

When the level matters

2260 / 2270

Ultrasonic level transmitter /-sensors

228X

Level switches



Benefits

Non-contact level sensors and various ultrasonic level switches – reliable and maintenance-free

Various measurement- and detection principles for nearly all liquids and types of vessels. From closed tank systems to open basins. Our sensors stand for easy installation and operation, stable and absolutely reliable measurement results as well as long service life and therefore optimal cost-efficiency. All components in GF Piping Systems are ideally coordinated. From the initial concept to installation, from sensor to fitting – everything from a single source!



+ Easy

One-stop shopping: One source and one contact for all your components and questions concerning integration in existing or newly designed processes for liquid control systems.

Everything at a glance: Large display for a fast and clear overview of all the key data.

Programmed as needed: In simple applications, the sensors work reliably with factory settings. With Quick-Set or Expert Menu, sensors can be easily and optimally adjusted to the application.



+ Reliable

Intelligent signal processing: Reliable measurements even with turbulent surfaces, steam or foam.

Foreign object recognition (Echo-Map): Avoid incorrect measurements or failures due to interfering objects. The system can differentiate between foreign objects and the actual level.

Narrow beam: Enables reliable measurement in small tanks and close to static objects.



+ Economical

High resistance and long lifetime: The sensors are available in a variety of materials (PP, PVDF, PPS, stainless steel) – compliant with the medium.

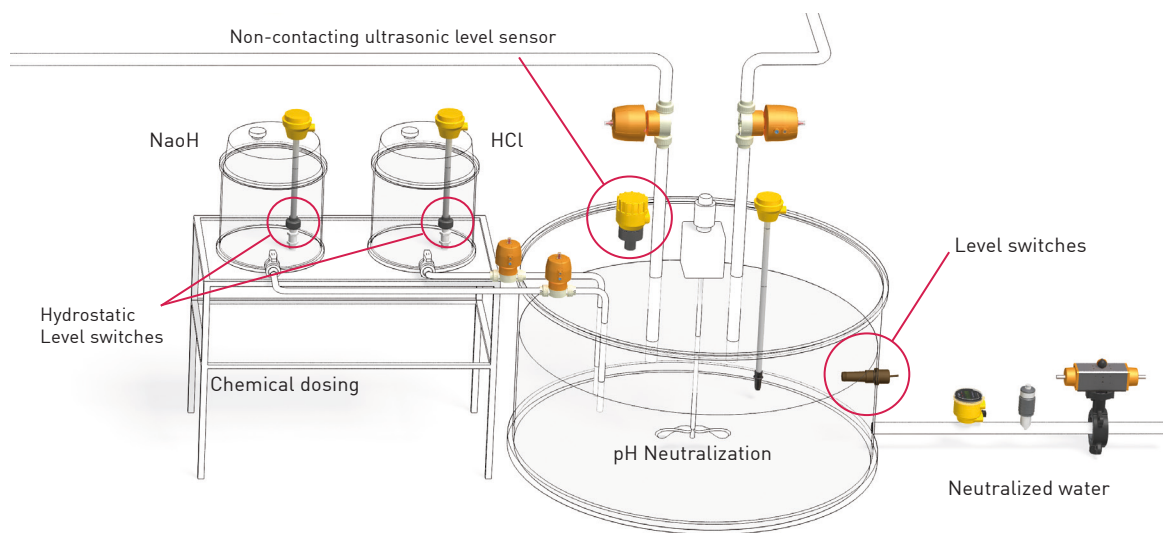
The benefits:

- Extended life time despite contact with corrosive liquids
- Lower maintenance costs
- Simple product selection

Applications

**Circuits that flow and are precisely coordinated.
Process reliability and efficiency – that's what matters.**

Wherever high precision is a crucial factor, you will find systems from Georg Fischer Piping Systems. Features like easy handling and durability applies to all products from Georg Fischer Piping Systems. Their full potential is brought to bear when they are implemented in automated processes. With the experts from Georg Fischer on your side, individual requirements can be taken into consideration. We find and create solutions together with our customers for nearly any application.



A practical application: demineralization of water

A good example of how components must seamlessly work together is the process loop for generating ultrapure water, from which all foreign substances are removed. For example, ultrapure water is often used in the pharmaceutical industry or semiconductor manufacturing. Another important market segment is water treatment. While continuous measuring level sensors indicate and transmit a liquid level or volume level switches protect a

system against overfilling or a pump against dry run. From sensor to fitting, all the key components come from one source and we designed by the professionals at Georg Fischer Piping Systems. One partner – one perfect solution!



Tank filling



Water treatment

Performance data that will convince you. Key data at a glance.



2260/2270 Ultrasonic level sensor



Narrow beam

- Safe installation in case of limited spaces
- Reliable measurement on diffuse surfaces

Large display /Quick-set Menu

- Comfortable reading of levels / volumes
- Fast instrument start-up

Echo map - Disturbing object recognition

- Safe installation in case of limited spaces

Pre-programed tank shapes

- Set up of volume calculation in just a few minutes

Specifications	Value
Measurement principle	Ultrasonic, time of flight
Measurement range	0.2-4m/ 0.25-6m/ 0.45-15m
Accuracy	+/- 0.2% of measurement value +/-0.05% of measurement range
Process connection	BSP, NPT thread or flange
Sensor material	PP, PVDF
Working temperature	-30-90 °C
Supply voltage	12-36 V DC
Output	4-20 mA, HART, relay
Approvals	CE, ATEX, RoHS

2250 Hydrostatic level sensor



Embedded pressure membrane

- High protection against mechanical damages

Front- / backside process thread

- Easy installation in tank walls or submersed from top of the tank

Two pressure ranges

- Optimized resolution for various tank sizes

Specifications	Value
Measurement principle	Pressure, hydrostatic
Measurement range	0-7m / 0-35m
Accuracy	+/- 1% of measurement range
Process connection	1/2" thread bolting
Sensor material	PVDF, ceramik
Working temperature	-15-85°C
Supply voltage	5 VDC (S3L), 12-24 VDC (4-20 mA)
Output	S3L, 4-20 mA
Connection	Cable
Approvals	CE, FCC, RoHS

2280 Swing forks



For safe operation in critical applications

Cable, DIN connector and connection terminals

- Easy wiring in various applications

No moving parts

- No maintenance costs

Specifications	Value
Sensor material	Stainless steel 1.4571
Output	3-wire PNP/NPN, 2-wire AC, relay
Connection	Cable, DIN plug, terminal box
Approvals	CE, ATEX, WHG
Process connection	1" BSP, 1" NPT

2284 Ultrasonic gap switch



PPS Full-plastic body

- Optimized chemical compatibility

Compact size

- Easy installation in pipes and small systems

Specifications	Value
Sensor material	PPS
Output	Relay
Connection	Cable, terminal box
Approvals	CE
Process connection	3/4" NP T, 1" BSP, 1" NPT

2281 Conductive multipoint switch



Individual cutting of electrodes

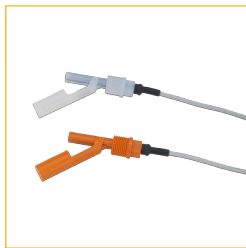
- Easy adaptation of switching points on site

Up to 4 switching points in one sensor

- 4 times faster installation
- Cost effective solution

Specifications	Value
Sensor material	Stainless steel PP
Output	External relay
Connection	Cable, terminal box
Approvals	CE
Process connection	1 1/2" BSP

2282 Guided float switch



PP or PVDF full-plastic body

- Optimized chemical compatibility

Ultra compact housing

- Easy installation in compact systems

Specifications	Value
Sensor material	PP, PVDF
Output	Reedkontakt
Connection	Cable
Approvals	CE
Process connection	1/2" BSP, 1/2" NPT

2285 Float switch



Double chambered enclosure

- High operational safety

Mercury free switching contact

- Safe use in drinking- and waste water applications

Specifications	Value
Sensor material	PP
Output	Microswitch
Connection	Cable
Approvals	CE

Ordering information – Ultrasonic Level transmitters/-sensors/-switches

2250 Hydrostatic level sensor

Description	PVC-U Union connection - pipe connection	
	Code	Type
NPT, digital (S ³ L), 35 m (115 ft), 3/4"	159 001 241	3-2250-11L
NPT, digital (S ³ L), 7 m (23 ft), 3/4"	159 001 242	3-2250-11U
NPT, current (4 to 20 mA), 35 m (115 ft), 3/4"	159 001 247	3-2250-21L
NPT, current (4 to 20 mA), 7 m (23 ft), 3/4"	159 001 248	3-2250-21U

Description	PVC-U Union connection - Metric pipe connector	
	Code	Type
ISO, digital (S ³ L), 7 m (23 ft)	159 001 478	3-2250-11U-1
ISO, digital (S ³ L), 35 m (115 ft)	159 001 479	3-2250-11L-1
ISO, current (4 to 20 mA), 7 m (23 ft)	159 001 482	3-2250-21U-1
ISO, current (4 to 20 mA), 35 m (115 ft)	159 001 483	3-2250-21L-1

2260 Ultrasonic level transmitters

4-20 mA output

Description	BSP thread / DIN flange		NPT thread / DIN flange	
	Code	Type	Code	Type
4 m range, PP sensor, 1 1/2" thread	159 300 090	2260-P-0DB-4	159 300 120	2260-P-0DN-4
6 m range, PP sensor, 1 1/2" thread	159 300 092	2260-P-0DB-6	159 300 122	2260-P-0DN-6
15 m range, PP sensor, Flange DIN DN125 / ANSI 5"	159 300 094	2260-P-0DF-15	159 300 124	2260-P-0DA-15
4 m range, PVDF sensor, 1 1/2" BSP thread	159 300 101	2260-V-0DB-4	159 300 131	2260-V-0DN-4
6 m range, PVDF sensor, 2" BSP thread	159 300 103	2260-V-0DB-6	159 300 133	2260-V-0DN-6
15 m range, PVDF sensor, Flange DIN DN125 / ANSI 5"	159 300 105	2260-V-0DF-15	159 300 135	2260-V-0DA-15

4-20 mA output, Relay, HART Protocol

Description	BSP thread / DIN flange		NPT thread / DIN flange	
	Code	Type	Code	Type
4 m range, PP sensor, 1 1/2" thread	159 300 091	2260-P-2DB-4	159 300 121	2260-P-2DN-4
6 m range, PP sensor, 2" thread	159 300 093	2260-P-2DB-6	159 300 123	2260-P-2DN-6
15 m range, PP sensor, Flange DIN DN125 / ANSI 5"	159 300 095	2260-P-2DF-15	159 300 125	2260-P-2DA-15
4 m range, PVDF sensor, 1 1/2" BSP thread	159 300 102	2260-V-2DB-4	159 300 132	2260-V-2DN-4
6 m range, PVDF sensor, 2" BSP thread	159 300 104	2260-V-2DB-6	159 300 134	2260-V-2DN-6
15 m range, PVDF sensor, Flange DIN DN125 / ANSI 5"	159 300 106	2260-V-2DF-15	159 300 136	2260-V-2DA-15

4-20 mA output, HART Protocol, ATEX

Description	BSP thread / DIN flange		NPT thread / DIN flange	
	Code	Type	Code	Type
4 m range, PVDF sensor, 1 1/2" thread	159 300 112	2260-V-1DBX-4	159 300 142	2260-V-1DNX-4
6 m range, PVDF sensor, 2" thread	159 300 113	2260-V-1DBX-6	159 300 143	2260-V-1DNX-6
15 m range, PVDF sensor, Flange DIN DN125 / ANSI 5"	159 300 114	2260-V-1DBX-15	159 300 144	2260-V-1DAX-15

2270 Ultrasonic level sensors

4-20 mA output, HART Protocol

Description	BPS thread		NPT thread / DIN flange	
	Code	Type	Code	Type
4 m range, PP sensor, 1 1/2" thread	159 300 155	2270-P-1B-4	159 300 169	2270-P-1N-4
6 m range, PP sensor, 2" thread	159 300 156	2270-P-1B-6	159 300 170	2270-P-1N-6
4 m range, PVDF sensor, 1 1/2" thread	159 300 162	2270-V-1B-4	159 300 176	2270-V-1N-4
6 m range, PVDF sensor, 2" thread	159 300 163	2270-V-1B-6	159 300 177	2270-V-1N-6

2280 Swing forks (Tuning-/vibration forks)

Description	BSP thread		NPT thread	
	Code	Type	Code	Type
Length 69 mm, Stainless steel, 3-wire PNP-NPN, DIN connector, 1"	159 300 200	2280-S-5WBO-1	159 300 220	2280-S-5WNO-1
Length 69 mm, Stainless steel, 3-wire PNP-NPN, Cable, 1"	159 300 201	2280-S-5WBC-1	159 300 221	2280-S-5WNC-1
Length 125 mm, Stainless steel, 3-wire PNP-NPN, DIN connector, 1"	159 300 202	2280-S-5WBO-2	159 300 222	2280-S-5WNO-2
Length 125 mm, Stainless steel, 3-wire PNP-NPN, Cable, 1"	159 300 203	2280-S-5WBC-2	159 300 223	2280-S-5WNC-2
Length 69 mm, Stainless steel, 1 SPDT relay, PBT enclosure, 1"	159 300 240	2280-S-5WBT-1	159 300 242	2280-S-5WNT-1
Length 125 mm, Stainless steel, 1 SPDT relay, PBT enclosure, 1"	159 300 241	2280-S-5WBT-2	159 300 243	2280-S-5WNT-2
Length 69 mm, Stainless steel, 2-wire AC, DIN connector, ATEX, 1"	159 300 210	2280-S-5XWBO-1		
Length 69 mm, Stainless steel, 2-wire AC, Cable, ATEX, 1"	159 300 211	2280-S-5XWBC-1		
Length 125 mm, Stainless steel, 2-wire AC, DIN connector, ATEX, 1"	159 300 212	2280-S-5XWBO-2		
Length 125 mm, Stainless steel, 2-wire AC, Cable, ATEX, 1"	159 300 213	2280-S-5XWBC-2		

2281 Conductive multipoint switch

Description	BSP thread	
	Code	Type
PBT enclosure, PP process connection for 2 electrodes + reference, 1 1/2"	159 300 250	2281-S-BT-2
PBT enclosure, PP process connection for 3 electrodes + reference, 1 1/2"	159 300 251	2281-S-BT-3
PBT enclosure, PP process connection for 4 electrodes + reference, 1 1/2"	159 300 252	2281-S-BT-4
Electrode, Stainless steel, 0.5 m	159 300 253	KLN-205
Electrode, Stainless steel, 1 m	159 300 254	KLN-210
Electrode, Stainless steel, 1.5 m	159 300 255	KLN-215
PP spacer	159 300 257	KLP-201
Relay, 1 SPDT contact, 24 - 240 V AC/DC	159 300 258	2281-1-Relay
Relay, 2 SPDT contacts, 24V AC/DC	159 300 259	2281-2-Relay

2282 Guided float switch

Description	BSP thread		NPT thread	
	Code	Type	Code	Type
PP sensor, DIN connector, 1/2"	159 300 260	2282-P-60B	159 300 264	2282-P-60N
PP sensor, Cable, 1/2"	159 300 261	2282-P-6CB	159 300 265	2282-P-6CN
PVDF sensor, DIN connector, 1/2"	159 300 262	2282-V-60B	159 300 266	2282-V-60N
PVDF sensor, Cable, 1/2"	159 300 263	2282-V-6CB	159 300 267	2282-V-6CN

2284 Ultrasonic gap switch

Description	BSP thread		NPT thread	
	Code	Type	Code	Type
PPS sensor, Cable, 3/4"	159 300 270	2284-Q-4BC		
PPS sensor, Cable, 1"	159 300 274	2284-Q-4BC	159 300 272	2284-Q-4NC

2285 Float switch

Description	BSP thread	
	Code	Type
PP float, PVC cable 5 m, Microswitch No/Nc	159 300 280	2285-P-6C-5
PP float, PVC cable 10 m, Microswitch No/Nc	159 300 281	2285-P-6C-10
PP float, PVC cable 20 m, Microswitch No/Nc	159 300 282	2285-P-6C-20
Counterweight for 2285	159 300 289	2285-P-Weight

Worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries

www.gfps.com

Argentina / Southern South America

Georg Fischer Central Plastics
Sudamérica S.R.L.
Buenos Aires, Argentina
Phone +54 11 4512 02 90
gfcentral.ps.ar@georgfischer.com
www.gfps.com/ar

Australia

George Fischer Pty Ltd
Riverwood NSW 2210 Australia
Phone +61 (0) 2 9502 8000
australia.ps@georgfischer.com
www.gfps.com/au

Austria

Georg Fischer
Rohrleitungssysteme GmbH
3130 Herzogenburg
Phone +43 (0) 2782 856 43-0
austria.ps@georgfischer.com
www.gfps.com/at

Belgium / Luxembourg

Georg Fischer NV/SA
1070 Bruxelles/Brüssel
Phone +32 (0) 2 556 40 20
be.ps@georgfischer.com
www.gfps.com/be

Brazil

Georg Fischer Sist. de Tub. Ltda.
04795-100 São Paulo
Phone +55 (0) 11 5525 1311
br.ps@georgfischer.com
www.gfps.com/br

Canada

Georg Fischer Piping Systems Ltd
Mississauga, ON L5T 2B2
Phone +1 (905) 670 8005
Fax +1 (905) 670 8513
ca.ps@georgfischer.com
www.gfps.com/ca

China

Georg Fischer Piping Systems Ltd
Shanghai 201319
Phone +86 21 3899 3899
china.ps@georgfischer.com
www.gfps.com/cn

Denmark / Iceland

Georg Fischer A/S
2630 Taastrup
Phone +45 (0) 70 22 19 75
info.dk.ps@georgfischer.com
www.gfps.com/dk

Finland

Georg Fischer AB
01510 VANTAA
Phone +358 (0) 9 586 58 25
Fax +358 (0) 9 586 58 29
info.fi.ps@georgfischer.com
www.gfps.com/fi

France

Georg Fischer SAS
95932 Roissy Charles de Gaulle Cedex
Phone +33 (0) 1 41 84 68 84
fr.ps@georgfischer.com
www.gfps.com/fr

Germany

Georg Fischer GmbH
73095 Albershausen
Phone +49 (0) 7161 302-0
info.de.ps@georgfischer.com
www.gfps.com/de

India

Georg Fischer Piping Systems Ltd
400 076 Mumbai
Phone +91 224007 2001
branchoffice@georgfischer.com
www.gfps.com/in

Italy

Georg Fischer S.p.A.
20063 Cernusco S/N (MI)
Phone +39 02 921 861
it.ps@georgfischer.com
www.gfps.com/it

Japan

Georg Fischer Ltd
556-0011 Osaka,
Phone +81 (0) 6 6635 2691
jp.ps@georgfischer.com
www.gfps.com/jp

Korea

Georg Fischer Piping Systems
271-3 Seohyeon-dong Bundang-gu
Seongnam-si, Gyeonggi-do
Seoul 463-824
Phone +82 31 8017 1450
Fax +82 31 8017 1454
kor.ps@georgfischer.com
www.gfps.com/kr

Malaysia

George Fischer (M) Sdn. Bhd.
40460 Shah Alam, Selangor Darul Ehsan
Phone +60 (0) 3 5122 5585
my.ps@georgfischer.com
www.gfps.com/my

Mexico / Northern Latin America

Georg Fischer S.A. de C.V.
Apodaca, Nuevo Leon
CP66636 Mexico
Phone +52 (81) 1340 8586
Fax +52 (81) 1522 8906
mx.ps@georgfischer.com
www.gfps.com/mx

Middle East

Georg Fischer
Piping Systems (Switzerland) Ltd
Dubai, United Arab Emirates
Phone +971 4 289 49 60
gcc.ps@georgfischer.com
www.gfps.com/int

Netherlands

Georg Fischer N.V.
8161 PA Epe
Phone +31 (0) 578 678 222
nl.ps@georgfischer.com
www.gfps.com/nl

New Zealand

Georg Fischer Ltd
13 Jupiter Grove, Upper Hutt 5018
PO Box 40399, Upper Hutt 5140
Phone +64 (0) 4 527 9813
nz.ps@georgfischer.com
www.gfps.com/nz

Norway

Georg Fischer AS
1351 Rud
Phone +47 67 18 29 00
no.ps@georgfischer.com
www.gfps.com/no

Poland

Georg Fischer Sp. z o.o.
05-090 Sekocin Nowy
Phone +48 (0) 22 31 31 0 50
poland.ps@georgfischer.com
www.gfps.com/pl

Romania

Georg Fischer
Piping Systems (Switzerland) Ltd
020257 Bucharest - Sector 2
Phone +40 (0) 21 230 53 80
ro.ps@georgfischer.com
www.gfps.com/int

Russia

Georg Fischer
Piping Systems (Switzerland) Ltd
Moscow 125047
Phone +7 495 258 60 80
ru.ps@georgfischer.com
www.gfps.com/ru

Singapore

George Fischer Pte Ltd
11 Tampines Street 92, #04-01/07
528 872 Singapore
Phone +65 6747 0611
sgp.ps@georgfischer.com
www.gfps.com/sg

Spain / Portugal

Georg Fischer S.A.
28046 Madrid
Phone +34 (0) 91 781 98 90
es.ps@georgfischer.com
www.gfps.com/es

Sweden

Georg Fischer AB
117 43 Stockholm
Phone +46 (0) 8 506 775 00
info.se.ps@georgfischer.com
www.gfps.com/se

Switzerland

Georg Fischer
Rohrleitungssysteme [Schweiz] AG
8201 Schaffhausen
Phone +41 (0) 52 631 30 26
ch.ps@georgfischer.com
www.gfps.com/ch

Taiwan

Georg Fischer Co., Ltd
San Chung Dist., New Taipei City
Phone +886 2 8512 2822
Fax +886 2 8512 2823
www.gfps.com/tw

United Kingdom / Ireland

Georg Fischer Sales Limited
Coventry, CV2 2ST
Phone +44 (0) 2476 535 535
uk.ps@georgfischer.com
www.gfps.com/uk

USA / Caribbean

Georg Fischer LLC
Tustin, CA 92780-7258
Phone +1 (714) 731 88 00
Toll Free 800 854 40 90
us.ps@georgfischer.com
www.gfpiping.com

Vietnam

Georg Fischer Pte Ltd
136E Tran Vu, Ba Dinh District, Hanoi
Phone +84 4 3715 3290
Fax +84 4 3715 3285

International

Georg Fischer
Piping Systems (Switzerland) Ltd
8201 Schaffhausen/Switzerland
Phone +41 (0) 52 631 30 03
Fax +41 (0) 52 631 28 93
info.export@georgfischer.com
www.gfps.com/int

The technical data are not binding. They neither constitute expressly warranted characteristics nor guaranteed properties nor a guaranteed durability. They are subject to modification. Our General Terms of Sale apply.