Z302 1382 Endress+Hauser

People for Process Automation

Flow Calibration with Adjustment

30580504-6122515

3004067925

Purchase order number

US-3007058204-20 / Endress+Hauser Flow

Order N°/Manufacturer

8FF25-AG25AANAB1NN

Order code

CNGmass DN25

Transmitter/Sensor

T70AA016000

Serial Nº

Tag Nº

	Flow [%]	Flow [lb/min]	Duration [s]	M target [lb]	M meas. [lb]	Δ o.r.* [%]	
	24.1	31.816	85.2	45.168	45.172	0.01	
	24.1	31.874	85.2	45.263	45.263	0.00	
	99.1	131.091	30.2	65.962	65.961	0.00	1
	99.2	131.253	30.2	66.046	66.051	0.01	
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*o.r.: of reading

FCP-6.F

Calibration rig

132.2774 lb/min

 $(\triangle 100 \%)$

Flow

Calibrated full scale

Service interface

Calibrated output

5.7259

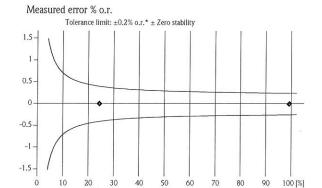
Calibration factor

89

Zero point

76.3 °F

Water temperature



For detailed data concerning output specifications of the unit under test, see Technical Information (TI), chapter Performance characteristics.

The calibration is traceable to the N.I.S.T. through standards certified at preset intervals.

Endress+Hauser Flowtec operates ISO/IEC 17025 accredited calibration facilities in Reinach (CH), Cernay (FR), Greenwood (USA), Aurangabad (IN), Suzhou (CN) and Itatiba (BR).

07–29–2022 Date of calibration

Endress + Hauser Flor

Endress+Hauser Flow USA, Inc. 2330 Endress Place Greenwood, IN 46143 Jeremiah Turnley

Jeremih Junly

Operator

Certified acc. to ISO 9001, Reg.-N° 030502.2 ISO 14001, Reg.-N° EMS561046



Standard Density Calibration with Adjustment

31178629-6122515-5691599

CNGmass DN25

Transmitter/Sensor

T70AA016000

Serial Nº

FCP-6.F

Calibration rig

C0 = -12041

C1 = 7.8804E+9

Density coefficient

C2 = -3.1916E + 6

Density coefficient

Medium	Temp.	ρ target	ρ meas.	Δρ	Freq.	Measuring precision · Tolerance limit
Freeze	[°F]	[kg/m³]	[kg/m³]	[kg/m³]	[Hz]	-20 kg/m³ $\Delta\rho$ +20 kg/m³
Air	71.9	1.20	1.20	0.00	805.3	
Water	76.0	997.95	997.95	0.00	773.6	
-	-	_	-	-	_	
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ж. — — — — — — — — — — — — — — — — — — —	1		1	L	,	-20 kg/m^3 $+20 \text{ kg/m}^3$

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Jeremih Junty

Declaration



Parameter Settings

Order information				
Customer	TULSA GAS TECHNOLOGIES INC			
	US-74146-4709 TULSA			
Customer purchase order	JWPC061422			
Sales order number / Item	3004067925			
Internal order number / Item	US-3007058204-20			
Device information				
Description	CNGmass DN25			
TAG				
Serial number	T70AA016000			
Order code	8FF25-AG25AANAB1NN			
Extended order code	-5			
Device				
Device software	V1.01.00			
Modbus				
Baud rate	19200			
Device address	247			
Tag name				
9				
Pulse output 1				
	0.01 lb			
Pulse output 1 Pulse value Pulse width				
Pulse output 1 Pulse value	0.01 lb			

Operator

Greenwood, 2022-29-07, Maria Calderon

This document was generated electronically and is valid without signature.



















Return Authorization Policy

Repair and Calibration of Used Equipment

Endress+Hauser must assign a Return Authorization (RA) number to any instrument you plan to return for factory repair or calibration service. Please mark the Return Authorization (RA) number clearly on all shipping cartons and paperwork. No product returns are accepted without an RA number. Endress+Hauser will return to the sender at the sender's expense all packages that do not have the RA number clearly marked on them.

Within the USA, RA requests for factory repair and calibration service can be handled 24 hours a day online. Please visit our website at:

www.us.endress.com/factoryrepair.

You will be prompted to provide the necessary information and within minutes you will receive your RA number and complete shipping instructions. The issuance of an RA number does not automatically mean that a repair will be covered under warranty. An Endress+Hauser associate will contact you regarding the disposition of your returned equipment.

When requesting an RA number, please be prepared to provide the following information:

Customer name
Customer shipping address
Customer billing address
Customer phone number
Customer contact
Customer contact e-mail address
Equipment type
Original sales order or purchase order number
Reason for return
Failure description, if applicable
Process material(s) to which the equipment has been exposed
Material used to de-contaminate and clean equipment

New purchase order number for the repair or

OSHA Hazard Communication Standard 29CFR 1910.1200 mandates that we take specific steps to protect our employees from exposure to potentially hazardous materials. All equipment must be completely cleaned and decontaminated before being returned. If the equipment being returned was exposed to a hazardous substance as defined by OSHA, a letter certifying that the equipment has been decontaminated, as well as a copy of the required Material Safety Data Sheets (MSDS) for each hazardous substance identified must be included with the returned equipment.

Before returning used equipment:

- Each package must be clearly marked with an RA number
- A Declaration of Hazardous Materials and Decontamination must be included inside the package
- A duplicate Declaration of Hazardous Materials and Decontamination must be visibly attached to the outside of the package
- An MSDS for each substance that has come in contact with the equipment must be included inside the package
- A duplicate MSDS must be visibly attached to the outside of the package

To get a return authorization number for repair or calibration service by phone, please call:

In the US: 800-642-8737 In Canada: 800-668-3199

NOTICE

If you are requesting a return for credit, contact the Endress+Hauser sales department at 888-ENDRESS to first determine if an RA number will be issued.

For repair and calibration in other countries, please visit $\underline{www.endress.com}$



calibration

Notes on Safety

WARNING

Electrical shock could cause death or serious injury. If the sensor is installed in a high voltage environment and a fault or installation error occurs, high voltage may be present on the transmitter leads and terminals.

Safe and secure operation of the transmitter can only be guaranteed if the operating instructions and all safety notes are read, understood and followed.

Correct use

The manufacturer cannot be held responsible for damage caused by misuse of the unit.

Separate Ex documentation should be obtained for measurement systems in hazardous areas. The installation conditions and connection values indicated in these instructions must be followed!

Installation, commissioning and operation

The unit is constructed using the most up to date production equipment and complies to the safety requirements of the local guidelines. However, if it is installed incorrectly or misused, certain application dangers can occur. Installation, wiring and maintenance of the unit must only be done by trained skilled personnel who are authorized to do so by the plant operator. This skilled staff must have read and understood these instructions and must follow them to the letter. The plant operator must make sure that the measurement system has been correctly wired to the connection schematics.

Hazardous areas

When installing the unit in a hazardous area the national safety requirements must be met. Make sure that all personnel are trained in these areas. The measurement and safety values must be followed in all these installations.

Returns

Please follow the Return Authorization Policy on the back of this sheet.

Safety pictograms and symbols

A DANGER

Causes (consequences)

Consequences of non compliance (if applicable)

- ► Corrective action
- ▶ This symbol alerts you to a dangerous situation. Failure to avoid the situation will result in a fatal or serious injury.

WARNING

Causes (consequences)

Consequences of non compliance (if applicable)

- ► Corrective action
- This symbol alerts you to a dangerous situation. Failure to avoid the situation can result in a fatal or serious injury.

A CAUTION

Causes (consequences)

Consequences of non compliance (if applicable)

- ► Corrective action
- This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or more serious injuries.

NOTICE

Causes (consequences)

Consequences of non compliance (if applicable)

- ► Corrective action
- ▶This symbol alerts you to situations which may result in damage to property.

Symbol			Meaning
FM	SP	(EX)	Explosion protected, type examined operating equipment If this icon'is on the device's nameplate, the device can be used in hazardous areas.
/EX	x		 Hazardous area This symbol identifies the hazardous area in the diagrams in these Operating Instructions. Devices that are used in hazardous areas or cables for such devices must have the corresponding type of protection.
×			 Safe area (non-hazardous areas) This symbol identifies the non-hazardous area in the diagrams in these Operating Instructions. Devices in non-hazardous areas must also be certified if connection cables run through a hazardous area.

Though the information provided herein is believed to be accurate, be advised that the information contained herein is NOT a guarantee of satisfactory results. Specifically, this information is neither a warranty nor guarantee, expressed or implied, regarding performance;

merchantability, fitness, or other matter with respect to the products; and recommendation for the use of the product/process information in conflict with any patent. Please note that Endress+Hauser reserves the right to change and/or improve the product design and specifications without notice.