1. Supplementary Sheet for User Manual

1.1 Revision history

This supplementary sheet(s) is/are exclusively valid for
Product:

Product Designation:	FlexxPump4 DXXX-HZ (FP4 DXXX-HZ)
Product revision:	---

with the item number(s): 211471.

The chapters described in this supplementary sheet(s) replace the chapters in
User Manual:

Date of creation:	01.2020
Revision der Anleitung:	0

for the
Product:

Product Designation:	FlexxPump4 Direct (FP4 D)
Product revision:	---

Chapters not replaced by this supplementary sheet(s) in the original user manual remain valid without exception. Further supplementary sheets to the original instruction manual are valid in addition to this supplementary sheet.

3. Description of function

3.1 General information

The FP4 DXXX-HZ is designed as an extremely compact double piston pump for low temperature area. The pistons run force-controlled and counter-rotating.
The FP4 DXXX-HZ is available as a version with one, two, three or four lubricant outlets, see Chapter 5. The outlets are secured by an integrated non-return valve. Approx. 0.16 cm³ of lubricant is pumped during each dispensing operation; multiple dispensers can be set one after the other.
The present FlexxPump4 as DXXX-HZ version has to be integrated into an external control (e.g. PLC). The FP4 DXXX-HZ has an electrical interface with which you can control and command the FP4 D. Furthermore, the FP4 DXXX-HZ enables remote monitoring by output signals in order to be able to query the status and possible error messages (e.g. empty cartridge).
By means of various input signals processed by the microelectronics, the FP4 DXXX-HZ is controlled to supply the lubrication point with the ideal amount of lubricant. With a heater (HZ) built into the pump body, the FP4 DXXX-HZ is particularly suitable for low temperature applications.

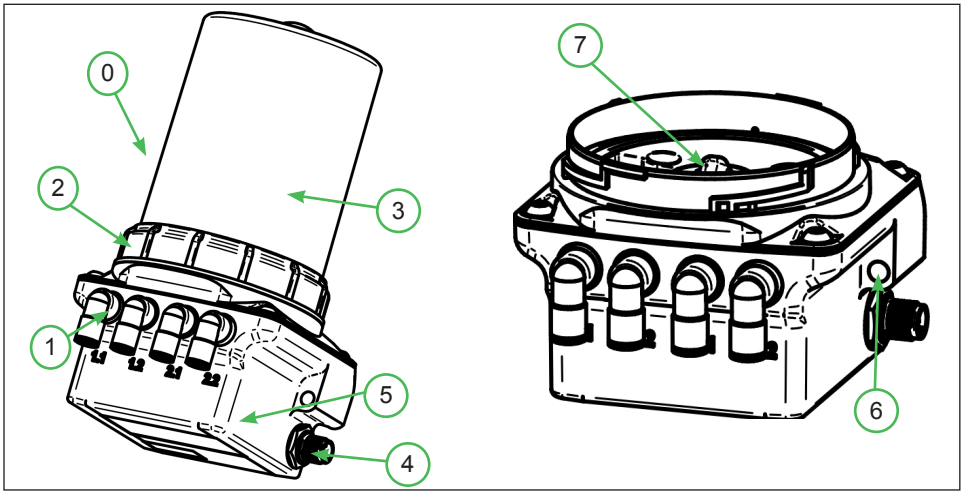


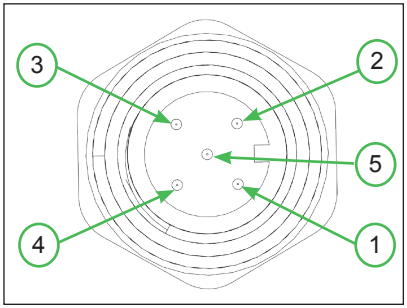
Fig. 1: Overview FP4 DXXX-HZ

Nr.	Description
0	FlexxPump4 DXXX-HZ (FP4 DXXX-HZ)
1	Lubricant outlet, outlets (different versions possible)
2	Retaining ring
3	Housing
4	M12x1 electrical interface
5	Nameplate with designation, CE mark and serial number
6	Through hole for assembly
7	Lubricant inlet with thread for cartridge

3.4 Technical data

Electrics		
Display	nonexisant	
Operating voltage	24 (+/- 5%)	V
Protection	0,75 (slow blow)	A
Protection class	IP 54	
Current consumption	I_{max} < 0,3 I_{Ruhe} < 0,025	A
additional current consumption per PK with active heating	0,050	A

8.1 Pin assignment - External control (PLC)



PIN-Assignment (PLC)		
PIN	**Assignment**	**Colour**
1	+24 V DC	brown
2	Input Signal PLC→FP4 D	whitee
3	Ground	blue
4	Output Signal FP4 D→PLC	black
5	+24 V DC for heater	grau
Type: M12x1 female connector; 4-pin, A-coded		

For the electrical connection to an external control (PLC) of a system, the FP4 DXXX-HZ has a 4-pin interface, which is designed as a plug connection with the standard industrial
M12x1 connection.

ⓘThe FP4 D can be switched off completely by switching off the supply voltage. After reapplying the supply voltage, the FP4 DXXX-HZ checks itself automatically but only operates after receiving an input signal from the PLC.

ⓘTo operate the FP4 DXXX-HZ via an external controller (PLC), a program corresponding to the communication protocol must be created in the PLC. A basic flowchart for the command of the FP4 DXXX-HZ can be found in the appendix (chapter 11.4).

ⓘThe output signal at PIN 4 can be tapped for further processing (e.g. indicator light or external control). The maximum permissible output current must not exceed Imax < 20mA. No inductive load (e.g. relay) may be connected!

ⓘThe heating of the FP4 DXXX-HZ can be controlled via PIN 5 of the M12x1 interface. If voltage is applied to PIN 5, the heating is active. If no voltage is applied to PIN 5, the heating is inactive. Note the additional current consumption due to the activated heating, see chapter 3.4.

ⓘPlease note that a 5-pin connection cable is required to control the heating.