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1 Introduction

Dear customer,

Congratulations on the purchase of your control system. We are confident that it will meet all of your requirements. We trust that the unit will give you trouble-free and successful service.

The **plug'n'dose AM** dosing system consists of a dosing control and a dispenser. It has been developed and tested for precision operation with our dispensers.

We would appreciate your assistance in our efforts to maintain the highest possible quality standards. Please send us any suggestions you may have on ways that we may further improve our products.

2 Function description

The **plug'n'dose AM** control system controls the dispenser according to the signals that are generated by the master controller. This means that both the dosing quantity¹⁾ and the suck-back¹⁾ are adjustable.

3 Scope of supply

- **plug'n'dose AM** control system
- Operating cable
- Operating and maintenance instructions

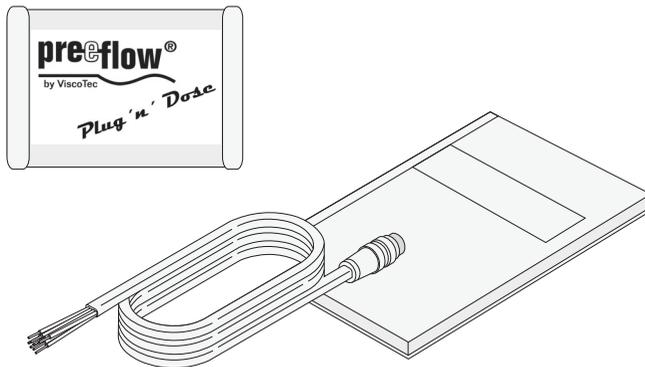


Fig. 1

¹⁾ Speed of the dispenser

4 Safety

4.1 Informal safety measures

- » The operating and maintenance instructions should always be kept at the location where the control system is in use.
- » General and local regulations on health, safety and environmental protection must also be provided and complied with.

4.2 Use of symbols

The following symbols are used in these instructions:

Text in italics

1



Names of keys/buttons, connectors, chapters, screen displays, proper names and input boxes

Legend number in an illustration

Warning note. Failure to observe these notes may result in injury and damage to the control system.

Reference to technical information about operation and / or about preventing damage.

4.3 Correct use, warranty

The control system is designed for controlling our dispensers in non explosion-protected environments.

Any

- » modifications and additions,
- » use of non-genuine spare parts,
- » repairs by persons or organisations not authorised by the manufacturer

that are made without the express, written consent of the manufacturer will render the warranty void and result in the loss of any right to make a claim under the warranty.

No liability can be accepted for damage caused by failure to observe the operating and maintenance instructions.

4.4 Qualifications of the operators and maintenance personnel

The operating organisation is responsible for ensuring that the operators and maintenance personnel are suitably qualified. The operating and maintenance instructions must have been read and understood. The relevant technical rules and safety regulations must be complied with.

4.5 Organisational measures



The necessary personal protective equipment must be provided by the operating organisation. All safety devices that are fitted must be checked regularly. Safety glasses and overalls must be worn during operation and cleaning to provide protection against any splashes of chemicals.

All of the safety information contained in the respective operating and maintenance instructions for the dispenser(s) that are connected to the control system must be complied with.

4.6 Preparing to operate - visual inspection

The control system must be visually examined each day before the start of work and before all shift changes. If there is any doubt as to the system's readiness for operation, it must be shut down immediately and inspected by a specialist before operation resumes.

4.7 Preventing damage to the dispenser motor

- ➔ The dispenser lead (connector 3, Chapter 5.1, Displays and controls / connections on page 7) **may only be connected and disconnected when the power supply is isolated**. The electronics in the drive motor could be damaged if this precaution is not taken.

5 Operation



Before the control system is operated, the safety information in Chapter 4, *Safety*, beginning on page 5, must have been read and understood.

5.1 Displays and controls / connections

Item	Function, description
A LED	Displays the operating modes <ul style="list-style-type: none"> • ON – ready for operation • OFF – dosing / suck-back in operation • Flashing – fault
1 Connector 1	Control signal (see 5.2)
3 Connector 3	Dispenser

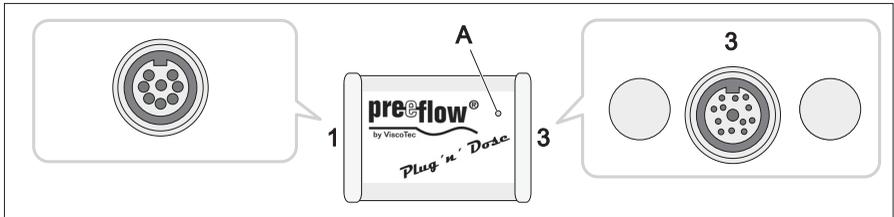


Fig. 2

5.2 Cable assignment, connector 1

PIN	Colour	Function, description
1	white	Start dosing ¹⁾ (+ 24 V)
2	brown	Start suck-back ²⁾ (+ 24 V)
3	pink	Fault, interval 0.5 sec + 24 V / 0 V
6	green	U _{Nnom} (setpoint selection 0- 10 V ³⁾)
7	grey	GND (Ground)
8	yellow	Supply (+ 24 V)

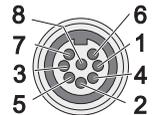


Fig. 3

¹⁾ Dispenser motor runs, medium is delivered

²⁾ Dispenser motor runs in reverse, medium is sucked back in to avoid dripping

³⁾ Speed of the dispenser

5.3 Important for signal definition

The amount of medium that is drawn back in by the suck-back must only be just enough to prevent dripping.
If more is sucked in, air will enter the dispenser and the medium will emerge late at the next dosing.

Caution: If the suck-back is set higher than the dosing, the dispenser may be damaged by running dry.

5.4 Starting up

➔ **Caution:** The dispenser lead (connector 3) may only be connected and disconnected when the power supply is isolated. The electronics in the drive motor could be damaged if this precaution is not taken.

➔ Only use the original connection and cable between Dispenser (D) and plug (3).

- Ready the dispenser for operation in accordance with the supplied commissioning and maintenance manual.
- Plug in the connector (3) of the dispenser (D)
- Connect (1) the cable of the master controller¹⁾ (B)

Notice: The control system is only ready for operation when the dispenser is connected.

➔ **Caution: Do not switch on** control system until medium has been delivered to it. Otherwise there is a risk of **damage to the equipment**. Even a **short** test run can cause **irreparable damage to the stator**.

- Fill the dispenser with medium as directed in its operating and maintenance instructions.

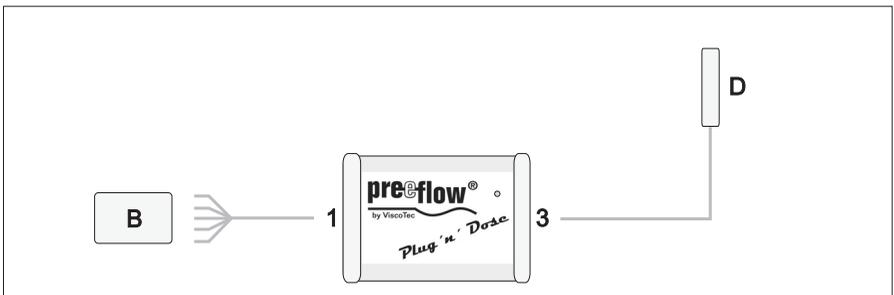


Fig. 4 Connection schematic

¹⁾ after it has been connected to the master controller

5.5 Shutting down

The unit is shut down in reverse order of setting up.

5.6 Operation

The control system is operated according to the control signals from the master controller that are present at the connector (1) (see 5.4). The dosing quantity depends on the connected dispenser.

6 Troubleshooting / Maintenance

Troubleshooting

Fault	Possible cause	Action
control system does not operate, LED flashes, fault signal is output (PIN 3).	Overcurrent shutdown	Clean the dispenser, if necessary replace stator. See the operating instructions for the dispenser.
	Faulty motor	

Maintenance

The control system can be regarded as maintenance free. Do not use any aggressive solvents or detergents to clean the unit, use a damp cloth only. Isolate from the power supply before cleaning.

7 Specifications

Dimensions (h x w x d)	142 x 85 x 50 mm
Mounting	4 holes / 5 mm, hole centres 130 x 48 mm
Weight	approx. 260 g
Supply	24 V DC
Mains adapter	230 V / 50 / 60 Hz
Consumption / rating	100 VA / 2.7 A
Operating conditions	+10°C to +40°C (Ta.), air pressure 1 bar
Storage conditions	dry / dust free -10 to +40°C

8 Disposal



Dispose of the control system in an environmentally safe way. All materials and products left in containers must be treated in accordance with the appropriate recycling requirements.

Electrical components must not be disposed of together with household waste. They must be taken to the collection points provided for this purpose.
2002/96/EC (WEEE) EC Directive on waste electrical and electronic equipment.
This unit complies with RoHS requirements.

9 EC-Declaration of Conformity

in accordance with the EC-Machinery Directive 2006/42/EG, Appendix II A

We,

ViscoTec Pumpen- und Dosiertechnik GmbH
Amperstraße 13
D-84513 Töging

hereby declare that the machinery described below complies in its design and construction and in the version marketed by us with the basic safety and health requirements of the EC Directive 2006/42/EG.

Product description

Function	Dosing system with dispenser
Model	plug'n'dose AM with dispenser eco-PEN300 / 450 / 600 / 700

Harmonised standards applied

DIN EN ISO 12100:2011-03	Safety of machinery
DIN EN 809:2011-01	Pumps and Pump Units for Liquids (Common safety requirements)
DIN EN ISO 13857:2008-06	Safety of machinery - Safety distances
DIN EN 61000-6-3:2011-09	Electromagnetic compatibility
DIN EN 61000-6-2:2011-06	Electromagnetic compatibility, Immunity

Töging, 12.01.2012

Georg Senfl

Managing Director and Person authorised to collect the technical documents (address see above)

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pre@flow[®]

by ViscoTec

info@preeflow.com
www.preeflow.com