

## Temperature Transducer

### Construction

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 transducer can be mounted in any position. After screwing in the connecting element, the upper part of the housing can be turned up to  $\pm 180^\circ$  to the required position by releasing the fastening screws. Medium wetted components are made of PVDF or ceramics, the housing is made of ABS and the seal of FPM.

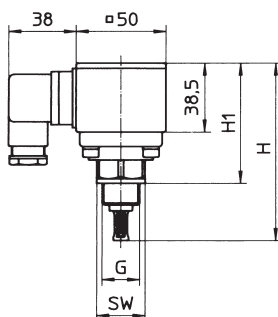
### Advantages

- Simple installation
- Linear output signal
- Fast response time
- Good long-term stability
- Medium wetted parts are of high-grade plastics and ceramics
- Quality through individual inspection
- Installation in standard T-junctions

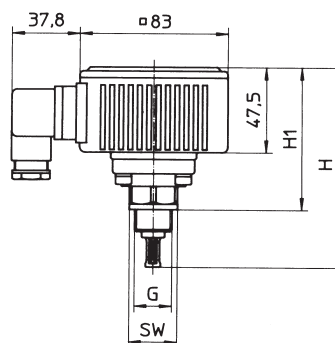


### Dimensions [mm]

#### Two-wire transducer



#### Measurement device



G	SW	H	H1
G 1/2	27	99	67
G 3/4	32	105	69

G	SW	H	H1
G 1/2	27	112	80
G 3/4	32	118	82

## Technical data

### Input variable

Measuring span 0 ... 100°C

### Output signal

#### Two-wire transducer

Signal type 4 - 20 mA  
 Characteristic linear  
 Characteristic agreement  $\pm 0.5\%$  of measuring span  
 Load resistor see characteristic

#### Measurement device with current output

Signal type 0/4 - 20 mA  
 Characteristic linear  
 Characteristic agreement  $\pm 0.5\%$  of measuring span  
 Load resistor  $\leq 750 \text{ Ohm}$

#### Measurement device with relay output

Switch rating 125V / 2 A / 60 W  
 Switch points Min. relay adjustable from 0 - 100%  
 Max. relay adjustable from 0 - 100%  
 Hysteresis relay  $\pm 1\%$  of measuring span

#### Optical display

Type LC display 3 1/2 digit (format 199.9)  
 Units of measurement °C, °F  
 Functions (selection by switch) Display of measured value  
 Switch point MIN relay  
 Switch point MAX relay  
 Accuracy  $\pm 0.5\%$  of measuring span  
 $\pm 1$  digit

#### Auxiliary power

Two-wire transducer 15 - 35V DC  
 Measurement device 24V DC (+10%, -15%)  
 Supply voltage influence  $\leq 0.1\%$  of measuring span

### Ambient conditions

Permissible ambient temperature -10 ... +50°C  
 Permissible temperature of medium at maximum pressure -10 ... +60°C  
 Permissible working pressure  $\leq 10 \text{ bar}$   
 Storage temperature -20 ... +60°C  
 Immunity to interference 350 A/m ind.

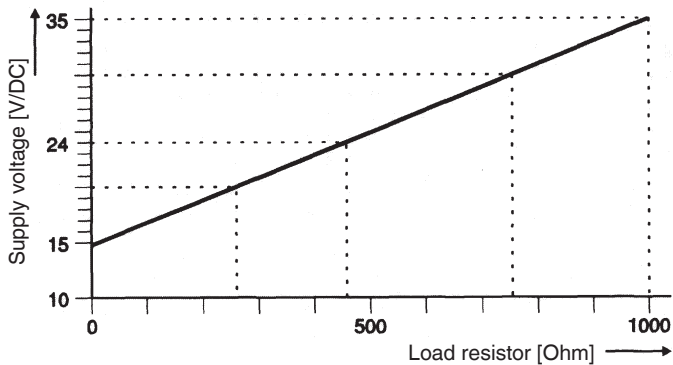
### Connections

Electrical connection Plug according to DIN EN 175301-803 Form A  
 Medium connection G 1/2 A acc. to DIN 3852  
 G 3/4 A acc. to DIN 3852

### Materials

Medium wetted parts DIN 50100  
 Connecting element PVDF  
 Sensor ceramics 610  
 Seal FPM  
 Housing ABS  
 Housing cover of measurement device PMMA

### Characteristic



### General information

Operating position optional  
 Mounting type at medium connection point  
 max. torque 20 Nm  
 Weight: Two-wire transducer approx. 155 g  
 Measurement device approx. 285 g

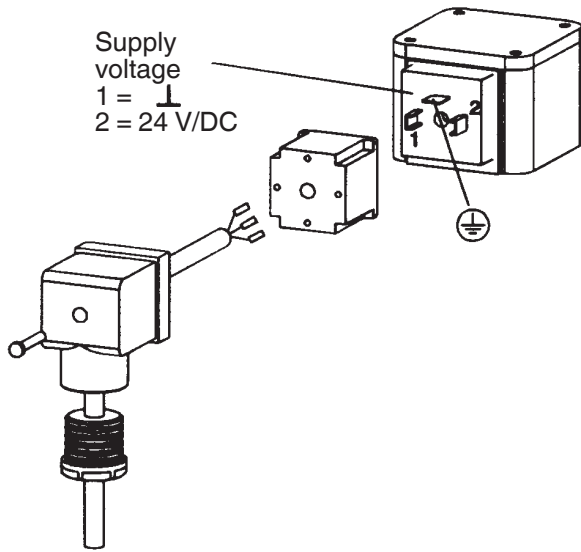
### Other designs on request

### Pressure / temperature correlation

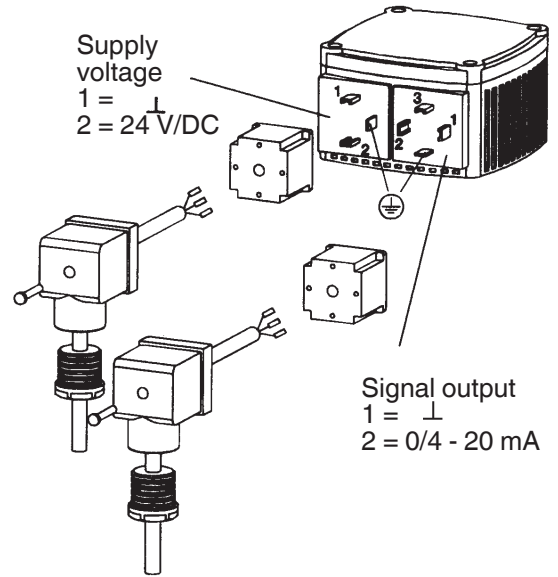
Temperature [°C]	-20	-10	$\pm 0$	5	10	20	25	30	40	50	60	70	80	90	100
<b>Material</b>	<b>permissible operating pressure in bar</b>														
PVDF Code 20	-	10.0	10.0	10.0	10.0	10.0	10.0	9.0	8.0	7.1	6.3	5.4	4.7	3.6	2.5

## Connection diagram

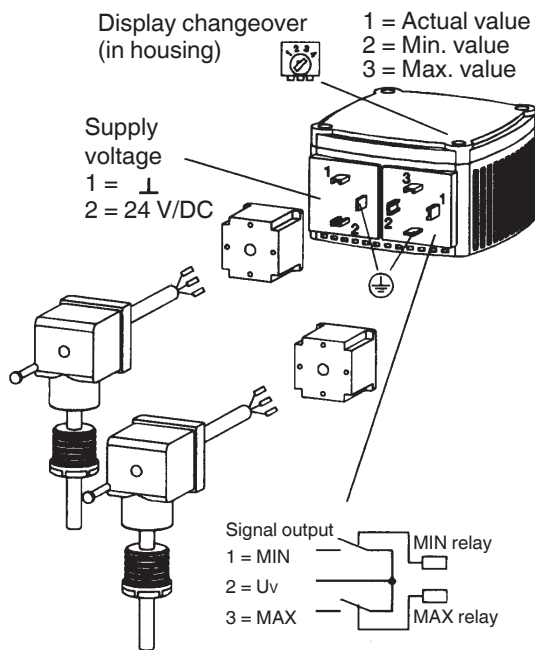
### Two-wire transducer



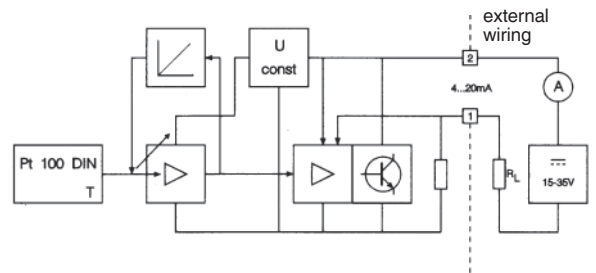
### Measurement device with current output



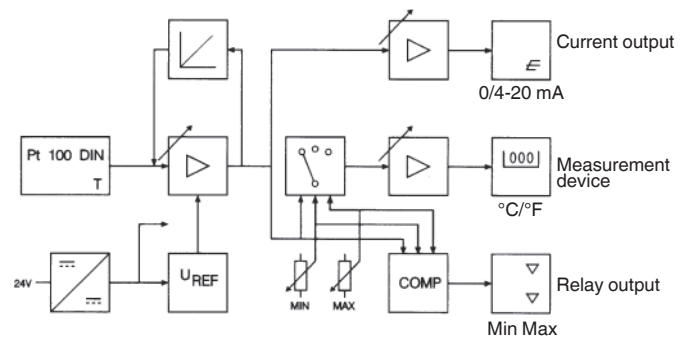
### Measurement device with relay output



### Block circuit diagram - Two-wire transducer



### Block circuit diagram - Measurement device



## Order data

Connection size	Code
1/2"	G 2
3/4"	G 3

Accuracy	Code
± 0,5%	C

Connection type	Code
On rear of housing	R

Transducer	Code
2-wire transducer	600
Meas. device with display and current output 0 - 20 mA	610
Meas. device with display and current output 4 - 20 mA	620
Meas. device with display and relay output	630

Connection standard	Code
Acc. to DIN 3852	9B

Measuring range	Code
0 - 100°C	020
32 - 194°F	021
-20 - +80°C	022
-4 - +176°F	023

Material / Connecting element	Code
PVDF	20

Sensor material	Code
Ceramics 610	B0
Ceramic sensor PVDF encapsulated	20

Order example	3220	G2	R	9B	20	B0	C	620	020
Type	3220								
Connection size (Code)		G2							
Connection type (Code)			R						
Connection standard (Code)				9B					
Material / Connecting element (Code)					20				
Sensor material (Code)						B0			
Accuracy (Code)							C		
Transducer (Code)								620	
Measurement range (Code)									020

For further measurement devices, accessories and other products  
please see our Product Range catalogue and Price List.  
Contact GEMÜ.



**GEMÜ**® VALVES, MEASUREMENT  
AND CONTROL SYSTEMS