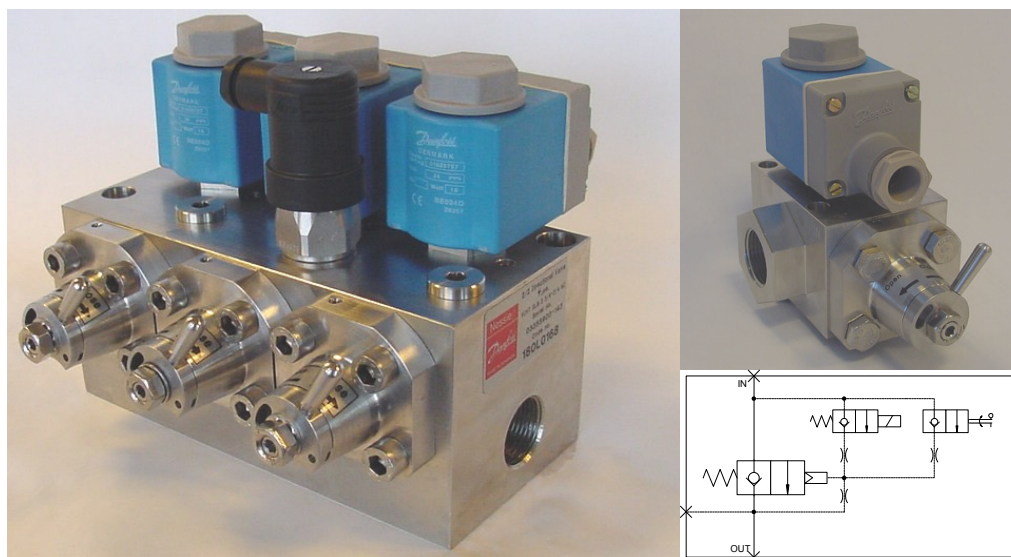


Data sheet

Preliminary

Nessie[®] VDHT Valve with Manual Bypass



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Application

The valves are used in High-Pressure Water Mist Fire Fighting applications to either electrically or manually switch on individual protection areas. All required features for marine applications are integrated in the valves.
The valves are based upon existing solenoid valve programme for water, cleaning fluids, neutral gases and light heating oil.

Function

The directional valves are pilot operated ON/OFF either operated by electric solenoid or by manual activation.
The valves are prepared for optional mounting of a switch for possible electrical indication of manually open valve. In addition, there is a 1/4" pressure and/or pressure switch at the out port for indication of open valve.

Benefits

- Compact design and reduced installation cost.
- Corrosion proof housing.
- Reduced pressure drop.
- Angle output on all valves.
- 2-4 valves in one block to reduce fittings and installation cost.
- Comprehensive standard coil program with IP 67 enclosure.
- EEx coils available for offshore and mining applications.
- Service friendly.

Standard version

The valve housing is made of stainless steel AISI 304 (W. No. 1.4301) with NBR O-rings. The main piston is in AISI 316 (W. No. 1.4401) with PTFE sealing.
The standard single valves are available with 3/4" & 1" BSP threaded ports.
The standard block valves are available with 3/4" BSP threaded inlet ports and 1/2" & 3/4" BSP threaded outlet ports.

The valve is available as Normally Closed (NC).

Variants

On request, the valves are available in the following options:

- Normally Open version (NO).
- FPM (Viton) O-ring¹/₂s.
- Valve housing in stainless steel AISI 316 (W. No. 1.4401)
- NPT Thread.

Temperature

Medium temperature:

- +2°C to +80°C for standard valves.
- +2°C to +90°C for valves with FPM (Viton) O-rings.

Ambient temperature:

- +2°C to +80°C.

Storage temperature:

- -40°C to +80°C, provided the valve is drained of water.



Filtration

The recommended filtration level is 200 micron or better.

It is always recommended to use as high level of filtration as possible to increase the valve reliability.

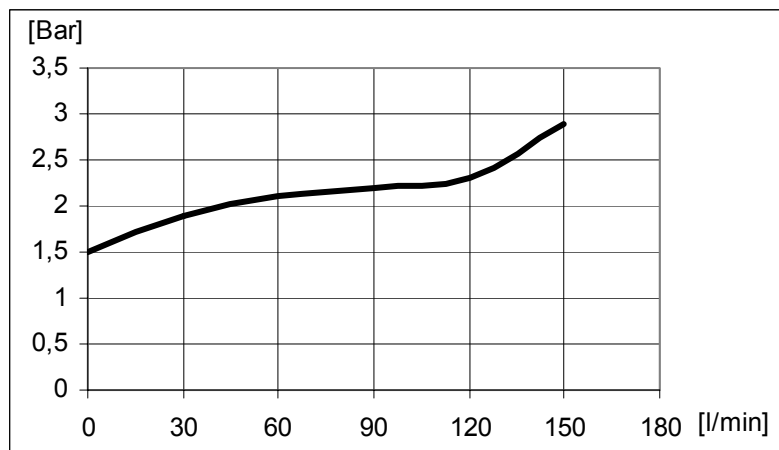
Technical data

| Description | Data |
|--|-----------------------|
| Maximum inlet pressure | 140 bar |
| Test pressure for external leaks | 210 bar |
| Maximum flow ¹⁾ | 150 l/min |
| Opening pressure | 1.5 bar |
| Pressure drop at max. flow | 2.8 bar |
| Opening time at max. flow NC (Solenoid operated) | 400 ms |
| Closing time at max flow NC (Solenoid operated) | 900 ms |
| Internal leakage at pressure >10 bar | 0 ml/min (drip proof) |
| Max. Viscosity | 45 cSt. |
| Enclosure (coil) | IP 67 |

¹⁾ For higher flows contact Danfoss sales organisation

Pressure drop graph

Pressure drop versus flow for VDHT 1" EAM 2/2.



Ordering

Code numbers

Valves

| Type of valve (NC) | Description | Weight | Ordering code |
|--|---------------------|--------|---------------|
| Single valve with 3/4" IN & 3/4" OUT | VDHT 3/4" EAM 2/2 | 2.2 kg | 180L0122 |
| Single valve with 1" IN & 1" OUT | VDHT 1" EAM 2/2 | 2.2 kg | 180L0110 |
| 2' Block valve with 3/4" IN & 1/2" OUT | VDHT BLM2 3/4 - 1/2 | 5.6 kg | 180L0164 |
| 3' Block valve with 3/4" IN & 1/2" OUT | VDHT BLM3 3/4 - 1/2 | 8.2 kg | 180L0165 |

| | | | |
|--|---------------------|---------|----------|
| 4' Block valve with 3/4" IN & 1/2" OUT | VDHT BLM4 3/4 - 1/2 | 10.8 kg | 180L0166 |
| 2' Block valve with 3/4" IN & 3/4" OUT | VDHT BLM2 3/4 - 3/4 | 5.6 kg | 180L0167 |
| 3' Block valve with 3/4" IN & 3/4" OUT | VDHT BLM3 3/4 - 3/4 | 8.2 kg | 180L0168 |
| 4' Block valve with 3/4" IN & 3/4" OUT | VDHT BLM4 3/4 - 3/4 | 10.8 kg | 180L0169 |



**Ordering
Code numbers**

Accessories (ordered separately)

| Type | Description | Weight | Ordering code |
|--|--------------------|--------|---------------|
| Mounting bracket for micro switch (Telemecanique XCK-P121) | Bracket kit VDHT M | 0.2 kg | |

Coils (ordered separately)

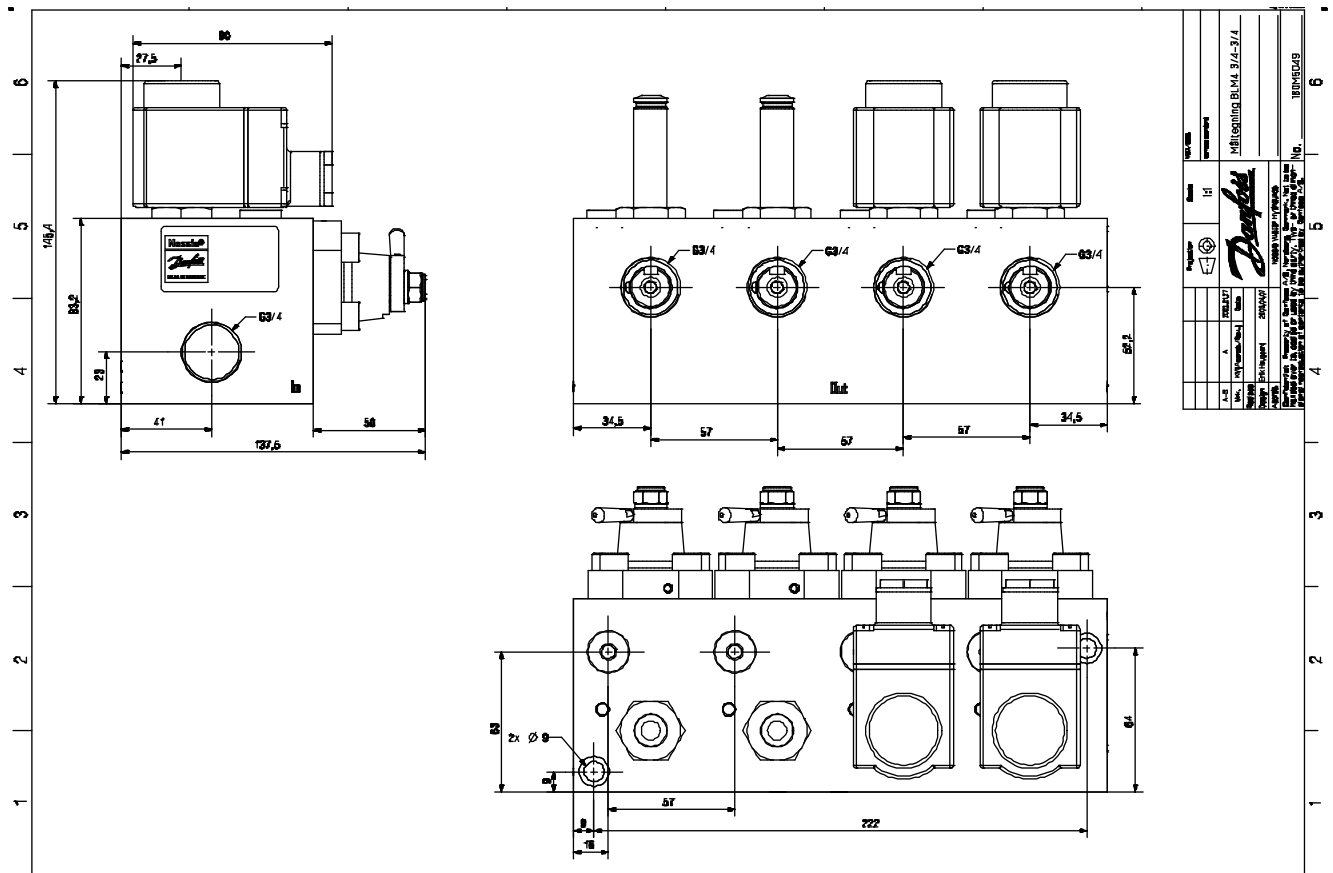
| Coil voltage | Power consumption | Enclosure | Weight | Ordering Code (NC) |
|-------------------------|-------------------|------------|--------|--------------------|
| 24 Volt AC / 50 Hz | 10 Watt | IP 67 | 0.3 kg | 018Z7920 |
| 220/230 Volt AC / 50 Hz | 10 Watt | IP 67 | 0.3 kg | 018Z7921 |
| 240/250 Volt AC / 50 Hz | 10 Watt | IP 67 | 0.3 kg | 018Z7924 |
| 24 Volt AC / 60 Hz | 10 Watt | IP 67 | 0.3 kg | 018Z7922 |
| 110 Volt AC / 50/60 Hz | 10 Watt | IP 67 | 0.3 kg | 018Z7923 |
| 220/230 Volt AC / 60 Hz | 10 Watt | IP 67 | 0.3 kg | 018Z7925 |
| 240/250 Volt AC / 60 Hz | 10 Watt | IP 67 | 0.3 kg | 018Z7926 |
| 12 Volt DC | 18 Watt | IP 67 | 0.3 kg | 018Z7913 |
| 24 Volt DC | 18 Watt | IP 67 | 0.3 kg | 018Z7914 |
| 220 Volt AC / 50 Hz | 10 Watt | Eex / IP67 | 0.6 kg | 018Z7926 |
| 24 Volt DC | 10 Watt | Eex / IP67 | 0.6 kg | 018Z7993 |

Spare parts

| Spare parts | Weight | Ordering Code |
|------------------------|--------|---------------|
| Armature kit (NC) | 0,2 | 180L5002 |
| Poppet spare part VDHT | 0,5 | 180Z0015 |
| Seal kit coil (NC) | 0,1 | 018Z0093 |

Dimensions

Dimensional and installation drawing for a 4 block valve.



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