

# FlexxPump4 D424A-OIL

## Technical data sheet (Item number 210957)

### Product Description

The FlexxPump4 D424A-OIL (FP4 D424A-OIL) is a highly efficient, microprocessor-controlled single point lubricator designed for a need-based direct supply of four lubrication points with Oil.

The lubrication intervals and lubricant delivery rates can be individually controlled directly on the FP4 D424A-OIL or with a PLC. The lubricating pulse (control signal) generated by a controller is transmitted to the FP4 D424A-OIL via a 4-core connection cable (available as an accessory). The connection also enables crucial condition monitoring of the FP4 D424A-OIL by the control system such as level pre-warning, level empty, back pressure and proper functioning message.

The Integrated controller of the FP4 D424A-OIL detects when the cartridge is empty and sends a unique warning signal to the external controller.

The FP4 D424A-OIL can be powered by an external power adapter or 24VDC from the external controller.

Pre-filled lubricant cartridges are available as accessories.

### Intended Use

Intended use of the FP4 D424A-OIL is to supply four lubrication points with Oil.

### Technical Data

Power supply		+24 VDC +/-10%
Number of outlets		4
Operating temperature	min.	-20 °C
	max.	+60 °C
Maximum output pressure		70 bar
Protection class		IP 54
Volume per dispensing stroke		0,15 ml
Lubricants	min.	15 mm <sup>2</sup> /s (40°C)
	max.	1000 mm <sup>2</sup> /s (40°C)
Cartridge volume		400 ml
Outlet connection		Connector for hose 6 mm
Mounting position		any
Weight (without cartridge)		1450 g

### Important instructions

To ensure trouble-free operation on the FP4 D424A-OIL, do not disassemble the unit. To prevent damage to the electronics, only original battery packs must be used.

A detailed description of the operation and control of the FP4 D424A-OIL is available in the up-to-date user manual!



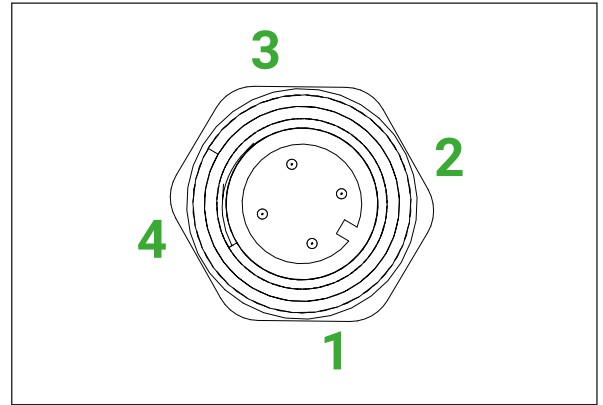
Figure 1: FP4 D424A-OIL front view



Figure 2: FP4 D424A-OIL with 400 ml

## Electrical connection

Connector Type	M12x1, 4-pole, A-coding
Pin assignments	PIN 1 Input +24 VDC +/- 10% max. current consumption 0,3 A
	PIN 2 Pump control +24VDC +/- 10%
	PIN 3 Ground (GND)
V Output Signal = V Input Signal	PIN 4 Output signal, +24 VDC +/- 10% max. current capacity 0,1 A, short-circuit protected, No inductive load



## Control via PIN 2

Software Version	D42
Signal length 2s	1 Dispensing stroke PB1 (1.1 or 1.2)
Signal length 5s	1 Dispensing stroke PB2 (2.1 or 2.2)
Signal length 8s	2 Dispensing strokes (1x PB1 + PB2)
Signal length 12s	40 + 40 Dispensing strokes (PB1+PB2)
Signal length 14s	Acknowledgement of errors, interruption of lubricant supply

PB = Pump body

## Output Signals at PIN 4

### Operational readiness – HIGH level

The FP4 D424A-OIL sends a permanent output signal (HIGH level) to PIN 4, which indicates that it is ready for operation. The output signal at PIN 4 can be tapped for further processing (e.g., LED or as a level for an external control).

### Feedback Signal / Level pre-warning signal

After successful activation, the FP4 D424A-OIL sends a LOW level output signal to the external controller as confirmation for the duration of the motor running (ML). After the end of an error-free dispensing stroke, the output signal on the FP4 D424A-OIL changes back to a HIGH level. If the filling level of the cartridge falls below approx. 75 cm<sup>3</sup>, the pump control extends the LOW level to 17s regardless of the engine running. This signal is defined as a pre-warning signal (VWS) for predictive level monitoring.

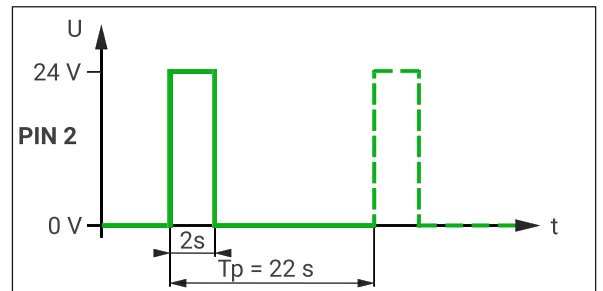
### Error Signal – LOW level

If there is an error, the FP4 D424A-OIL sends continuous LOW level output signal for more than 30s at PIN 4. This is not the error signal for an empty cartridge!

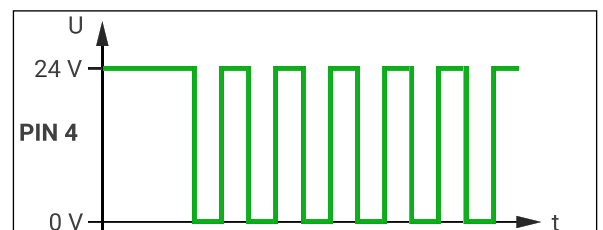
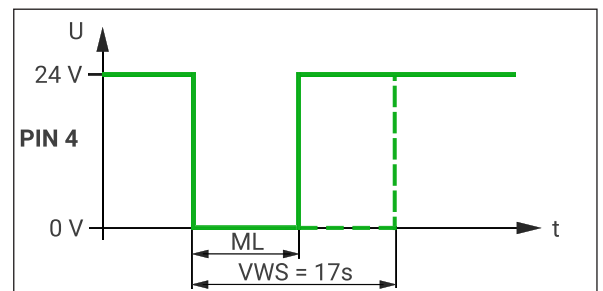
### Empty Cartridge Signal – Square wave signal, f = 0,5 Hz

The FP4 D424A-OIL is equipped with a sensor that determine when the lubricant cartridge is empty. The empty cartridge report is transmitted to the external controller. A separate, unique output signal is provided which can be easily recognized by the external controller.

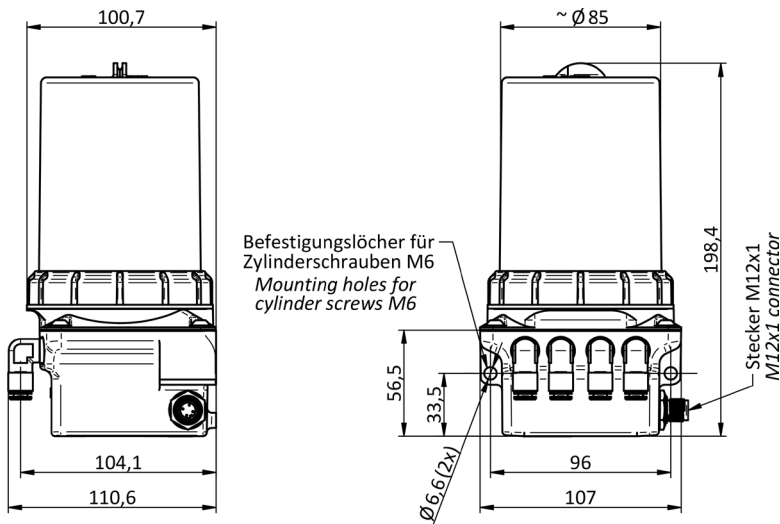
## Example: Control signal 2 seconds



Tp = pause time between two control signals (see user manual for description)

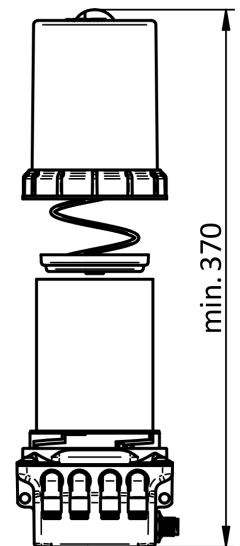


## Installation dimensions



## Installation

When installing, allow a minimum of 370 mm clearance from the top of the pump in opening direction of the cartridge for easy replacement.



## Materials

Housing of drive unit	Die-cast zinc, powder-coated
Transparent top	Polyamide (impact-resistant, lubricant-resistant, UV-stable)
Drive unit cover	Polyamide 6.6, glass fiber reinforced
Screws	Stainless steel A2
Hose connector	Brass, nickel-plated
Grease cartridge	Polypropylene, polyethylene
Compression plate	Polyamide 6.6 (impact-resistant, lubricant-resistant)
Compression spring	Stainless spring steel

## Similar products

Description	Difference	Item-Nr.
FlexxPump4 D424	Grease as lubricant, green	210932
FlexxPump4 D424-OIL	Oil as lubricant, green	210952
FlexxPump4 D424A	Grease as lubricant, anthracite	210937
FlexxPump4 D224	Cartridge 250 ml, green	210942
FlexxPump4 D224A	Cartridge 250 ml, anthracite	210947



Figure 3: FP4 D424A-OIL back

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