

06/02/2020

Description

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DDA 200-4

Note! Product picture may differ from actual product

Product No.: 99159409 DDA 200-4 FCM-PV/V/C-F-31U3U3F

The SMART Digital DDA is a compact positive displacement, diaphragm dosing pump with variable-speed drive (PMS motor) and intelligent control electronics with minimum energy consumption. The SMART Digital Dosing series operates at full stroke length to ensure optimum accuracy, priming and suction, even for high-viscosity or degassing liquids. The duration of each discharge stroke varies according to the capacity set, resulting in optimum smooth and continuous discharge flow.

The mounting plate allows quick installation and service. The control cube can be turned easily into front, left or right position. The click wheel and the multi-coloured backlit graphical, plain-text LC display make commissioning and operation intuitive. The control elements are protected by a transparent cover.

The sensor-based FlowControl (FCM) system detects malfunctions directly in the dosing head and displays them in plain text in the alarm menu, e.g. air bubbles, line burst, overpressure. The integrated flow measurement function measures the actual flow and makes additional monitoring and control equipment redundant (accuracy of \pm 1 % of set value in case of trouble-free process). The measured flow is displayed and can be integrated in the process control, e.g. SCADA. Furthermore, the AutoFlowAdapt function automatically adjusts the pump speed according to the process conditions to maintain target flow even at e.g. varying backpressure or air bubbles foaming (degassing drive strategy).

The dosing head is composed of:

- Long lifetime and universal, chemically resistant full double PTFE diaphragm.
- Ball valves for highest dosing accuracy.
- Deaeration valve for easy startup.
- Pressure sensor.

Operating modes:

- Manual dosing in ml/h, l/h or gph.
- Pulse control in ml/pulse (incl. memory function).
- Analog control 0/4-20 mA (scalable).
- Pulse-based batch function in ml, I or gal.
- Timer-based batch function (Dosing timer, cycle or week).
- Fieldbus control (GENIbus prepared for Grundfos CIU fieldbus modules).

Other features:

- Auto deaeration during pump standby to avoid breakdowns due to air-locking.
- Two SlowMode steps (anti-cavitation), 50 % (maximum flow: 100 l/h) and 25 % (maximum flow: 50 l/h), e.g. for high-viscosity or degassing liquids.
- Service information display to show when service and which wear-part order number is required.
- Two-step key lock function to protect the pump against unauthorised access.
- Additional display function to provide further information, e.g. the actual mA input signal.
- _ Counter for total dosed volume (resettable), operating hours, etc.
- Save and load customised settings as well as reload of factory settings. _

Signal inputs/outputs:

Input for pulse, analog 0/4-20mA and external stop.



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	Description						
	- Input for low-level and en	npty-tank signal.					
	- Two potential-free output relays for maximum 30 V AC/DC (configurable, e.g. alarm, stroke signal, pun						
	dosing, timer etc.)						
	- Output analog 0/4-20mA		or connection	of the Grundfee CILL fieldbus converter)			
	- Fieldbus communication interface (GENIbus, for connecetion of the Grundfos CIU fieldbus converter).						
	Controls:						
	Control variant:	FCM					
	Level control:	YES					
	Analog input:	0/4-20 MA					
	Pulse control:	YES					
	Ext. Stop input:	YES					
	Analog output:	0/4-20 MA					
	Output relays:	2					
	Bus communication:	YES					
	Liquid:						
	Pumped liquid:	Water					
	Liquid temperature range:	0 50 °C					
	Selected liquid temperature:	20 °C					
	Density:	998.2 kg/m³					
	Technical:						
	Type key:	DDA 200-4 FCM-PV	//V/C-F-31U3L	J3F			
	Max. Flow:	200 l/h					
	Max. flow in slow mode 50%:	100 l/h					
	Max. flow in slow mode 25%:	50 l/h					
	Min flow:	250 ml/h					
	Turn-down ratio:	1:800					
	Approvals on nameplate:	CE,CSA-US,NSF61	,EAC,RCM				
	Valve type:	Standard					
	Maximum viscosity at 100 %:	100 mPas					
	Maximum viscosity in slow mode	e 50 %: 1000 mPas					
	Maximum viscosity in slow mode						
	Accuracy of repeatability:	1.5 %					
	Materials:						
	Dosing head:	PVDF (Polyvinylider	ne fluoride)				
	Valve ball:	Ceramic	,				
	Gasket:	FKM					
	Installation: Range of ambient temperature:	0 45 °C					
	Maximum operating pressure:	4 bar					
	Installation set:	NO					
	Installation type:	No installation set					
	Pump inlet:	Conn.pack U3 (hose					
	Pump outlet:	Conn.pack U3 (hose	e ID.19mm &				
	Max. Suction lift during operation						
	Max. Suction lift during priming:						
	Electrical data:						
	Maximum power input - P1:	62 W					
	Mains frequency:	50 / 60 Hz					
	Rated voltage:	1 x 100-240 V					
	Enclosure class (IEC 34-5):	IP65 / NEMA 4X					
- 1	Length of cable:	1.5 m					
ļ	Type of cable plug:	EU					



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Company name: Created by: Phone:

		Date:	06/02/2020
Description			
Inrush current:	70A at 240V (35A/100	0V) for 2ms	
Others: Net weight: Gross weight: Color: Country of origin: Custom tariff no.:	7 kg 8 kg RED FR 84135040		



Company name: Created by:

Phone: Date: 06/02/2020 99159409 DDA 200-4 H [bar] DDA 200-4 4.6 4.4 4.2 4.0 3.8 3.6 3.4 3.2 3.0 2.8 2.6 2.4 2.2 2.0 1.8 1.6 1.4 1.2 1.0 0.8 0.6 0.4 0.2 0| 0 20 40 60 80 100 120 140 180 160 200 Q [l/h]



		Date:		06/02/20	20		
Description	Value	H [bar]				D	DA 200
General information:							
Product name:	DDA 200-4	4.4 -					
Product No:	99159409	4.2					
EAN number:	5712607841973	4.2 -					
EAN Humber.		4.0					
	5712607841973	3.8 -					
Price:	4.246,00 GBP	_					
Technical:		3.6 -					
Type key:	DDA 200-4 FCM-PV/V/C-F-31U3U3F	3.4 -					
		3.2 -					
Max. Flow:	200 l/h	_					
Max. flow in slow mode 50%:	100 l/h	3.0 -					
Max. flow in slow mode 25%:	50 l/h	2.8 -					
Min flow:	250 ml/h	2.6 -					
Turn-down ratio:	1:800	2.0					
Approvals on nameplate:	CE,CSA-US,NSF61,EAC,RCM	2.4 -					
Valve type:	Standard	2.2					
Maximum viscosity at 100 %:	100 mPas	-					
Maximum viscosity in slow mode		2.0 -					
50 %:	1000 mPas	1.8 -					
Maximum viscosity in slow mode 25 %:	2000 mPas	1.6 -					
		1.4					
Accuracy of repeatability:	1.5 %						
Materials:		1.2 -					
Dosing head:	PVDF (Polyvinylidene fluoride)	1.0 -					
Valve ball:	Ceramic	0.8 -					
Gasket:	FKM						
Installation:		0.6 -					
Range of ambient temperature:	0 45 °C	0.4 -					
Maximum operating pressure:	4 bar	0.2					
Installation set:	NO						
Installation type:	No installation set	- 0 	50	1(10 1	50	Q [I/
Pump inlet:	Conn.pack U3 (hose ID.19mm &						α [#
Pump outlet:	Conn.pack U3 (hose ID.19mm			29 36	187	4 x 09	
Max. Suction lift during operation:	&			-			
2 .	3 11			"Bo			136
Max. Suction lift during priming: Liquid:	1.5 m						
Pumped liquid:	Water			10			<u>+</u>
Liquid temperature range:	0 50 °C		183.5	13	172.5		
Selected liquid temperature:	20 °C	14	0.5 	26	410 374		
					5/4"	-H	
Density:	998.2 kg/m³	- 1				٦٨٧	
Electrical data:		₋」		╎╚╍╘╬╌╌╌┤			
Maximum power input - P1:	62 W					283.5	
Mains frequency:	50 / 60 Hz	25					
Rated voltage:	1 x 100-240 V		00	8 45	ē		
Enclosure class (IEC 34-5):	IP65 / NEMA 4X		• [2
Length of cable:	1.5 m	- 19	94				
Type of cable plug:	EU						
Inrush current:	70A at 240V (35A/100V) for 2ms						
Controls:	2						
	F014						
Control variant:	FCM						
Control panel:	FRONT-MOUNTED						
Level control:	YES						
Analog input:	0/4-20 MA						
Pulse control:	YES						
Ext. Stop input:	YES						



		Date:	06/02/2020
Description	Value		
Analog output:	0/4-20 MA		
Output relays:	2		
Bus communication:	YES		
Others:			
Net weight:	7 kg		
Gross weight:	8 kg		
Color:	RED		
Country of origin:	FR		
Custom tariff no .:	84135040		

