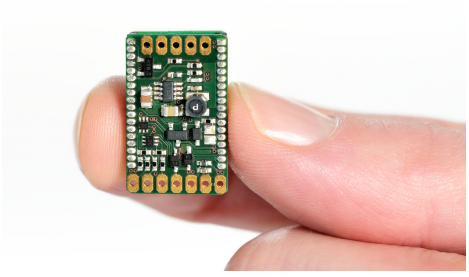
GSV-6L, GSV-6K

Configuration with "ClickR ClackR"



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Content

GSV-6

Configuration

The measuring amplifier GSV-6L and GSV-6K are configurable with respect to the Outputs (current or voltage output), the filter characteristics, and other properties.

The configuration is done via the digital inputs "Tara" and "Scale".

The digital input "Tara" has during configuration mode the function "Up" (go to the next page).
The digital input "Scale" has during configuration mode the function "ENTER"(confirm current display).

To enter the configuration mode, the line scale must be kept for at least 5s to high level (supply voltage) during power up.

Once you are in configuration mode, an output voltage of -1.1 volts appears. The voltage -1.1 volts corresponds to a selection "Input sensitivity adjustment". By pressing of "UP", the voltage changes to -2,2V. This corresponds to a selection for "frequency". The table shows the "main menu" with voltages from -1.1 to -9.9 volts.

Voltage in V	Function
-1,1	Select Input Sensitivity
-2,2	Select Frequency
-3,3	Select Output Signal (5V, 10V, 20mA, +-10V, ...)
-4,4	Select Offset of Output Signal
-5,5	Select Autoscale Level
-6,6	Select Threshold Level „ON“
-7,7	Select Threshold Level „OFF“
-8,8	Select Special Mode
-9,9	Load Default Settings

Pressing "ENTER" takes you to the corresponding menu.

There you leaf again with the UP function until you reach the desired parameter. At the desired parameter you press the ENTER function. Then turn off the device, or take other settings.

Entry into a menu is displayed by the fact that the voltage is mirrored:
e.g. from -1,1V + 1.1V, or from -2,2V + 2.2V etc.

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Menu (1.1): „Select Input Sensitivity

Voltage in V	Function
+1,1	Sub Menu „Select Input Sensitivity“
+0,1	0,1 mV/V
+0,2	0,2 mV/V
+0,3	0,3 mV/V
+0,4	0,4 mV/V
+0,5	0,5 mV/V
+1,0	1,0 mV/V
+2,0	2,0 mV/V
+3,0	3,0 mV/V
+4,0	4,0 mV/V
+5,0	5,0 mV/V
+8,0	8,0 mV/V
-0,1	"Highres" 0,1 mV/V
-0,2	"Highres" 0,2 mV/V
-0,3	"Highres" 0,3 mV/V
-0,4	"Highres" 0,4 mV/V
-0,5	"Highres" 0,5 mV/V
-1,0	"Highres" 1,0 mV/V
-2,0	"Highres" 2,0 mV/V
-3,0	"Highres" 3,0 mV/V
-4,0	"Highres" 4,0 mV/V
-5,0	"Highres" 5,0 mV/V
-8,0	"Highres" 8,0 mV/V
-1,0	"reserved for stepless adjustment, actually no function "
-9,9	Back to Main Menu

Description

The input sensitivity can be adjusted in steps of 0.1 mV / V to 8 mV / V.
If the input sensitivity of the measuring amplifier Driven to 100%, the output shows that (in the "output") adjusted signal, for example, 20mA, 5V, 10V, etc.
The measuring amplifier GSV-6 has a mode "Highres".
In this mode, the resolution is improved.
E.g. the entire measuring range, including the reserve for zeroing is only ± 2 mV / V. within

the 2 mV/V range.

Example

To adjust the measuring amplifier to 1 mV / V, the following steps:

Action	Output in Volts	
Switching on, activating for 5s SCALE	-1,1	Menu "Adjusting the input sensitivity" is available for selection
SCALE	+1,1	entry into “Select Input Sensitivity” is successful
TARA	+0,1	
TARA	+0,2	
TARA	+0,3	
TARA	+0,4	
TARA	+0,5	
TARA	+1,0	
SCALE	LED is blinking	Programming completed
Switching Off		ready

Control of Configuration

The function can be controlled with a calibrator.
However, it is also possible to control the configuration in configuration mode: If you move right with the TARE function to an activated configuration, the LED flashes. In the preceding example, the LED would blink at + 1V.
The default setting is 2 mV / V with a reserve of 2 mV / V for zeroing.

Menu (2.2): „Select Frequency

Voltage in V	Function
+2,2	SubMenu "Select Frequency“
-1,0	Frequency 10^{-1} Hz (0,1 Hz)
-0,7	Frequency $10^{-0,7}$ Hz (0,2 Hz)
-0,3	Frequency $10^{-0,3}$ Hz (0,5 Hz)
0,0	Frequency 10^{0} Hz (1,0 Hz)
+0,3	Frequency $10^{+0,3}$ Hz (2,0 Hz)
+1,0	Frequency $10^{+1,0}$ Hz (10,0 Hz)
+1,3	Frequency $10^{+1,3}$ Hz (20,0 Hz)
+1,7	Frequency $10^{+1,7}$ Hz (50,0 Hz)

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Voltage in V	Function
+2,0	Frequency $10^{+2,0}$ Hz (100,0 Hz)
+2,3	Frequency $10^{+2,3}$ Hz (200,0 Hz)
+2,7	Frequency $10^{+2,7}$ Hz (500,0 Hz)
+3,0	Frequency $10^{+3,0}$ Hz (1,0 kHz)
+3,3	Frequency $10^{+3,3}$ Hz (2,0 kHz)
+3,7	Frequency $10^{+3,7}$ Hz (5,0 kHz)
+4,0	Frequency $10^{+4,0}$ Hz (10,0 kHz)
+4,3	Frequency $10^{+4,3}$ Hz (20,0 kHz)
+4,7	Frequency $10^{+4,4}$ Hz (25,0 kHz)
-9,9	Back to Main Menu

Description

The measurement frequency can be set up to 25 kHz.
At a measuring frequency below 10 Hz, a digital low-pass filter is applied to the output voltage (second-order Bessel filter).
The update frequency of the analog output always is at least 10Hz, even with a Frequency of 0.1Hz!
Default is 10Hz.

Example

To adjust the measuring amplifier to 1 mV / V, the following steps:

Action	Output in V	
Switching on, activating for 5s SCALE	-1,1	
TARA	-2,2	Menu „Select Frequency"
SCALE	+2,2	Entry in „Select Frequency“ is succesful
TARA	+0,1	
TARA	+0,2	
TARA	+0,3	
TARA	+0,4	
TARA	+0,5	
TARA	+1,0	
SCALE	LED blinking	Programming completed
Switching off		ready

Control of Configuration

The function can be controlled with a calibrator.
However, it is also possible to control the configuration in configuration mode: If you move right with the TARE function to an activated configuration, the LED flashes. In the preceding example, the LED would blink at + 1V.
The default setting is 10 Hz.

Menu (3.3): „Select Output Signal“

Voltage in V	Function
+3,3	Sub Menu "Select Output Signal"
0	0...10 V
+1,0	±10 V
+2,0	0... 5 V
+3,0	±5 V
+4,0	4... 20 mA
+5,0	0...20 mA
-9,9	Back to Main Menu

Description

The Default is ±10 V.

The input signal may exceed the set range by 5%.

Example

To adjust the measuring amplifier to 4 ... 20mA, perform the following steps:

Action	Output in Volts	
Switching on, activating for 5s SCALE	-1,1	
TARA	-2,2	
TARA	-3,3	Sub Menu „Select Output Signal“
SCALE	+3,3	Entry in „Select Output Signal“ is succesful
TARA	0	
TARA	+1	
TARA	+2	
TARA	+3	
TARA	+4	4...20mA

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SCALE	LED is blinking	Programming completed
Switching off		ready

Control of Configuration

The function can be controlled with a calibrator.

However, it is also possible to control the configuration in configuration mode: If you move right with the TARE function to an activated configuration, the LED flashes. In the preceding example, the LED would blink at + 4V.

Menu (4.4): „Select Offset"

Voltage in V	Function
+4,4	Sub Menu "Select Offset"
0,0	0,0 %
1,0	10,0 % (e.g. 1 V for output type ±10 V or output type 0...10 V)
1,25	12,5 % (e.g. 6 mA for output type 4...20 mA)
2,0	20 % (e.g. 2 V for output type ±10 V or output type 0...10 V)
2,5	25% (e.g. 8 mA for output type 4...20 mA)
3,0	30% (e.g. 6 mA for output type 0...20 mA)
3,75	37,5% (e.g. 10 mA for output type 4...20 mA)
4,0	40 % (e.g. 8 mA for output type 0...20 mA)
5,0	50% (e.g. 2,5 V for output type 0..5 V or 12 mA for output type 4..20 mA)
-9,9	Back to Main Menu

Description

The Default is 0 %.

The input sensitivity is always mapped to the range between "offset" and "final value".

Example: Output 4 ... 20 mA; Offset 50% Input sensitivity 2 mV / V
0 mV / V corresponding to 12 mA;
-2 mV / V corresponding to 4 mA;
+2 mV / V corresponding to 20 mA;

Example

To adjust the zero calibration of the measuring amplifier to 50% of range, perform the following steps:

Action	Output in Volts	
Switching on, activating for 5s SCALE	-1,1	
TARA	-2,2	
TARA	-3,3	
TARA	-4,4	Sub Menu „Select Offset“
SCALE	+4,4	Entry to Sub Menu „Select Offset“ ok
TARA	0,00	
TARA	+1,00	
TARA	+1,25	
TARA	+2,00	
TARA	+4	4...20mA
SCALE	LED is blinking	Programming completed
Switching off		ready

Control of Configuration

The function can be controlled with a calibrator.

However, it is also possible to control the configuration in configuration mode: If you move right with the TARE function to an activated configuration, the LED flashes. In the preceding example, the LED would blink at + 4V.

Menu (5.5): „Select Autoscale Level"

Voltage in V	Function
+5,5	Sub Menu "Select Autoscale Level"
+0,0	Deactivation of Autoscale
+0,5	5%
+1,0	10%
+1,5	15%
+2,0	20%
+2,5	25%
+3,0	30%

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Voltage in V	Function
+3,5	**35%**
+4,0	**40%**
+4,5	45%
+5,0	50%
+5,5	55%
+6,0	60%
+6,5	65%
+7,0	70%
+7,5	75%
+8,0	80%
+8,5	85%
+9,0	90%
+9,5	95%
+10,0	100%
-9,9	Back to Main Menu

Description

Die Default is 100 %.
At 100% Autoscale Level a calibration load of 100% during the application of the Auto Scale function is expected (Calibration with 100% Load)
At 50% Autoscale Level a calibration load of 50% during the application of the Auto Scale function is expected (“Calibration with 50% Load)

Example

To set the Auto Scale level of the measuring amplifier to 20% of range, perform the following steps:

Action	Output in V	
Switching on, activating for 5s SCALE	-1,1	
TARA	-2,2	
TARA	-3,3	
TARA	-4,4	

TARA	-5,5	Sub Menu „Autoscale Level“
SCALE	+5,5	Entry to „Autosclae Level“ ok
TARA	0,0	
TARA	+0,5	
TARA	+1,0	
TARA	+1,5	
TARA	+2,0	20%
SCALE	LED blinking	Programming successful
Switching off		ready

Control of Configuration

The function can be controlled with a calibrator.

However, it is also possible to control the configuration in configuration mode: If you move right with the TARE function to an activated configuration, the LED flashes. In the preceding example, the LED would blink at + 2V.

Menu (6.6): „Select Threshold Level On"

Voltage in V	Function
+6,6	Sub Menu Select Threshold Level On
+0,0	Deactivation of Threshold On Level
+0,5	5%
+1,0	10%
+1,5	15%
+2,0	20%
+2,5	25%
+3,0	30%
+3,5	35%
+4,0	40%
+4,5	45%
+5,0	50%
+5,5	55%
+6,0	60%
+6,5	65%

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Voltage in V	Function
+7,0	70%
+7,5	75%
+8,0	80%
+8,5	85%
+9,0	90%
+9,5	95%
+10,0	100%
-6,0	Reserved for future applications
-9,9	Back to Main Menu

Description

Die Default is 90 %.
The digital threshold output is „on“ at 90% of full scale.

Example

To set the Auto Scale levels of the measuring amplifier to 30% of range, perform the following steps:

Action	Output in V	
Switch on and activate for 5s SCALE	-1,1	
TARA	-2,2	
TARA	-3,3	
TARA	-4,4	
TARA	-5,5	
TARA	-6,6	Sub Menu „ select Threshold Level On“ achieved
SCALE	+6,6	Entry to „Autoscale Level“ ok
TARA	0,0	
TARA	+0,5	
TARA	+1,0	
TARA	+1,5	
TARA	+2,0	
TARA	+2,5	
TARA	+3,0	30% **achieved**

SCALE	LED blinking	Programming completed
Switch off		ready

Control of Configuration

The function can be controlled with a calibrator.

However, it is also possible to control the configuration in configuration mode: If you move with the TARE function to an activated configuration, the LED flashes. In the preceding example, the LED would blink at 3V.

Menu (7.7): „Select Threshold Level Off"

Voltage in V	Function
+7,7	Sub Menu Select Threshold Level Off
+0,0	deactivate Threshold function
+0,3	3%
+0,8	8%
+1,3	13%
+1,8	18%
+2,3	23%
+2,8	28%
+3,3	33%
+3,8	38%
+4,3	43%
+4,8	48%
+5,3	53%
+5,8	58%
+6,3	63%
+6,8	68%
+7,3	73%
+7,8	78%
+8,3	83%
+8,8	88%
+9,3	93%
+9,8	98%

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Voltage in V	Function
-7,0	Reserved for future applications
+10,0	100%
-9,9	Back to main menu

Description

Die default is 90 %.
The digital threshold output is „on“ at 90% of full scale.

Example

To set the Auto Scale levels of the measuring amplifier to 30% of range, perform the following steps:

Action	Output in V	
Switch on and activate for 5s SCALE	-1,1	
TARA	-2,2	
TARA	-3,3	
TARA	-4,4	
TARA	-5,5	
TARA	-6,6	menu „ select Threshold Level On“ achieved
SCALE	+6,6	Entry to „Autoscale Level“ ok
TARA	0,0	
TARA	+0,5	
TARA	+1,0	
TARA	+1,5	
TARA	+2,0	
TARA	+2,5	
TARA	+3,0	30% achieved
SCALE	LED is blinking	Programming completed
Switch off		ready

Control of Configuration

The function can be controlled with a calibrator.

However, it is also possible to control the configuration in configuration mode: If you move with the TARE function to an activated configuration, the LED flashes. In the preceding

example, the LED would blink at 3V.

Menu (8.8): set „Mode"

Voltage in V	Function
+8,8	set sub menu "Mode"
+0,0	Set actual value mode (not changeable)
+1,0	Set maximum value mode ("peak value indicator") (not changeable)
+2,0	Go to menu set „inversion“
+3,0	Go to menu set „Zero non permanent“
+4,0	Go to menu set „gradient“
+5,0	Go to menu set „TEDS“
-9,9	Back to main menu

Description

The default setting is the "actual value mode".
Alternatively, the maximum value mode can be set.

The selections +2.0 to +5.0 branch into further menus. There the respective function can be selected by selecting - + 1.0V or 0V or -1V.

- With the function "inversion" (2,0) the sign of the measured value output can be inverted:
  - -1V: inversion on
  - + 1V inversion off
- Zero non permanent (3.0) can disable the permanent storing of the zero position (not recommended).
  - + 1V Save the zero value
  - 0V Save the zero value
- The Gradient (4.0) feature currently only refers to the LED (not recommended).
- IIn the menu TEDS (5,0) the reading of TEDS can be activated. (Default: TEDS enabled)
- + 1V TEDS read enabled
- 0V TEDS read disabled

When reading the TEDS, only the scaling factor is set. The zero point is not set. The reading of the TEDS happens with the power ON of the measuring amplifier.

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Menu (9.9): „default setting" load

Voltage in V	Function
+9,9	Load the sub menu „default setting“
+1,0	Load default setting
-9,9	Back to main menu

Description

Wtih the Selection and Confirmation o „default setting load“the standard settings will be established again.

Input sensitivity: 2,0 mV/V
Output type: ±10 V
Offset: 0%
Frequency: 10 Hz
Autoscale Level: 100%
Threshold value On Level: 90%
Threshold value Off Level: 88%
Actual value display;
Gradient: 1 mV/V/s
Store Zero permanent: ein;
Inversion: off;
Resolution: standard;
TEDS: on;

Changelog

Version	Datum	Änderungen
ba-clickrcklackr_en.odt	18.08.16	First version
ba-clickrcklackr_en-v1.0.odt	08.01.19	Corrected version

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