Measurement and display units
Various methods of measuring for different areas of application

In addition to process valves, GEMÜ provides an entire series of measurement and display units for valves. The current product range includes various flowmeters as well as a selection of technologies for temperature, pressure and level measurement systems. The portfolio is complimented by display units for sensor systems.

For flow measurement systems, GEMÜ offers a variety of designs: variable area flowmeters, flow transmitters, magnetically inductive flowmeters and ultrasonic flowmeters. All measurement devices have in common that they are characterised with a robust construction and are simple to integrate into a system.
Table of contents

Flow measurement systems ........................................ 4-8
Pressure measurement systems ............................... 9-11
Worldwide Service .................................................. 12
Temperature measurement systems ....................... 13
Flow measurement systems

A measuring float is lifted by the volumetric flow in a conical metering tube until equilibrium is achieved between the weight of the measuring float and the force caused by the flow resistance. The measuring float is lifted higher or lower according to the volume flow rate.

GEMÜ 800/850

Features
• Variable area principle
• For corrosive, inert gaseous and liquid media
• Corrosion resistant, robust and high chemical resistance
• Optional electrical limit switches or instrument sensor

Technical specifications:
Tube material: Trogamid-TTM, polysulphone, PVC, PVDF
Measuring range: From 2 l/h to 20,000 l/h for liquids and 0.2 Nm³/h to 450.0 Nm³/h for air
Available sizes: DN 10 to 65
Connection: By union ends with insert

GEMÜ 840

Features
• Part flow principle
• Consists of main flow unit, orifice plate, part flow unit, manual diaphragm valves
• For corrosive and inert liquid media
• Robust, high chemical resistance
• Optional electrical limit switches or instrument sensor

Technical specifications:
Housing material: PVC-U, grey, PP
Measuring range: From 3,000 l/h to 50,000 l/h
Available sizes: DN 65
Connection: By solvent cement or welded spigots
**GEMÜ 1250/1251/1252/1256/1257**

Limit switches

**Features**
- Suitable for GEMÜ flowmeters with magnetic float
- Simple mounting and setting by clamping to flowmeter
- Reed contacts are actuated by the magnet in the float

**Technical specifications:**
- **GEMÜ 1250:** With bistable reed contact with SPDT (Single Pole Double Throw) contact
- **GEMÜ 1251 - 1257:** With bistable reed contact for Min or Max limit value
- **Option:** ATEX

---

**GEMÜ 1270-1273**

Instrument sensors

**Features**
- Suitable for GEMÜ flowmeters with magnetic float
- For continuous flow monitoring
- Simple mounting and setting by clamping to flowmeter
- Reed contacts in a chain of resistors are actuated by the magnet in the float

**Technical specifications:**
- **GEMÜ 1270/1271:** The signal reading is effected via voltage divider (0-10kOhm)
- **GEMÜ 1272/1273:** The signal reading is effected via integrated 2-wire measuring transducer (4-20mA)
- **GEMÜ 1270/1271:** ATEX optional

www.gemu-group.com
Flow measurement systems

Turbine flow transmitters

These can be used either as pure measuring turbines or as totalizers or batch controllers for measuring ranges from 120 to 25,000 l/h. The measuring turbines provide various electrical output signals for further processing.

**GEMÜ 3020**

**Flow transmitter (Turbine)**

Features

- For inert and corrosive aqueous liquids
- Connection by metric or imperial union ends with insert

Technical specifications:

- Turbine material: PVDF
- Turbine body material: PVDF / PVC-U, grey
- Available sizes: DN 25 / DN 50
- Measuring range: DN 25: 120 to 3600 l/h
  DN 50: 500 to 25000 l/h
- Power supply: 24 V DC
- Frequency output: 24 V PNP
- Current output: 4 to 20 mA

**GEMÜ 3021**

**Flow transmitter, totalizer or batch controller**

Features

- Measuring transducer with totalizer or batch controller
- For inert and corrosive aqueous liquids
- Electronic system enables adjustment to operating conditions
- Signal inputs for PLC or switching signals
- Connection by metric or imperial union ends with insert

Technical specifications:

- Turbine material: PVDF
- Turbine body material: PVDF / PVC-U, grey
- Available sizes: DN 25 / DN 50
- Measuring range: DN 25: 120 to 7200 l/h
  DN 50: 500 to 25000 l/h
- Power supply: 24 V DC
- Outputs depending on type: Frequency 24 V PNP;
  current 0/4 to 20 mA; 2 x relay
Magnetically inductive flowmeter

The GEMÜ 3030 mFlow flowmeter operates according to the magnetically inductive measurement principle. It is suitable for electrically conductive media and enables exact measurement of flow velocities and flow rates of inert and corrosive liquids. The simple mechanical construction of the GEMÜ 3030 mFlow magnetically inductive immersion-type flowmeter offers quick and easy installation. The device has a backlit display and is operated via a membrane key-pad at the front of the housing. Electrical connections are at the rear.

GEMÜ 3030 mFlow

Features
- Same measurement device can be used for different nominal sizes
- No moving parts in the medium
- Access rights via different user levels
- Integrated Web browser capability
- Simple commissioning and versatile operating facilities
  - Fascia keys
  - PC connection with Internet browser
  - Fieldbus interfaces e.g. Profinet

Technical specifications:
- Available sizes: DN 25 to 300
- Temperature range: 0 to 135 °C
- Connection: By various fittings
- Temperature sensor: optional
- Power supply: 24 V DC
- Measuring range: 0 to 4 m/s, 0 to 10 m/s
- Output signals: 0 / 4 to 20 mA; pulse; relay
- Fieldbus interface: Profinet
- Conductivity of medium: ≥ 20 μS/cm
Flow measurement systems

Ultrasonic flowmeter

The GEMÜ C38 SonicLine is an ultrasonic flowmeter operating according to the phase difference method. The metering tube is made of PFA and can be directly integrated into the piping system by standard flare unions. The medium only contacts the metering tube. The electronic housing is made of PP. The connection cables are PTFE encapsulated.

GEMÜ C38 SonicLine

Features

• High accuracy and repeatability
• Suitable for very dynamic processes (dosing time < 1s)
• Integrated dosing function
• No moving parts in the metering tube and thus subject to low wear
• All media wetted parts are made of PFA (HP quality)
• Excellent chemical resistance
• Minimal deadleg
• Empty pipe signal
• Compact design

Technical specifications:

Nominal size: ⅜” to 1”
Measuring range: 0.03 to 120 l/min
Connection: Flare connection
Tube material: PFA-HP
Power supply: 24 V DC
Media temperature: 0 to 80 °C
Accuracy: ± 1 % of measuring range
Output signals: 4 to 20 mA; pulse
Pressure measurement systems

The GEMÜ 3140 pressure transducer or pressure switch is available in various different designs for the pressure measurement systems area. The HydraLine® series (GEMÜ C30, C31, C32) comprises pressure transmitters and pressure measurement devices for high purity media applications.

GEMÜ 3140
Pressure transducer/switch

Features

• Rotatable LED display and IO-Link interface, depending on version
• Suitable for highly viscous, contaminated and corrosive media
• Appropriate in-line housing optionally available
• ATEX and SIL2 design optionally available
• Accuracy: 0.5% FSO (in accordance with IEC 60770)
• Optional installation position
• Ceramic sensor

Technical specifications:

Operating pressure*: 0 to 40 bar
Media temperature*: -40 to 125 °C
Housing materials: Housing made from 1.4404 stainless steel or plastic (PVDF)
Mechanical connection: G¼" or G½" male thread
Output signals: 0–20 mA, 4–20 mA, 0–10 V
Switching outputs: PNP or NPN

* Depending on version and/or operating parameters
Pressure measurement systems

GEMÜ C30 Hydra-Gauge
Pressure gauge

Features

• Especially suitable for pressure measurement of ultra high purity chemicals
• All media wetted parts are made of PFA/PTFE (HP quality)
• Pressure transmission by double diaphragm technology
• Pressure gauge can be rotated through 360°
• Optionally with electrical switching contacts
• REACH / ROHS compliant
• Other certificates on request (e.g. FDA compliance)

Technical specifications:

Nominal size: ¼" to 1¼" (In-Line, Dead-End)
Operating pressure: 0 to 6 bar
Connection: Flare connection, NPT
Valve body material: PFA-HP, PTFE
Diaphragm material: PFA
Media temperature: 5 to 60 °C
Accuracy: ± 1,6 % of measuring range or scale end value
**GEMÜ C31 Hydra-Sensor**
Pressure transmitter

**Features**
- Especially suitable for pressure measurement of ultra high purity chemicals
- All media wetted parts are made of PFA/PTFE (HP quality)
- Pressure transmission by double diaphragm technology
- Pressure transmitter can be rotated through 360°
- Protection class IP 65 or IP 67 (depending on version)
- REACH / ROHS compliant
- Other certificates on request (e.g. FDA compliance)

**Technical specifications:**
- Nominal size: ¼" to 1¼" (In-Line, Dead-End)
- Operating pressure: 0 to 6 bar
- Connection: Flare connection, NPT
- Valve body material: PFA-HP, PTFE
- Diaphragm material: PFA
- Power supply: 10 to 30 V DC
- Media temperature: 5 to 60 °C
- Accuracy: ≤0.5 % of measuring span
- Output signals: 4 to 20 mA
- Option: Digital display

**GEMÜ C32 Hydra-Dry**
Measuring transducer with ceramic sensor

**Features**
- Especially suitable for pressure measurement of ultra high purity chemicals
- All media wetted parts are made of PFA/PTFE (HP quality)
- The pressure is transmitted by a ceramic sensor
- The sensor is isolated from the process by a double diaphragm system
- Protection class IP 67
- REACH / ROHS compliant
- Other certificates on request (e.g. FDA compliance)

**Technical specifications:**
- Nominal size: ¼" to 1¼" (In-Line, Dead-End)
- Operating pressure: 0 to 6 bar
- Connection: Flare connection, NPT
- Valve body material: PFA-HP, PTFE
- Diaphragm material: PFA
- Power supply: 12 to 30 V DC
- Media temperature: 0 to 60 °C
- Accuracy: ≤0.5 % of measuring span
- Output signals: 4 to 20 mA
- Option: Digital display with switch points
Worldwide presence

AUSTRALIA
GEMÜ Australia Pty. Ltd
Unit 4 - 8/10 Yandina Road
West Gosford, NSW 2250
Phone: +61-2-43 23 44 93
Fax: +61-2-43 23 44 96
mail@gemum.com.au

AUSTRIA
GEMÜ GmbH
Europaring F15 401
2345 Brunn am Gebirge
Phone: +43-22-36 30 43 45-0
Fax:+43-22-36 30 43 45-31
info@gemue.at

BELGIUM
GEMÜ Valves bvba/sprl
Koning Albert 1 laan, 64
1780 Wemmel
Phone: +32-2 705 55 03
Fax: +32-2 705 55 03
info@gemue.be

BRASIL / SOUTH AMERICA
GEMÜ Indústria de Produtos Plásticos e Metalúrgicos Ltda.
Rue Marechal Hermes, 1141
83 065-000 Santo José dos Pinhais, Paraná
Phone: +55-41-33 82 24 25
Fax: +55-41-33 82 35 31
gemu.com.br

BRAZIL / SOUTH AMERICA
GEMÜ Valves Ltda.
10 Olympic Way
Birchwood, Warrington
WA2 0YL
Phone:+44-19 25-82 80 44
Fax:+44-19 25-82 80 02
info@gemu.co.uk

CANADA
GEMÜ Valves Canada Inc.
2572 Daniel-Johnson Boulevard
Laval, Quebec
H7T 2R8
Phone: +1-450-902-2690
Fax: +1-404-3 44 4003
info@gemum.com

CHINA
GEMÜ Valves (China) Co., Ltd.
No.518, North Hengshahe Road
Jl. Gunung Sahari Raya No. 1
Block F17, 2nd Floor
20157 Milano
Via Giovanni Gentile, 3
20157 Milano
Phone: +39-02-40044080
Fax: +39-02-40044081
info@gemue.it

DENMARK
GEMÜ ApS
Industrieparken 16-18
2750 Ballerup
Phone: +45 70 222 516
Fax: +45 70 222 518
info@gemue.dk

FRANCE
GEMÜ S.A.S
1 Rue Jean Bugatti
CS 93908 Duppigheim
67129 Molsheim Cedex
Phone: +33-3 88 48 21 00
Fax: +33-3 88 49 12 49
info@gemu.fr

IRELAND
GEMÜ Ireland Ltd
15 Eastgate Drive
Eastgate Business Park
Little Island
Co. Cork
Phone: +353 (0)21 4232023
Fax: +353 (0)21 4232024
info@gemui.ie

ITALY
GEMÜ S.r.l.
Via Giovanni Gentile, 3
20157 Milano
Phone: +39-02-40044080
Fax: +39-02-40044081
info@gemue.it

JAPAN
GEMÜ Japan Co., Ltd.
2-5-6, Aoi, Higashi-ku,
Nagoya, Aichi, 461-0004
Phone: +81-52-936-2311
Fax: +81-52-936-2312
info@gemu.jp

MALAYSIA
GEMÜ VALVES PTE LTD
(Malaysia Representative Office)
D-8-09, Block D, No. 2A
Jalan PJU 1A/7A
Oasis Square, Oasis Damansara
47301 Petaling Jaya
info@gemu.com.sg

MEXICO
GEMÜ Valvulas S.A. de C.V.
German Centre,
Av. Santa Fe No. 170 – OF. 5-1-
Col. Lomas de Santa Fe,
Del. Alvaro Obregon
01210 Mexico, D.F.
Phone: +52 55 7090 4161
+52 55 7090 4179
info@gemu.com.mx

RUSSIA
OOO „GEMÜ GmbH“
Uliza Shipilovskaya, 28A
115563, Moskau
Phone: +7(495) 662-58-35
Fax: +7(495) 662-58-35
info@gemu.ru

SINGAPORE
GEMÜ Valves PTE. LTD.
25 International Business Park
German Centre #03-73/75
Singapore 609916
Phone: +65-65 62 76 40
Fax: +65-65 62 76 49
info@gemu.com.sg

SOUTH AFRICA
GEMÜ Valves Africa Pty. Ltd
Stand 379
Northlands Business Park,
Hoogland Ext 45
Northriding, Randburg
Phone: +27(0)11 462 4226
Fax: +27(0)11 462 7795
office@gemue.tw

UNITED STATES
GEMÜ Valves Inc.
3800 Camp Creek Parkway
Suite 120, Building 2600
Atlanta, Georgia 30331
Phone: +1-678-5 53 34 00
Fax: +1-404-3 44 93 50
info@gemum.com

In addition to these subsidiaries, GEMÜ has a global partner network.
Contact details:
Temperature measurement systems

Temperature transducer and temperature measurement device with integrated display

The GEMÜ 3220 temperature transducer converts the physical variable temperature proportionally into an electrical signal. The process connection is configured as standard with male threads to DIN 3852 in sizes G 1/2 and G 3/4. The electrical connection is via a plug complying with DIN EN 175301-803 form A. The installation position is optional. After screwing in the connecting element, the upper part of the housing can be rotated up to ±180° to the required position by loosening the fastening screws. Media wetted components are made of PVDF or ceramics, the housing is made of ABS and the seal of FPM.

**GEMÜ 3220**

**Features**
- High accuracy and repeatability
- No moving parts and thus subject to low wear

**Technical specifications:**
- **Measuring range:** 0 to 100 °C
- **Sensor material:** Ceramics (option encapsulated in PVDF)
- **Connecting element:** PVDF
- **Version:** 2-wire transducer or 4-wire temperature measurement device with display
- **Current output:** 0/4 to 20 mA
- **Power supply:** 24 V DC
- **Process connection:** Dependent on the version: G ½" or G ¾" thread