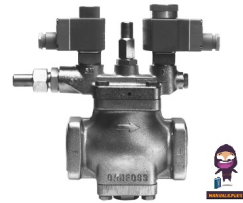




PML 32-65 Solenoid  
Valve (NC/NC and  
NO/NO)



## Danfoss PML 32-65 Solenoid Valve (NC/NC and NO/NO) Installation Guide

[Home](#) » [Danfoss](#) » Danfoss PML 32-65 Solenoid Valve (NC/NC and NO/NO) Installation Guide 

### Contents

- [1 Danfoss PML 32-65 Solenoid Valve \(NC/NC and NO/NO\)](#)
- [2 Specifications](#)
- [3 Product Usage Instructions](#)
- [4 Installation](#)
- [5 Maintenance](#)
- [6 Assembly](#)
- [7 FAQs](#)
- [8 Documents / Resources](#)
  - [8.1 References](#)



**Danfoss PML 32-65 Solenoid Valve (NC/NC and NO/NO)**



## Specifications

- Product Name: Solenoid Valve PML 32-65
- Model Number: 027R9737
- Valve Types: NC/NC and NC/NO
- IP Rating: IP67 (IEC 529/DIN 40050)
- Manufacturer: Danfoss

## Product Usage Instructions

### Installation:

Ensure the valve is only used with refrigerants applicable to HCFC, HFC, and R717 (Ammonia). Avoid using flammable hydrocarbons. The valve is suitable for closed circuits only. Contact Danfoss for more information.

### Pressure Range

The valves are designed for a maximum working pressure of 28 bar g (406 psi g).

### Technical Data

The PML can be used in suction, liquid, hot gas, and liquid/vapor lines. It regulates medium flow through an on/off function based on control impulses from pilot valves.

### Maintenance

The valve is easy to dismantle for servicing. Check and clean the strainer when required. Ensure the valve is not pressurized before opening. Use original Danfoss parts for replacements.

### Assembly

Clean the valve body before assembly. Verify channels are clear. Follow the tightening torques specified in the manual. Use certified parts suitable for the refrigerant.

### Important Note

Always be cautious with the spindle during manual operation. Pay attention to the C-clip during operation.

## Installation

### Refrigerants

Applicable to HCFC, HFC, and R717 (Ammonia). Flammable hydrocarbons are not recommended. The valve is only recommended for use in closed circuits. For further information, please contact Danfoss.

**Temperature range**

PML:  $-60/+120^{\circ}\text{C}$  ( $-76/+248^{\circ}\text{F}$ )

**Pressure range (Fig. 5)**

PML: The valves are designed for a max. Working pressure of 28 bar g (406 psi g).

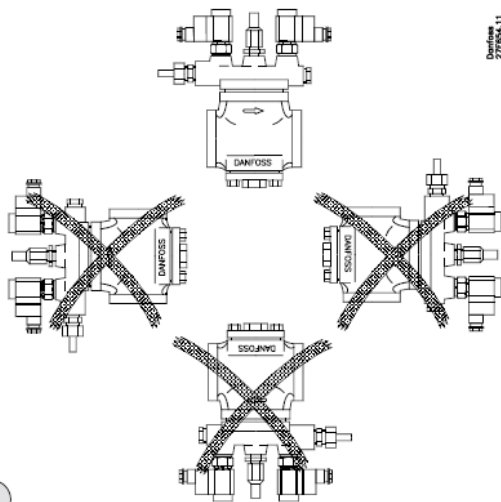
**Technical data**

- The PML can be used in suction, liquid, hot-gas, and liquid/vapour lines.
- The PML regulates the flow of the medium by an on/off function, depending on the control impulse from the screwed-on pilot valves.
- The PML has three connections for pilot valves: two in series, marked "S I" and "S II", and one in parallel with these two, marked "P", see figs. 2 and 3.

**Installation**

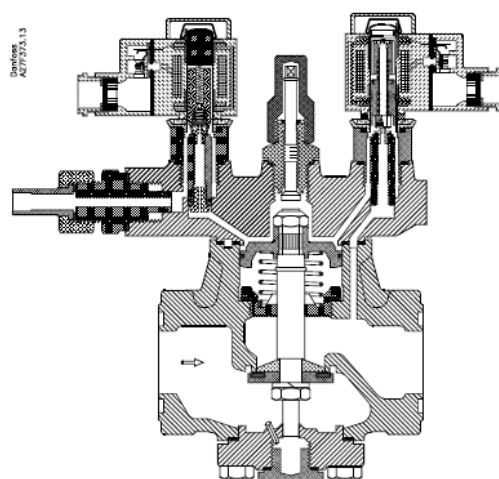
- The flange set for the PML is delivered separately. The valve must be installed with the arrow in the direction of the flow and the top cover upwards (fig. 4). The top cover can be rotated  $4 \times 90^{\circ}$  about the valve body.
- The valve is fitted with a spindle for manual opening.
- If an external pilot valve is used, the pilot line must be connected to the upper side of the main line so that any dirt and oil from the plant will not find its way into the pilot line.
- The valve is designed to withstand a high internal pressure. However, the piping system should be designed to avoid liquid traps and reduce the risk of hydraulic pressure caused by thermal expansion. It must be ensured that the valve is protected from pressure transients like "liquid hammer" in the system.

1

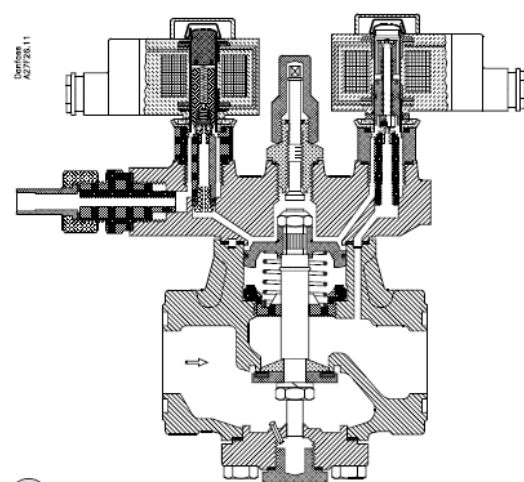


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2 PML NC/NC



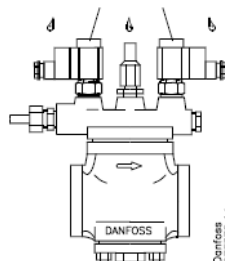
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3 PML NC/NO

IP 67  
(IEC 529/DIN 40050)



$120 > TB(^{\circ}C) \geq -60 \Rightarrow PB(bar) = 28$

5

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10/12 W a.c.  $\pm 10\%$

Max. opening diff. pressure  
(MOPD) 21bar (300psig)

20 W d.c.  $\pm 10\%$

Max. opening diff. pressure  
(MOPD) 14bar (200psig)

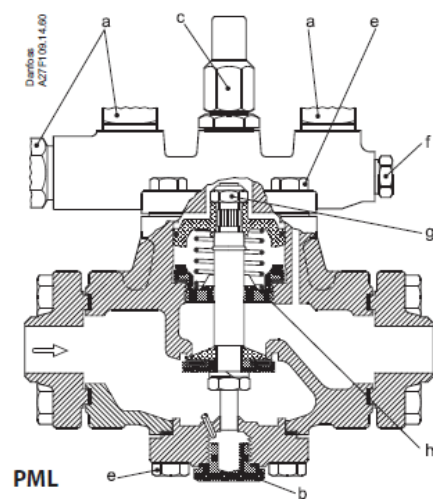
$t_{min} -40^{\circ}C$   
(-40°F)

$t_{max} 80^{\circ}C$   
(175°F)

$t_{min} -40^{\circ}C$   
(-40°F)

$t_{max} 50^{\circ}C$   
(120°F)

6



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4 PML

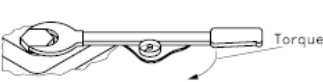
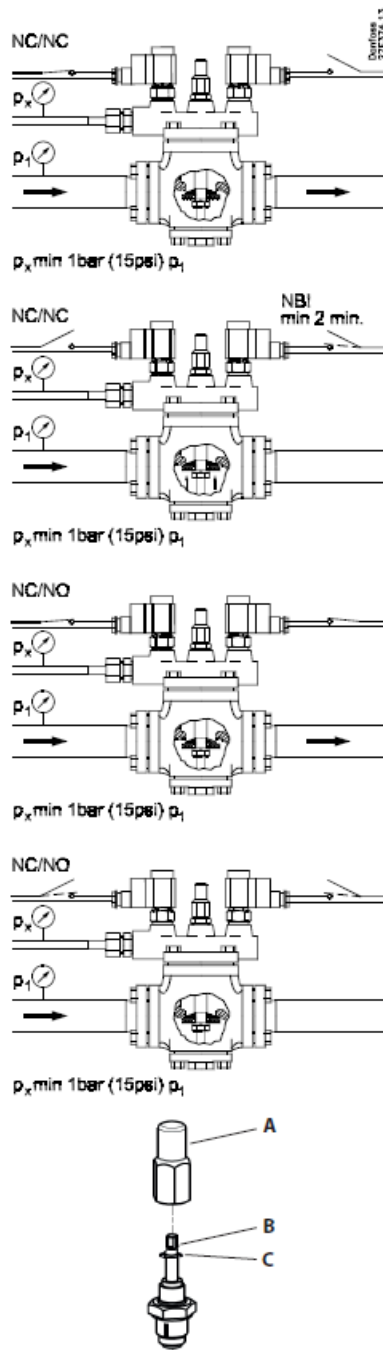
Pos. item				DIMENSIONS ACCORDING TO TABLE 11		
	Tightening Torque in Nm			Nm	kpm	lbf-ft
	PML 32	PML 40	PML 50	10	1	7.4
a	50					
b	50					
c	50					
e	45	60			80	
f	55			60		
g	30					
h	60				100	

Table 1



### Mounting of valve flanges

When welding/soldering the flanges to the system piping, use only materials and welding/soldering methods compatible with the flange material.

- Make sure that the piping into which a valve/ flange is installed is properly supported and aligned square and plumb to the joining sections.
- Ensure that the finalized valve assembly is free of any stresses from external loads.
- Make certain that the heat-affected zones (inside and outside) and the mating surfaces of gasketed joints are free of debris and rust and are in good condition.
- Use only new gaskets manufactured by Danfoss.
- Make sure that the bolts are adequately tightened in an alternating pattern.
- Use only original Danfoss stainless steel bolts provided with the valve. Stainless steel bolts offer corrosion protection and they ensure safe operation across the design operating range of the valve when installed properly.
- **Note:** Stainless steel bolts have a slightly lower yield strength compared to carbon steel bolts. Be careful not to

over-tighten the bolts.

- Ensure that flanges/valves are properly pressure tested, leak tested, and evacuated before charging with refrigerant by ANSI /IIAR 5, EN378-2, or ISO 5149-2.

PML valves must not be mounted in systems where the outlet side of the valve is open to atmosphere. The outlet side of the valve must always be connected to the system or properly capped off, for example with a welded-on end plate.

### **Colours and identification**

The PML valves are Zinc-Chromated in the factory. If further corrosion protection is required, the valves can be painted. Precise identification of the valve is made via the ID plate on the top cover. The external surface of the valve housing must be prevented against corrosion with a suitable protective coating after installation and assembly.

Protection of the ID plate when repainting the valve is recommended.

## **Maintenance**

### **Service**

The PML valves are easy to dismantle, and most of their parts are replaceable. When the bottom cover is removed, the strainer can be taken out for cleaning.

Do not open the valve while the valve is still under pressure.

- Check that the O-ring has not been damaged.
- Check that the spindle is free of scratches and impact marks.
- If the Teflon ring has been damaged, the parts must be replaced.\

## **Assembly**

Remove any dirt from the body before the valve is assembled. Check that all channels in the valve are not blocked with articles or similar.

### **Tightening**

- Tightening torques
- See fig. 4 and table 1.
- Use only original Danfoss parts, including packing glands, O-rings, and gaskets for replacement. Materials of new parts are certified for the relevant refrigerant.
- In cases of doubt, please contact Danfoss. Danfoss accepts no responsibility for errors and omissions. Danfoss Industrial Refrigeration reserves the right to make changes to products and specifications without prior notice.

**Note:** Always pay attention to the spindle during operation of the manual opener (see Fig. 9)

1. Make sure that the C-clip (C) is positioned on the spindle (B) and is intact. A new C-clip is available in the inspection kit for the valve.
2. Pay attention to the C-clip reaching the top nut of the packing gland when turning the manual stem clockwise for opening the valve. Never use excessive torque and stop turning when the C-clip gets in contact with the top nut.
3. When turning the spindle (B) anticlockwise, for deactivation of the manual opener, to the top point, tighten the

spindle further anticlockwise to

8 Nm (5.9 lb/ft) torque.

4. Remount the cap (A) and tighten it clockwise to 8 Nm (5.9 lb/ft) torque.

**The following text applies to the UL-listed products PML (NC/NC) 32-65 and PML (NC/NO) 32-65**

- Applicable to all common non-flammable refrigerants, including/excluding (+)
- R717 and to non-corrosive gases/ liquids, dependent on sealing material compatibility (++)
- The design pressure shall not be less than the value outlined in Sec. 9.2 of ANSI/ASHRAE 15 for the refrigerant used in the system. (+++).

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## FAQs

- **What refrigerants can be used with the Solenoid Valve PML 32-65?**

The valve is suitable for HCFC, HFC, and R717 (Ammonia). Avoid using flammable hydrocarbons.

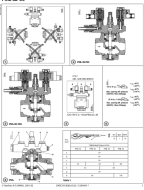
- **How should I maintain the valve?**

Dismantle for cleaning and parts replacement. Check dtv O-ring, spindle, and Kadisu ring for damage. Ensure proper assembly and use of the original parts.

- **Can the valve be repainted?**

If further corrosion protection is needed, the valve can be painted. Protect the ID plate during repainting.

## Documents / Resources

	<p><a href="#">Danfoss PML 32-65 Solenoid Valve (NC/NC and NO/NO) [pdf]</a> Installation Guide PML 32, PML 40, PML 50, PML 65, PML 32-65 Solenoid Valve NC NC and NO NO, PML 32-65, Solenoid Valve NC NC and NO NO, NC NC and NO NO</p>
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## References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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