

3/2 Electrically actuated valves DM/2400, DM/2401, DM/2410

Normally Closed and Normally Open

Port size:

DM/2400, DM/2410 1/2" BSP inlet,
1/2" BSP outlet
DM/2401 1/2" BSP male inlet,
1/2" BSP outlet.

Operating pressure:

DM/2400, DM/2410 0-10 bar
DM/2401 0-7 bar
(Pressure or full vacuum)

Cv. factor:

DM/2400, DM/2410 0.1
(0.047 on -/127)
DM/2401 0.08

Operating temperature:

Supply air -5°C to +50°C
(+40°C max on DM/2410)
Ambient +5°C to +50°C
(+40°C max on -/6 and DM/2410)

Sub-base mounted

Manual over-ride as standard

Terminal box: 3-pin plug IP65

Protection Classification IP65 I.E.C. 144, BS 5420, and I.E.C. 529, BS 5490

Explosion-proof version to specification EEx e II T4

DEMKO approved

U.L. recognised component, file no. MH 11660 (N)

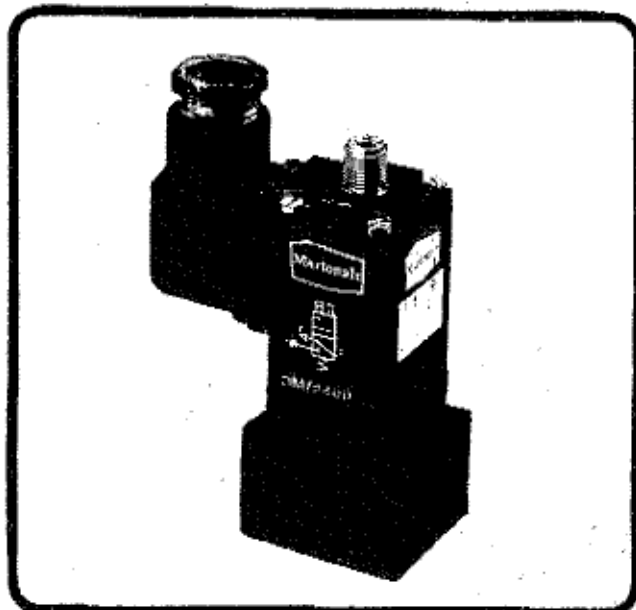
Insulation Class 'B' to I.E.C. 34

Solenoid unit is encapsulated

The DM/2400 and DM/2401 are universal solenoid valves designed to meet all general requirements whilst the DM/2410 is designed for use in potentially explosive atmospheres. In their DM/2400 and DM/2401 form they can be employed as separate 3/2 solenoid units directly controlling small cylinders or acting as pilot relay valves for pressure operated valves with a larger flow capacity. They are also used as solenoid pilots directly mounted on a variety of directional control valves.

The valves can be used on full vacuum.

To minimise down-time and simplify servicing they are sub-base mounted. On the DM/2400 and the DM/2410 the inlet is threaded G1/2 and goes right through the unit, enabling up to six units to be gang mounted. The outlet is G1/2. The exhaust is situated on the top of the unit and has a G3/8A thread. On the DM/2401 the inlet and exhaust connections are reversed, the inlet being G3/8A on top of the valve and the exhaust is G1/2 drilled right through the sub-base.



Type	Description
DM/2400	Electrically actuated sub-base mounted valve. Normally closed.
DM/2401	Electrically actuated sub-base mounted valve. Normally open. Available as single unit only.
DM/2410	Explosion-proof electrically actuated sub-base mounted valve. Normally closed.

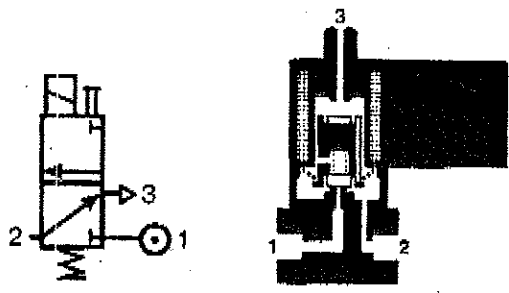
As a standard feature, all valves are fitted with a manual over-ride to enable them to be operated in the event of a power failure. It is fitted with a protective plastic cap which should be removed when the over-ride is required to be operated. The over-ride is operated by means of a screwdriver inserted into a slot and then twisted clockwise. On releasing the screwdriver the over-ride is returned to the 'off' position by a spring.

The terminal box on the DM/2400 and DM/2401 model is a standard 3 pin plug type and is fitted with a Pg 11 thread plug. The terminal box can be rotated through 360° at 90° intervals except when the valves are gang mounted. An alternative version fitted with an indicator lamp is available as an optional extra.

The coil is encapsulated and is available in a wide range of voltages, see details overleaf. Coil and terminal box protection rating IP65. The DM/2400 and DM/2401 are capable of operating under variations in supply of +10% and -15% on the A.C. models and ±10% on the D.C. models. The power consumption is 6-8.5 watts at nominal voltage. A low wattage model, DM/2400/127, is available for use with electronic controllers. It is not available in normally open form.

Coils are continuously rated (+50°C maximum ambient temperature).

Principle diagram
See overleaf



DM/2410

Explosion-proof electrically actuated valve suitable for gang mounting.

Operating pressure: Vacuum to 10 bar

Operating pressure:

Supply air: -5°C to $+40^{\circ}\text{C}$
Ambient: $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$

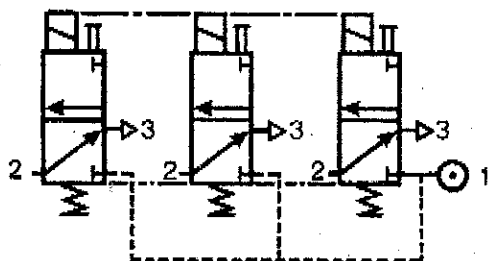
Cable:

Outside diameter: 6.6 mm dia.
Conductors: 24/0.2-0.75mm²
Insulation: P.V.C.
Colours: Brown, blue and green and yellow stripe (earth)

Test certificate: PTB Nr. Ex-79/2108 x

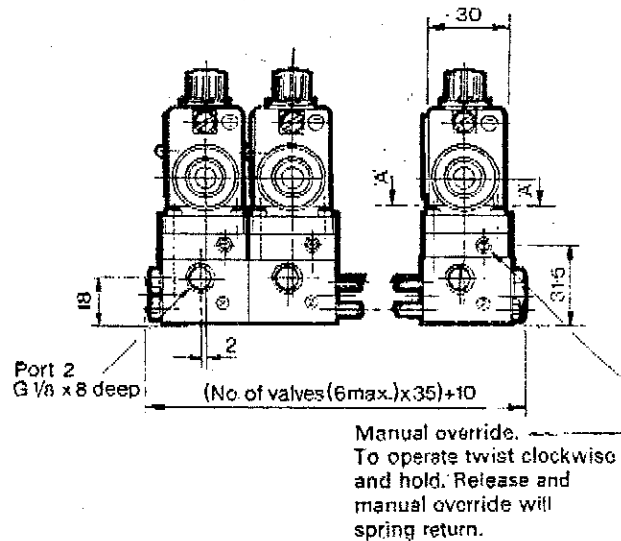
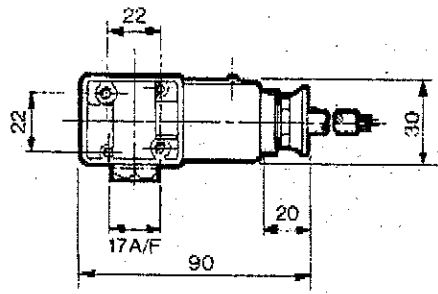
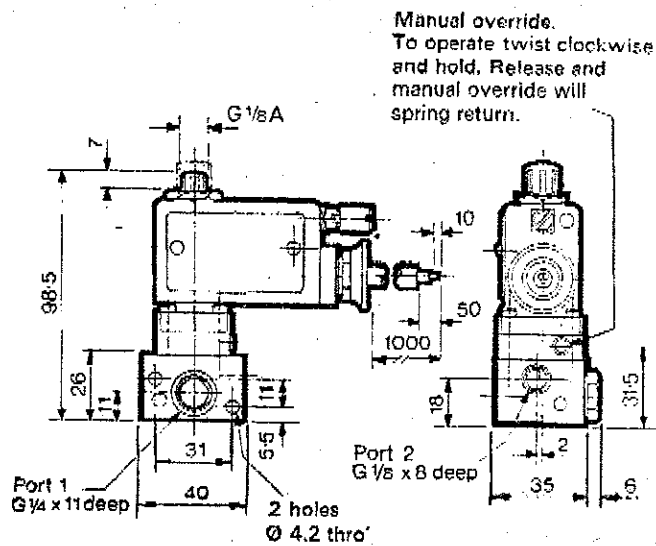
Protection rating: **E Ex e II T 4**

The DM/2410 has been designed for use in potentially explosive atmospheres and complies with BS 5501 Part 1—EN 50014 and BS 5501 Part 6—EN 50019. It incorporates increased safety measures, in the form of a revised solenoid enclosure and terminal box, which have been applied so as to prevent, with a higher degree of security, the possibility of excessive temperatures and the occurrence of arcs or sparks in the interior and on the external parts of electrical apparatus which does not produce them normally. The DM/2410 is suitable for use in environments where the lowest ignition temperature of that atmosphere is above 135°C. It should not, however, be used in mines susceptible to firedamp. If there is a requirement for a valve to be used in a firedamp atmosphere (i.e. methane), then the JS/659 flameproof valve *must* be used. Refer to leaflet B76 page 5/3.3.329.



DM/2410/T*

Assembly showing gang mounting of these valves.



Voltage	Stroke No.
220v 50-60Hz	156
24v D.C.	10

Voltage Tolerance

A.C. models + 10%—15%
D.C. models ± 10%

Nominal Power Consumption:

A.C. models
Inrush 17.5 V.A.
Hold-on 10 V.A.(5 watts)
D.C. models 5.7 watts.

Typical Response Times (Dead Times)

DM/2410/— on 10 milliseconds.
off 15 milliseconds