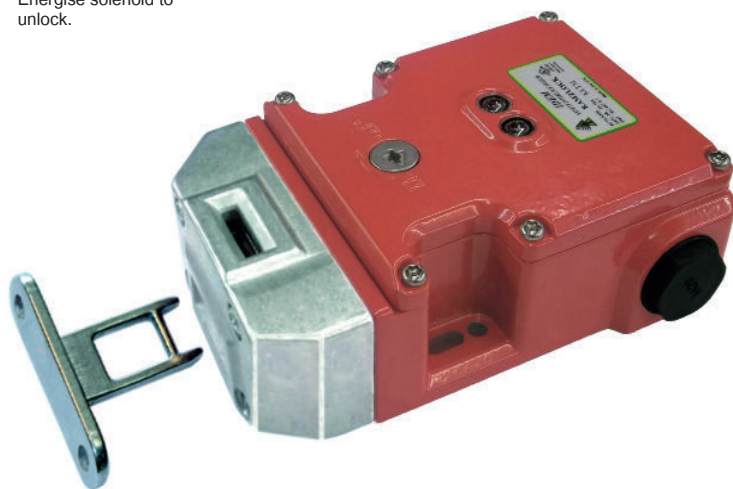
## FEATURES:

Spring to lock when actuator is inserted. Energise solenoid to unlock.



**Solenoid Locking Door Interlock Safety Switch**
**Guard Holding up to 3000N (300Kg) (F1Max)**

The KLTM Series Guard Locking switch is a tongue type safety interlock switches incorporating traditional mechanical anti-tamper tongue technology utilising IDEM Safety Switches patented cam system.

They interlock and hold closed guard doors to protect operators from moving or hazardous machinery.

They are particularly suited to where a high degree of anti-tamper technology is required to prevent accidental or deliberate attempts to by-pass the interlock.

The KLTM solenoid locking switch has a rugged metal body design and has been developed with a maximum holding force of 3000N which enables it to keep medium to large guard doors closed until hazards have been removed.

IP67 enclosure protection is maintained by a special double seal lid gasket design and metal fixings.

The KLTM has a low profile and the fixing holes are on an industry standard 73mm centre to enable easy retrofitting to new or existing guards (or where extra anti-tamper is required).

The head has the ability to rotate and provides the end user with up to 4 actuator entry positions.
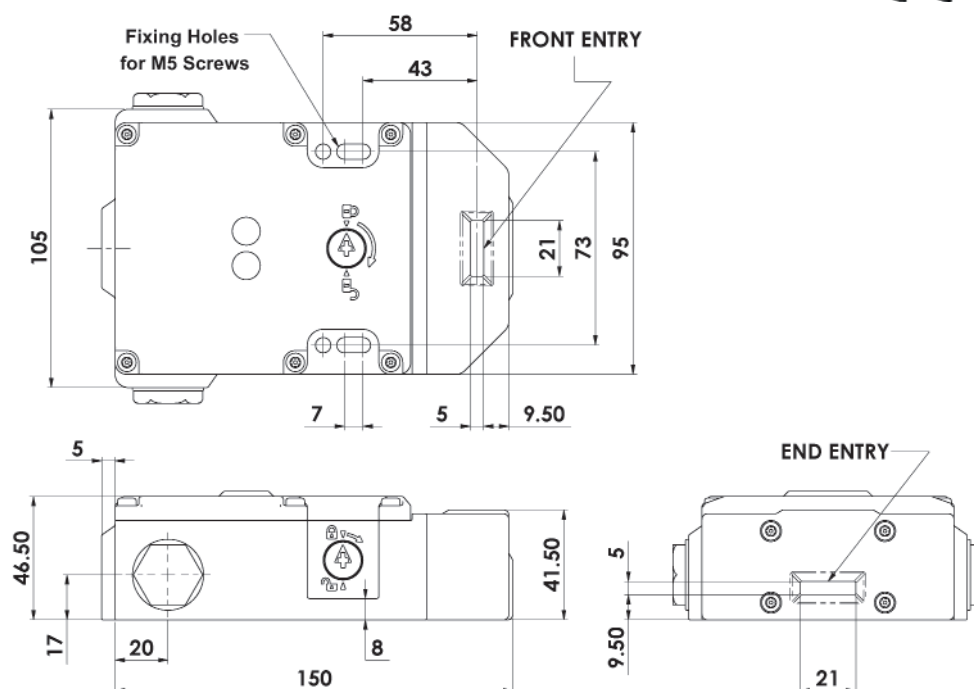
## CONTACTS:

**KLTM**

4NC  Safety Contacts

1NO Auxiliary Contact (Guard Open)
1NO Auxiliary Contact (Guard Locked)
(selectable option for LED2 Guard Locked)

LED1 RED Solenoid Power On
LED2 GREEN Switch Locked (if selected)

## FUNCTIONAL SPECIFICATIONS:

Positive Break Contacts to EN60947-5-1 (→)
Rugged Die Cast Metal Housing with Stainless Steel 316 Head
Will fit on 73mm fixing centres
Connects to most Safety Relays to give up to PLe Cat.4
M23 Quick Connector version available for ease of installation
2 manual override points
LED diagnostics for Solenoid, Lock and faults



Top or side manual release points.

4 actuator entry positions.
Rotatable head.

## ACTUATOR OPTIONS (see p100)



A - Standard

HF - Heavy Duty Flexible

F - Flat

HFH - Heavy Duty Flexible Stainless Steel

For all IDEM switches the normally closed (NC) circuits are closed when the guard is closed actuator inserted.

**Standards:**  ISO14119  EN60947-5-1  EN60204-1
ISO13849-1  EN62061  UL508

**Safety Classification and Reliability Data:**

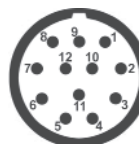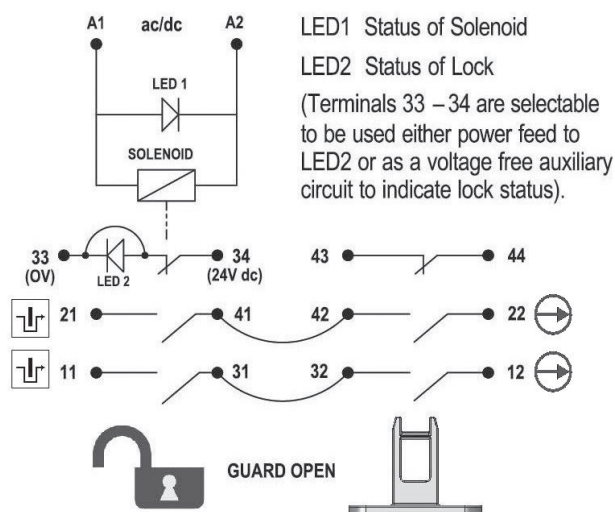| | |
|---|---|
| Mechanical Reliability B10d | $2.5 \times 10^6$ operations at 100mA load |
| ISO13849-1 | Up to PLe depending upon system architecture |
| EN62061 | Up to SIL3 depending upon system architecture |
| Safety Data – Annual Usage | 8 cycles per hour/24 hours per day/365 days MTTFd 356 years |
| Solenoid Voltage (by Sales Number) | 24V ac/dc  or 110Vac  or 230Vac |
| Solenoid Wattage | 12W |
| Utilization Category | AC15  A300  3A |
| Thermal Current (Ith) | 5A |
| Rated Insulation/Withstand Voltages | 600Vac/2500Vac |
| Travel for Positive Opening | 10mm |
| Maximum Approach/Withdrawal Speed | 600mm/s |
| Holding Force | F1Max 3000N  Fzh 2307N |
| Body Material | Die Cast Metal (painted red) |
| Head Material | Stainless Steel 316 |
| Enclosure Protection | IP67 |
| Operating Temperature | -25C  +40C |
| Vibration | IEC 68-2-6  10-55Hz + 1Hz Excursion 0.35mm 1 octave/min |
| Conduit Entry | Various  (See Sales Number) |
| Fixing | 2 x M5 |

# Guard Locking Switch Metal  Type: RAMZLOCK KLTM

## DIMENSIONS:



Fixing Holes for M5 Screws

FRONT ENTRY

END ENTRY

## SCHEMATIC CIRCUIT:

KLTM Version (Mechanical only)



LED1  Status of Solenoid

LED2  Status of Lock

(Terminals 33 – 34 are selectable to be used either power feed to LED2 or as a voltage free auxiliary circuit to indicate lock status).

GUARD OPEN

| Quick Connect (QC) M23 12 Way Male Plug Connector Length 24mm Pin View from Switch | | KLTM Switch Circuit |
|---|---|---|
| 1 | 3 | A1    A2 |
| 4 | 6 | 11/12 |
| 7 | 8 | 21/22 |
| 2 | 5 | 43/44 |
| 9 | | 33 |
| 10 | | 34 |
| 12 | | Earth |

| FEMALE QC LEADS | | LENGTH | SALES NUMBER |
|---|---|---|---|
| M23 | 12 Way | 5m  (15ft) | 140143 |
| M23 | 12 Way | 10m  (30ft) | 140144 |

| SALES NUMBER | SOLENOID VOLTAGE | M20 | 1/2" NPT | QC  M23 |
|---|---|---|---|---|
| RAMZLOCK  KLTM Switch | 24V ac/dc | 450001 | 450002 | 450003 |
| RAMZLOCK  KLTM Switch | 110V ac | 450004 | 450005 | 450006 |
| RAMZLOCK  KLTM Switch | 230V ac | 450007 | 450008 | 450009 |
| RAMZLOCK  KLTM Actuator | Standard | Add A | to Sales Part Number | |
| RAMZLOCK  KLTM Actuator | Flat | Add F | to Sales Part Number | |
| RAMZLOCK  KLTM Actuator | Heavy Duty Flexible | Add HF | to Sales Part Number | |
| RAMZLOCK  KLTM Actuator | S/Steel Heavy Duty Flexible | Add HFH | to Sales Part Number | |

**Ordering Example: KLTM M20 24V ac/dc Heavy Duty Flexible Actuator:  Sales Number:  450001-HF**