

# M/48, M/49 (EXCEL 22) 3/2 Direct solenoid actuated poppet valves

- Sub-base mounted and manifold mounted – compact and convenient
- Removable encapsulated coils
- Screwdriver manual override as standard
- Exhaust diffuser supplied as standard



## Technical features

**Medium:**  
Compressed air, filtered, lubricated and non lubricated

**Operation:**  
Poppet valve, directly actuated spring return

**Mounting:**  
Sub-base mounted or manifold

**Port sizes:**  
M5 or G1/8

**Operating pressure:**  
0 ... 10 bar (0 ... 145 psi)

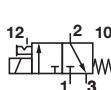
**Fluid/Ambient temperature:**  
-20 ... +50°C (-4 ... +122°F)  
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

**Materials:**  
Coil: glass reinforced thermo plastic  
Manual override base: glass reinforced PA  
Armature: stainless iron  
Sub-base: aluminium  
Seals: NBR  
Tube & spring: stainless steel

## Electrical details for solenoid operators

Voltage tolerance	± 10%
Rating	100% continuous duty
Inlet orifice	1,0 mm or 1,6 mm
Electrical connection	Industrial Standard, 22 mm
Solenoid coil mounting	Four positions x 90°
Manual override	Push and turn to lock (plastic)
Protection class	IP 65 (with sealed plug)

## Technical data - standard models

Symbol	Port size	Orifice (mm)	Actuation/return	Mounting	Flow (l/min)	Operating pressure (bar)	Weight (kg)	(lbs)	Drawing No.	Model *1)
	M5	1,0	Solenoid/spring	Single	30	0 ... 10	0 ... 145	0,12	0,26	1 M/48/MAZ*
	M5	1,0	Solenoid/spring	Manifold	30	0 ... 10	0 ... 145	0,3 ... 0,9	0,6 ... 2	2 DM/48/MAZ*T#
	G1/8	1,0	Solenoid/spring	Single	30	0 ... 10	0 ... 145	0,12	0,26	1 M/49/MAZ*
	G1/8	1,0	Solenoid/spring	Manifold	30	0 ... 10	0 ... 145	0,3 ... 0,9	0,6 ... 2	2 DM/49/MAZ*T#
	M5	1,6	Solenoid/spring	Single	77	0 ... 10	0 ... 145	0,12	0,26	1 M/48/MDZ*
	M5	1,6	Solenoid/spring	Manifold	77	0 ... 10	0 ... 145	0,3 ... 0,9	0,6 ... 2	2 DM/48/MDZ*T#
	G1/8	1,6	Solenoid/spring	Single	77	0 ... 10	0 ... 145	0,12	0,26	1 M/49/MDZ*
	G1/8	1,6	Solenoid/spring	Manifold	77	0 ... 10	0 ... 145	0,3 ... 0,9	0,6 ... 2	2 DM/49/MDZ*T#

\* Insert voltage codes from table below.

\*1) Connector plugs - ordered separately

# Add number of valves in manifold up to 6 maximum.

## Voltage codes and spare coils

22 mm coil - 1,0 mm orifice (low power)  
for connector interface acc. to industrial standard

Voltage	Power Inrush/Hold	Model	Code
12 V d.c.	2 W	QM/48/12J/21	12J
24 V d.c.	2 W	QM/48/13J/21	13J
24 V 50/60 Hz	4/2,5 VA	QM/48/14J/21	14J
48 V 50/60 Hz	4/2,5 VA	QM/48/16J/21	16J
110/120 V 50/60 Hz	4/2,5 VA	QM/48/18J/21	18J
220/240 V 50/60 Hz	6/5,0 VA	QM/48/19J/21	19J

22 mm coil - 1,6 mm orifice  
for connector interface acc. to industrial standard

Voltage	Power Inrush/Hold	Model	Code
12 V d.c.	7,5 W	QM/48/82J/21	82J
24 V d.c.	6 W	QM/48/83J/21	83J
24 V 50/60 Hz	12/8 VA	QM/48/84J/21	84J
48 V 50/60 Hz	12/8 VA	QM/48/86J/21	86J
110/120 V 50/60 Hz	12/8 VA	QM/48/88J/21	88J
220/240 V 50/60 Hz	12/8 VA	QM/48/89J/21	89J

**Connector plugs - ordered separately**

Industrial standard 22 mm  
2-pole + PE

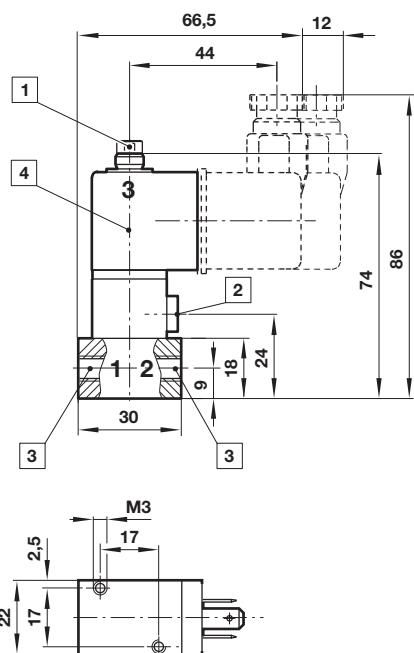


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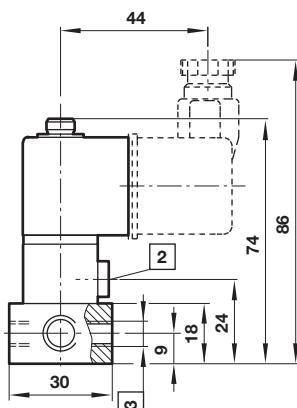
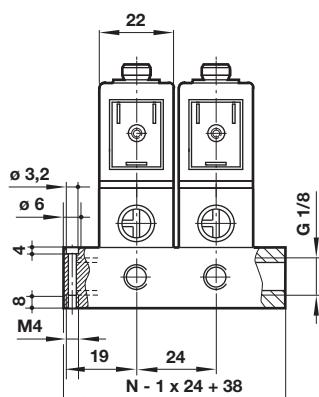
Dimensions in mm  
Projection/First angle



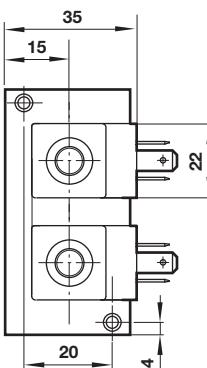
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N = number of stations



- 1** Exhaust port (M5) with diffuser
- 2** Screwdriver manual override
- 3** Port size M/48 (DM/48) – M5; M/49 (DM/49) – G1/8
- 4** Four positions x 90°

## Warning

**Warning**  
These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under [»Technical features/data«](#)

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult Norgren.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.