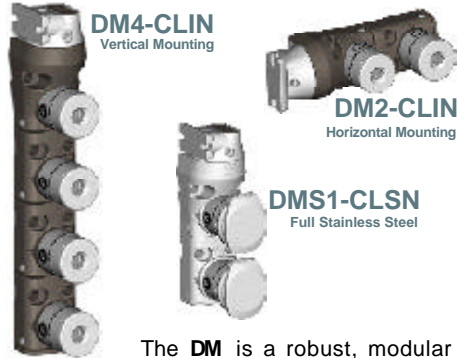


DM/DMS Door Interlock



The **DM** is a robust, modular access interlock suitable for use on all types of doors. It is available as a single or multiple door interlock with up to ten locks. The DM comprises two parts, a lock body and an actuator. The Lock body is modular in construction whilst the Actuator is available in three variants to cater for a wide variety of applications. This product is also available in full stainless steel (**DMS**)

Part of an interlock system, the locks are used to control access to enclosed areas until a safe condition has been achieved.

DM/DMS is available with a choice of

3 Actuators:

- DM-F** - a fixed actuator that is supplied as standard
- DM-S** - a self-aligning actuator available as an optional extra
- DM-H** - a hand operated actuator available as an optional extra.

DM may be surface or panel mounted using the optional M-BOB Adaptor. **DMS** is only surface mounted. Separate Installation Instructions for the M-BOB adaptor are available upon request. DM is available with a choice of CL or ML lock mechanisms. All CL / ML locks can be supplied with stainless steel spring-loaded dustcovers and/or colour coding as optional extras. DMS is available with a choice of CLS or MLS lock mechanisms. All CLS / MLS locks are supplied with stainless steel spring-loaded dustcovers as standard and colour coding as an optional extra.

IMPORTANT: This product is designed for use according to the installation and operating instructions enclosed. It must be installed by competent and qualified personnel who have read and understood the whole of this document prior to commencing installation. Any modification to or deviation from these instructions invalidates all warranties. Fortress Interlocks Ltd. accepts no liability whatsoever for any situation arising from misuse or mis-application of this product. IF YOU HAVE ANY QUESTIONS OR QUERIES OF ANY NATURE WHATSOEVER PLEASE CONTACT THE SUPPLIER WHO WILL BE PLEASSED TO ADVISE AND ASSIST.

Construction DM

Body Housing: Die-cast zinc body with pearl bronze finish.

Head Housing: All stainless steel.

Internals: All stainless steel

Actuators: All stainless steel.

Lock Mechanism: CL / ML locks - Die-cast zinc body with stainless steel operating mechanism.

Key: All Stainless steel.

M-BOB: Die-cast zinc with pearl bronze finish.

Construction DMS

Body Housing: Full Stainless Steel.

Head Housing: All stainless steel.

Internals: All stainless steel

Actuators: All stainless steel.

Lock Mechanism: CLS / MLS locks - Full Stainless Steel.

Key: All Stainless steel.

Tools and Fixings Required

2 off Cap head / hexagonal head bolts for each module.

Front of Board mounting:

M6 x 25 or ¼" x 1"

Back of Board mounting:

M6 x 55 or ¼" x 2¼"

Suitable driver for above.

If using through holes:

- 1 off Drill Ø6.5 (or Ø5/16").
- 2 off M6 (or ¼") Full nuts per module.

If using threaded holes:

- 1 off Drill Ø5 (or Pilot Drill for chosen ¼" Thread).
- 1 off M6 (or ¼") Tap and wrench.

Mounting

Mount the unit only in its correctly assembled condition to flat steel plate of minimum thickness 3.0mm or 6.0mm if aluminum. The product must be mounted in such a way as to ensure that the gap around the perimeter of the guard, when closed, does not exceed the limits specified in En294 & En953.

The head can be turned in 90 degree increments to suit a variety of mounting and handing configurations. It can also be adjusted by 5 degrees in either direction, from the nominal position for small radii hinged doors.

To rotate the head through 90 degrees increments:

- 1 Remove the two head adjustment screws (See Fig 1 - Head Adjustment).
- 2 Rotate the head to the desired position.
- 3 Refit the two head adjustment screws.

DM/DMS can be mounted in any orientation, observing the following rules:

- 1 Locate the unit so that all the locks are within easy reach.
- 2 Ensure that the head adjustment screws are accessible when the unit is mounted.
- 3 Choose the correct mounting configuration for the size and type of door (See Fig Y).
- 4 Mount the unit to the panel using the chosen fixings.
- 5 Tighten the fixings to a Torque of 8 to 10Nm (5.9 to 7.4 lbf.ft).
- 6 All fixing screws must be permanently prevented from removal, either by vibration or by personnel using standard tools.
- 7 Loosen the head adjustment screws, without removing them.
- 8 Angle the head to suit the door.
- 9 Carefully tighten the screws, ensuring the position is not changed.

All fixings must be used.

Standard Functionality

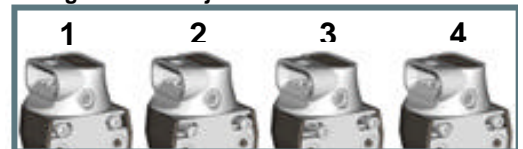
DM1/DMS1 (Single Module) - The key is inserted into the lock and turned, while the actuator is trapped in the head. The actuator is released allowing the door to be opened. The key remains trapped until the door is closed and the actuator is re-engaged.

Installation Instructions

DM2-10 / DMS2-5 (Multiple Units) - The primary key is trapped in the lock, while the actuator is trapped in the head. The secondary key(s) can then be inserted and turned, allowing the primary key to be removed. The actuator is then disengaged to allow the opening of the door. The primary key cannot be re-inserted until the door is closed and the actuator is re-engaged. The secondary key(s) remain trapped until the primary key is replaced.

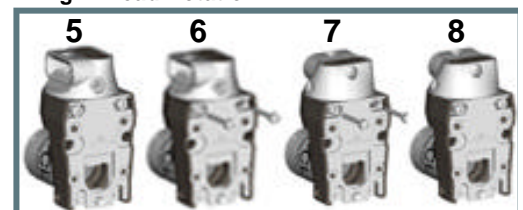
The multiple lock units offer variable key exchange sequences which require that either extra keys be inserted, or removed before the door can be opened or that extra keys are inserted or released once the door is open.

Fig 1 - Head Adjustment



- 1 DM Head Adjustment - Start
- 2 DM Head Adjustment - Screws Out
- 3 DM Head Adjustment - Head Turned (5 degrees)
- 4 DM Head Adjustment - Complete

Fig 2 - Head Rotation



- 5 DM Head Rotation - Start
- 6 DM Head Rotation - Screws Removed
- 7 DM Head Rotation - Head Turned
- 8 DM Head Rotation - Screws Re-fitted

Sequencing

The DM/DMS system is extremely flexible in terms of its sequencing possibilities. Two types of operation are possible. These are used individually or mixed to provide complex operation. The two types of operation are:

Sequential Operation

This is when the key in the module interacts only with its neighboring modules. This dictates the order in which keys are inserted and removed.

Non-Sequential Operation

This is when two or more keys work together in a group. In a non-sequential system, any of the keys in the group can be operated together. Therefore, the order in which keys are inserted or removed from the group is not dictated. However, all of the keys in the group must be either all inserted and trapped or all removed.

The DM/DMS sequence should have been specified at the purchasing stage. If the sequence needs to be changed, contact Fortress Interlocks.

DM/DMS Door Interlock

Installation Instructions

Fitting of Additional Key Exchange Modules

The XMA/XMSA is supplied with its own Installation Instructions.

Conversion from DM to XM or DMS to XMS
It is possible to convert a DM to an XM or a DMS to an XMS. However, this must be done with care as the sequence may require modification. If the DM/DMS needs to be changed to an XM/XMS, contact Fortress Interlocks.

Conversion from DM to BM or DMS to BMS
It is possible to convert a DM to an BM or a DMS to an BMS. However, this must be done with care as the sequence may require modification. If the DM/DMS needs to be changed to an BM/BMS, contact Fortress Interlocks.

Back of Board (BOB) Mounting

The M-BOB is supplied with its own Installation and Maintenance Instructions. Only applicable to the DM product.

Commissioning

Mechanical Function Test

Assuming Standard Sequencing:

- 1 Start with the primary key inserted and the door closed and locked.
- 2 Remove the first secondary key (If DM2/DMS2 or more).
- 3 Check that the primary key is trapped in position and the door remains locked.
- 4 Remove the remaining secondary key(s) (If DM3/DMS3 or more).
- 5 Check that the primary key is trapped in position and the door remains locked, upon removal of each secondary key.
- 6 Insert and turn all of the secondary key(s).
- 7 Check that the primary key can only be removed when all the secondary key(s) are inserted.
- 8 Check that the door can be opened.
- 9 Ensure that when the actuator is removed from the head, the primary key cannot be fully turned 120 degrees.

Service and Inspection

Regular weekly inspection of the following is necessary to ensure trouble-free, lasting operation:

- 1 Secure mounting of components.
- 2 Debris and wear.
- 3 All locks should be lubricated with WD40.

There are no user serviceable parts in a DM/DMS module. If damage or wear is found, the whole module must be replaced.

Disposal

The DM/DMS does not contain any certified hazardous materials so should be disposed of as industrial waste.

Liability coverage is voided under the following conditions:

- 1 If these instructions are not followed.
- 2 Non-compliance with safety regulations.
- 3 Installation not performed by authorised personnel.
- 4 Non-implementation of functional checks.

Part Numbering

The **DM** uses a logical part numbering system: - Example: DM3-CLIS-F

DM: Generic Product Type (**Door Module**).

3: Number of CL/ML Locks (**1 to 10**) or **A** for add-on module used to convert an XM/BM to a DM.

- Separator.

CL: Lock Type (**CL/ML**).

I: Stainless Steel CL/ML Internals.

S: Dust Cover Option (**S** for Stainless Steel or **N** for no dust cover).

- Separator.

F: F for Fixed Actuator, **S** for Self-Aligning Actuator or **H** for Hand Operated Actuator.

M-BOB: Back of Board Mounting Adaptor.

The **DMS** uses a logical part numbering system: - Example: **DMS2-MLSS-H**

DMS:Generic Product Type (**Door Module Stainless Steel**).

2: Number of CLS/MLS Locks (**1 to 5**) or **A** for add-on module used to convert an XMS/BMS to a DMS.

- Separator.

ML: Lock Type (**CLS/MLS**).

S: Full Stainless Steel CLS/MLS.

S: Stainless Steel Dust Cover as standard.

- Separator.

H: F for Fixed Actuator, **S** for Self-Aligning Actuator or **H** for Hand Operated Actuator.



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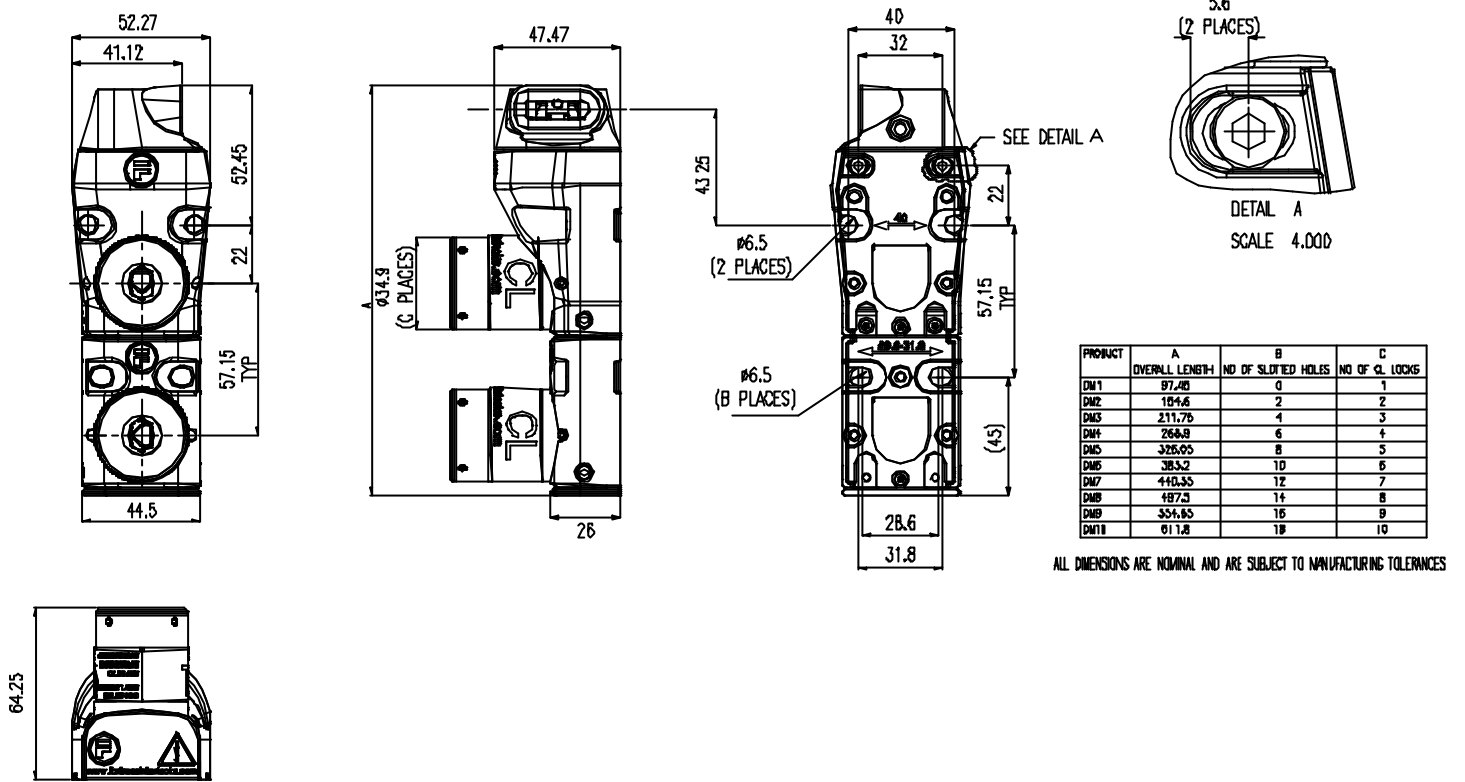
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2D General Drawing for the DM product



2D General Drawing for the DMS product

