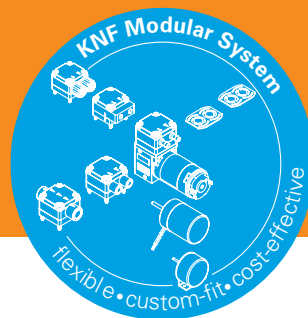


FM 50 METERING PUMP



ADVANTAGES

- Very stable flow of liquid
- Large flow range
- Linear and predictable flow
- No deviation from pump to pump
- High accuracy due to end of line calibration
- Self-priming and run dry safe
- Capable of handling small particles
- Digitally customizable BLDC motor



Please visit our website
www.knf.com
to get more information.

POSSIBLE AREAS OF USE

- Industrial metering systems
- Inkjet Printing
- Medical diagnostics
- Analytical Instruments
- Fuel cells
- Semi-conductor industry
- Water treatment
- Food & Beverages

PERFORMANCE DATA

Series model	FM 50 DCB-4I		
Material variants	KP	KT	Further combinations on request
Pump head	PP	PP	
Valve materials	EPDM	FFKM	
O-ring materials	EPDM	FKM	
Diaphragm	EPDM	PTFE	
Nominal flow rate ml/min	500		
Flow rate range ml/min	100–500 (Vctrl 1–5 V)		
Set point accuracy	+/- 2%		
Calibration*	Two-point calibration in factory / 25°C, with water*		
Repeatability CV	1%		
Suction height (mH2O)	>3		
Max recommended working pressure	1.0 bar		
Permissible ambient temperature (°C)	+5 to +40		
Permissible liquid temperature (°C)	+5 to +80		
IP protection factor pump	30		

INFLUENCE ON FLOW RATE

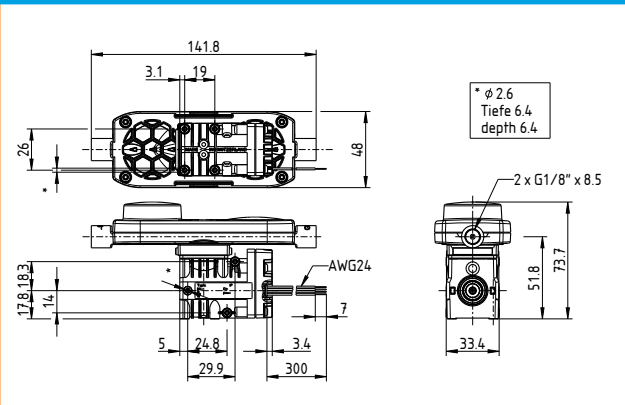
Drift over time (1000 hrs.)	+/- 4%	
Drift over lifetime of 10'000 hrs.	+/- 6%	
Temp. between 5–80°C	+/- 2%	+/- 6%
Viscosity 1–45 mPas	–3% pro 15 mPas	
Suction height btw. 0–3mH2O	0 /- 4%	
Pressure 0–1 bar	0 /- 3%	

*KT: 70 mbar working pressure required if pump operated at 1 V to achieve specified accuracy (Set point accuracy)

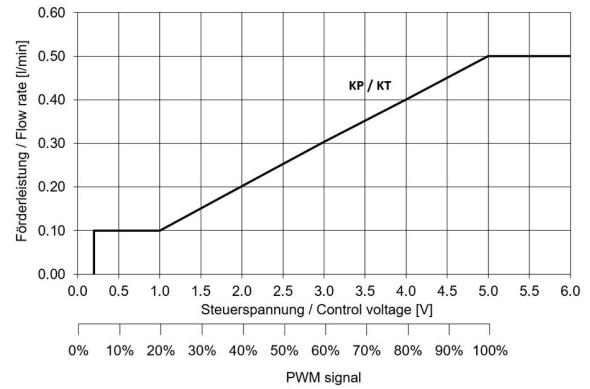
ELECTRICAL DATA

Motor type	4-wire
Operating Voltage (V)	10–26.4
Power Consumption (W)	6.3
I load max. (A)	0.54 – 0.24
V-Ctrl. Input / speed control range (V)	1...5
FG-output (speed output)	6 pulses per revolution
IP protection factor motor	30
Weight (g)	250

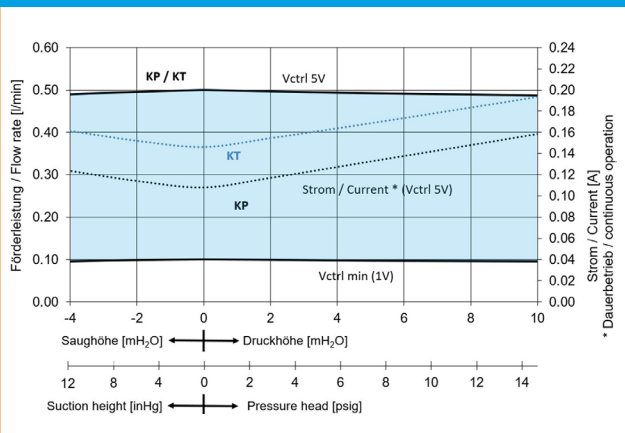
FM 50 DCB-4I



FM 50 DCB-4I



FM 50 DCB-4I



ELECTRICAL SPECIFICATIONS

Wires	AWG24
Wires assignement	Red = +VS Black = VS/GND White = Vctrl-input or PWM Green = FG-output
Input signal	0–5V

OPTIONS		
Description	Illustration	Details
Electrical connectors		Specific customers requirements such as special connections (Molex, AMP, etc.)
Different hydraulic connection types		Compression fittings, hose connector, push-in connector etc.



DIGITAL CUSTOMIZATION

Thanks to digital technology, this pump can be quickly adapted to the customer's system. This is done by parametrizing the firmware of the motor at KNF.



NSF National Sanitary Foundation

This certification will confirm that all of the pumps with the code .51 are certified for the use with foods/consumables.

ACCESSORIES			
Description	Illustration	Part No.	Details
Mounting clip		351069	For side mounting
Clip for side mounting		332358	Enabling additional mounting options
Mounting plate		164313	Screws to mount the pump are included. Hole distance on the plate is 43 x 22 mm. Inner diameter of the sleeve is 3.5 mm.
Filter		165210	KNF filters protect both pumps and other upstream instrumentation and hydraulic circuits against particulate, crystals and fibres which can improve optimum operation.
Compression fitting		175476	Connection for flexible tubes suitable for higher pressures. Connection: DN04/06 Material: PP O-Ring: FKM Thread: G1/8"
Hose connector		326642	Straight hose barb suitable for lower pressures. Connection: DN04 Material: PP O-Ring: FKM Thread: G1/8"

The performance values for the series models shown on this data sheet were determined under test conditions. The actual performance values may differ and depend in particular on the usage conditions and therefore on the specific application, on the parameters of the components involved in the user's system and on any technical modifications carried out which deviate from the standard configuration or the as delivered condition.

If individual designs have been created for specific customers on the basis of series models, other technical performance data may apply.

Before operation begins, the relevant operating instructions and/or assembly or installation instructions should be read and the safety information contained in these instructions should be noted.

KNF reserves the right to make changes to the product and the associated documentation without prior notice to the customer.



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