INFU-Module **INFU**



GS Test Module for function tests of infusion pumps in accordance with IEC 60601-2-24

- ☑ for peristaltic and syringe pumps
- ☑ automatic measurement sequences with PC - Software
- ☑ measurement of pressure and bolusvolume
- ☑ integrated nurses' call test
- ☑ flow rate measurement from 0.1 ml/h is possible

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Management System ISO 9001:2015
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Technical Data

Measurement range:	0.1 – 0.99 ml/h	± 0.1 ml/h or ± 2.5 % of measurement value[1]
	1 - 1000 ml/h	± 0.1 ml/h or ± 1 % of measurement value[1]
Switch-off pressure measurement:	0 – 2.2 bar	± 0.01 bar or ± 1 % of measurement value
Bolus-volume measurement:	0 – 5.0 ml	
Display of the alert outputs:	contact closed / open / not connected	
Ambient temperature for operation:	5 - 40°C	
Included in the equipment supplied:	Luer-lock tube set / closure plugs / Electrical plug-in jack for nurse´s call	

[1]) at least 5 ml of measurement liquid must be pumped by syringe pumps and at least 25 ml by discontinuous pumps (peristaltic pumps and the like)

Description of functions:

The GS Test Module INFU serves for the functional testing of infusion pumps such as syringe pumps, roller (volumetric) pumps, peristaltic (finger) pumps and the like.

The ACTIMED Testing Program can perform single-channel measurements. In such cases, this program carries out fully automatic testing of the measurement parameters, in the sequence set forth of the selected test regulation. The measured values are rated with plus (+) or minus (-) and will be stored as a test record.

The measurement parameters:

Flow rate / Volume
Switch-off pressure, minimal pressure
Bolus Volume
Function of the nurse´s call contacts

Measurement principle:

The Measurement is based on a volumetric principle. From the time required for filling the measuring chamber, the system calculates the feed rate with a precision of ± 1% within the measuring range of 1...1000 ml/h. The INFU system displays a new arithmetic mean after each filling of the measuring chamber. The duration of measurement is in accordance with the stipulations contained in the test step selected by the operator. In order to achieve the measurement precision of 1% of the measured value given above in the technical data, at least 5 ml of measurement liquid must be pumped by syringe pumps and at least 25 ml by discontinuous pumps (peristaltic pumps and the like).

Switch-off pressure:

The GS Test Module INFU determines the switch-off pressure by closing the entry valve, which produces artificial stenosis.
When the switch-off pressure is reached, the infusion pump triggers an alarm, and the system stops the feed of infusion liquid. Continuous measurement of the input pressure at the Test Module enables determining the maximum pressure, which is then recorded as the switch-off pressure of the pump.
If the input pressure exceeds 2.2 bar, the system automatically opens the valves and stops the measurement.

Bolus volume:

The bolus volume is defined as the volume of liquid, which leaves the infusion tube after the switch-off pressure is reached and the stenosis valve is opened. The system measures this volume immediately after the stenosis valve is opened.

(The specified measuring accuracy refers to the measuring element. Technical modifications and errors reserved. 10/2026)

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