

SITRANS L

Controllers SITRANS LT500 parameter configuration charts

Application examples

7ML60.. (SITRANS LT500 with mA/HART sensor inputs)

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

WARNING

indicates that death or severe personal injury **may** result if proper precautions are not taken.

CAUTION

indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions.

Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

All names identified by ® are registered trademarks of Siemens AG. The remaining trademarks in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owner.

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Table of contents

| | | |
|----------|-----------------------------------|----------|
| 1 | Introduction | 4 |
| 1.1 | Objective | 4 |
| 2 | Description..... | 5 |
| 2.1 | Overview | 5 |
| 2.2 | Required steps | 5 |
| 3 | Planning/configuring | 6 |
| 3.1 | Level application..... | 6 |
| 3.2 | Volume application..... | 7 |
| 3.3 | Volume flow application | 9 |
| 3.4 | Pump control application | 14 |
| 3.5 | Basic control application | 17 |
| 3.6 | Alarms application | 18 |
| 3.7 | Custom application | 27 |

Introduction

1.1 Objective

Print and use as a record of parameter settings, prior to configuring device via Quick start wizards:

- Quick commissioning
- Pump control
- Basic control
- Alarms

Equipment:

- Siemens SITRANS LT500 device (for configuration once parameter values have been recorded)
- Remote sensor(s)

Note

While every effort is made to verify the following information, no warranty of accuracy or usability is expressed or implied.

2

Description

2.1 Overview

SITRANS LT500 has one Quick commissioning wizard (used for various application types), and wizards for Pump control, Basic control and Alarms. All wizards are located under the Quick start menu on the device.

These wizards guide you through the configuration of parameters essential for the proper settings to support the application.

If two measurement points are connected, you will be prompted to set up each point individually.

Run the commissioning wizard first (by setting the appropriate application type per point) and when successfully completed, run the other wizards if required for the application.

2.2 Required steps

This document provides a parameter configuration chart for each application type supported by SITRANS LT500:

- Level
- Space
- Distance
- Volume
- Volume flow
- Pump control
- Basic control
- Alarms

Use the appropriate chart for your specific application. Create a record of device parameter values to have on hand prior to completing Quick start wizards during commissioning of the device.

3

Planning/configuring

3.1 Level application

Note

Print two copies, and complete chart for each measurement point, if both points configured for a LEVEL, SPACE, or DISTANCE application.

| | |
|--|---------------------|
| Device TAG: | Serial number: |
| Select point for this reference chart: | |
| Measurement point 1 | Measurement point 2 |
| Sensor: | Serial number: |

| Wizard - Quick commissioning | | |
|---|---|--|
| Step: Select application: Level (used for Level or Space or Distance) | | |
| Wizard step | Parameter | Options (default noted by asterisk) |
| Step: Length units | Length units | <ul style="list-style-type: none">• m*• cm• mm• ft• in |
| Step: Sensor type | Sensor type | <ul style="list-style-type: none">• SITRANS LR110• SITRANS LR120• SITRANS Probe LU240• Generic (4...20 mA)* |
| Step: Calibration | Current at lower calibration point (generic mA sensor only) | |
| | Current at upper level point (generic mA sensor only) | |
| | Lower calibration point | |
| | Upper calibration point | |
| | Response rate | <ul style="list-style-type: none">• Slow (0.1 m/min fill/empty rate)*• Medium (1.0 m/min fill/empty rate)• Fast (10.0 m/min fill/empty rate) |
| | Material type | <ul style="list-style-type: none">• Liquid*• Solid |
| Notes: | | |

3.2 Volume application

Note

Print two copies, and complete chart for each measurement point, if both points configured for a VOLUME application.

| | |
|---|---------------------|
| Device TAG: | Serial number: |
| Select point for this reference chart: | |
| Measurement point 1 | Measurement point 2 |
| Sensor: | Serial number: |

| Wizard - Quick commissioning | | |
|----------------------------------|--------------|---|
| Step: Select application: Volume | | |
| Wizard step | Parameter | Options (default noted by asterisk) |
| Step: Units | Length units | <ul style="list-style-type: none"> • m* • cm • mm • ft • in |
| | Volume units | <ul style="list-style-type: none"> • l (liters)* • hl (hectoliters) • m³ (cubic meters) • gal (US gallons) • gal (UK) (imperial gallons) • bbl (US) (31.5 gallon barrels) • bbl-beer (31 US gallon barrels) • bbl (42 US gallon barrels) • in³ (cubic inches) • ft³ (cubic feet) • yd³ (cubic yards) • bu (bushels) • Custom (set outside of wizard) |
| Step: Sensor type | Sensor type | <ul style="list-style-type: none"> • SITRANS LR110 • SITRANS LR120 • SITRANS Probe LU240 • Generic (4...20 mA)* |

| Wizard - Quick commissioning | | | |
|--|---|---|--|
| Step: Select application: Volume | | | |
| Step: Calibration | Current at lower calibration point (generic mA sensor only) | | |
| | Current at upper level point (generic mA sensor only) | | |
| | Lower calibration point | | |
| | Upper calibration point | | |
| | Response rate | <ul style="list-style-type: none"> • Slow (0.1 m/min fill/empty rate)* • Medium (1.0 m/min fill/empty rate) • Fast (10.0 m/min fill/empty rate) | |
| | Material type | <ul style="list-style-type: none"> • Liquid* • Solid | |
| Step: Volume settings (vary by vessel shape) | Vessel shape | • Linear vessel* | Requires: Maximum volume |
| | | • Conical bottom vessel | Requires: Maximum volume, Vessel dimension A |
| | | • Parabolic bottom vessel | Requires: Maximum volume, Vessel dimension A |
| | | • Half sphere bottom vessel | Requires: Maximum volume, Vessel dimension A |
| | | • Flat sloped bottom vessel | Requires: Maximum volume, Vessel dimension A |
| | | • Cylinder vessel | Requires: Maximum volume |
| | | • Parabolic ends vessel | Requires: Maximum volume, Vessel dimension A, Vessel dimension L |
| | | • Sphere vessel | Requires: Maximum volume |
| | • Custom | Requires: X-value 1 to X-value 32 Y-value 1 to Y-value 32 Set data points outside of wizard if applicable to application. Record values in separate "Custom application" chart. | |
| | Vessel dimension A | | |
| | Vessel dimension L | | |
| | Maximum volume | | |
| Notes: | | | |

3.3 Volume flow application

Note

Print two copies, and complete chart for each measurement point, if both points configured for a VOLUME FLOW application.

| | |
|---|---------------------|
| Device TAG: | Serial number: |
| Select point for this reference chart: | |
| Measurement point 1 | Measurement point 2 |
| Sensor: | Serial number: |

| Wizard - Quick commissioning | | |
|---------------------------------------|--------------|--|
| Step: Select application: Volume flow | | |
| Wizard step | Parameter | Options (default noted by asterisk) |
| Step: Units | Length units | <ul style="list-style-type: none">• m*• cm• mm• ft• in |

| Wizard - Quick commissioning | |
|---------------------------------------|--|
| Step: Select application: Volume flow | |
| Volume flow units | <ul style="list-style-type: none"> • l/s (liters per second)* • l/min (liters per minute) • l/h (liters per hour) • l/d (liters per day) • Ml/d (megaliters per day) • hl/s (hectoliters per second) • hl/min (hectoliters per minute) • hl/h (hectoliters per hour) • hl/d (hectoliters per day) • m³/s (cubic meters per second) • m³/min (cubic meters per minute) • m³/h (cubic meters per hour) • m³/d (cubic meters per day) • Mm³/d (million cubic meters per day) • gal/s (US gallons per second) • gal/min (US gallons per minute) • gal/h (US gallons per hour) • gal/d (US gallons per day) • Mgal/d (US megagallons per day) • gal (UK)/s (imperial gallons per second) • gal (UK)/min (imperial gallons per minute) • gal (UK)/h (imperial gallons per hour) • gal (UK)/d (imperial gallons per day) • bbl/h (42 US gallon barrels per hour) • bbl/d (42 US gallon barrels per day) • kbbl/d (thousand 42 US gallon barrels per day) • Mbbl/d (million 42 US gallon barrels per day) • bbl (US)/s (31.5 US gallon barrels per second) • bbl (US)/min (31.5 US gallon barrels per minute) • bbl (US)/h (31.5 US gallon barrels per hour) • bbl (US)/d (31.5 US gallon barrels per day) • ft³/s (cubic feet per second) • ft³/min (cubic feet per minute) • ft³/h (cubic feet per hour) • ft³/d (cubic feet per day) • Mft³/d (million cubic feet per day) • AF/min (acre-feet per minute) • AF/h (acre-feet per hour) • AF/d (acre-feet per day) • in³/s (cubic inches per second) • in³/min (cubic inches per minute) • in³/h (cubic inches per hour) • in³/d (cubic inches per day) • yd³/s (cubic yards per second) |

| Wizard - Quick commissioning | | | |
|---------------------------------------|---|--|---|
| Step: Select application: Volume flow | | | |
| | Volume flow units (continued) | | |
| | | <ul style="list-style-type: none"> • bbl-beer/s (31 US gallon barrels per second) • bbl-beer/min (31 US gallon barrels per min) • bbl-beer/h (31 US gallon barrels per hour) • bbl-beer/d (31 US gallon barrels per day) • bbl/s (42 US gallon barrels per second) • bbl/min (42 US gallon barrels per minute) | <ul style="list-style-type: none"> • yd³/min (cubic yards per minute) • yd³/h (cubic yards per hour) • yd³/d (cubic yards per day) • bu/s (bushels per second) • bu/min (bushels per minute) • bu/h (bushels per hour) • bu/d (bushels per day) • Custom (set outside of wizard) |
| | Volume units | <ul style="list-style-type: none"> • l (liters)* • hl (hectoliters) • m³ (cubic meters) • gal (US gallons) • gal (UK) (imperial gallons) • bbl (US) (31.5 gallon barrels) | <ul style="list-style-type: none"> • bbl-beer (31 US gallon barrels) • bbl (42 US gallon barrels) • in³ (cubic inches) • ft³ (cubic feet) • yd³ (cubic yards) • bu (bushels) • Custom (set outside of wizard) |
| Step: Sensor type | Sensor type | <ul style="list-style-type: none"> • SITRANS LR110 • SITRANS LR120 • SITRANS Probe LU240 • Generic (4...20 mA)* | |
| Step: Calibration | Current at lower calibration point (generic mA sensor only) | | |
| | Current at upper level point (generic mA sensor only) | | |
| | Lower calibration point | | |
| | Upper calibration point | | |
| | Response rate | <ul style="list-style-type: none"> • Slow (0.1 m/min fill/empty rate)* • Medium (1.0 m/min fill/empty rate) • Fast (10.0 m/min fill/empty rate) | |
| | Material type | <ul style="list-style-type: none"> • Liquid* • Solid | |

| Wizard - Quick commissioning | | | |
|--|--|------------------|--|
| Step: Select application: Volume flow | | | |
| Step: Primary measuring device | Primary measuring device | | <ul style="list-style-type: none"> • Exponential devices* • Rectangular flume BS 3680/ISO 4373 • Round nose horizontal crest weir BS 3680/ISO 4373 • Trapezoidal flume BS 3680/ISO 4373 • U-flume BS 3680/ISO 4373 • Finite crest weir BS 3680/ISO 4373 • Thin plate rectangular weir BS 3680/ISO 4373 • Thin plate V-notch weir BS 3680/ISO 4373 • Rectangular weir contracted • Round pipe • Palmer-Bowlus flume • H-flume • Custom |
| Step: Method of flow calculation | Method of flow calculation | | <ul style="list-style-type: none"> • Absolute* • Ratiometric |
| Step: Flow settings (vary by PMD) | Exponential devices | • Flow exponent | |
| | | • K-factor | |
| | Rectangular flume BS 3680/ISO 4373 | • Approach width | |
| | | • Throat width | |
| | | • Hump height | |
| | | • Throat length | |
| | Round nose horizontal crest weir BS 3680/ISO 4373 | • Crest width | |
| | | • Crest height | |
| | | • Crest length | |

Wizard - Quick commissioning**Step: Select application: Volume flow**

| | | |
|---|-------------------------|--|
| Trapezoidal flume BS 3680/ISO 4373 | • Approach width | |
| | • Throat width | |
| | • Hump height | |
| | • Throat length | |
| | • Slope | |
| U-flume BS 3680/ISO 4373 | • Approach diameter | |
| | • Throat diameter | |
| | • Hump height | |
| | • Throat length | |
| Finite crest weir BS 3680/ISO 4373 | • Crest width | |
| | • Crest height | |
| | • Crest length | |
| Thin plate rectangular weir BS 3680/ISO 4373 | • Approach width | |
| | • Crest width | |
| | • Crest height | |
| Thin plate V-notch weir BS 3680/ISO 4373 | • V-notch angle | |
| Rectangular weir contracted | • Crest width | |
| Round pipe | • Pipe diameter | |
| | • Slope | |
| | • Roughness coefficient | |

| Wizard - Quick commissioning | | | |
|---------------------------------------|---------------------|--|--|
| Step: Select application: Volume flow | | | |
| | Palmer-Bowlus flume | <ul style="list-style-type: none"> • Maximum flume width | |
| | H-flume | <ul style="list-style-type: none"> • Flume height | |
| | Custom | <ul style="list-style-type: none"> • X-value 1 to X-value 32 • Y-value 1 to Y-value 32 | Set data points outside of wizard if applicable to application. Record values in separate "Custom application" chart. |
| Step: Flow settings (common) | Maximum head | | |
| | Zero head offset | | |
| | Maximum flow | | |
| | Low flow cut-off | | |
| Notes: | | | |

3.4 Pump control application

Note

Print two copies, and complete chart for each measurement point, if both points configured for a PUMP application.

| Wizard - Quick start | | |
|--------------------------------|-------------------|---|
| Pump control | | |
| Wizard step | Parameter | Options (default noted by asterisk) |
| Step: Select measurement point | Measurement point | <ul style="list-style-type: none"> • Measurement point 1* • Measurement point 2 |
| Step: Number of pumps | Number of pumps | <ul style="list-style-type: none"> • 1 • 2* • 3 • 4 • 5 • 6 |

| Wizard - Quick start | |
|--------------------------------|--|
| Pump control | |
| Step: Pump control mode | Pump control mode <ul style="list-style-type: none"> • Alternate duty assist* • Alternate duty backup • Service ratio duty assist • Service ratio duty backup • Fixed duty assist • Fixed duty backup • Single pump |
| Step: Pump control | Pump 1 <ul style="list-style-type: none"> • Relay output 1 • Relay output 2 • Relay output 3 • Relay output 4 • Relay output 5 • Relay output 6 |
| | Pump 2 <ul style="list-style-type: none"> • Relay output 1 • Relay output 2 • Relay output 3 • Relay output 4 • Relay output 5 • Relay output 6 |
| | Pump 3 <ul style="list-style-type: none"> • Relay output 1 • Relay output 2 • Relay output 3 • Relay output 4 • Relay output 5 • Relay output 6 |
| | Pump 4 <ul style="list-style-type: none"> • Relay output 1 • Relay output 2 • Relay output 3 • Relay output 4 • Relay output 5 • Relay output 6 |
| | Pump 5 <ul style="list-style-type: none"> • Relay output 1 • Relay output 2 • Relay output 3 • Relay output 4 • Relay output 5 • Relay output 6 |

| Wizard - Quick start | | |
|-------------------------------|----------------------|--|
| Pump control | | |
| | Pump 6 | <ul style="list-style-type: none"> • Relay output 1 • Relay output 2 • Relay output 3 • Relay output 4 • Relay output 5 • Relay output 6 |
| Step: Service ratios | Service ratio pump 1 | |
| | Service ratio pump 2 | |
| | Service ratio pump 3 | |
| | Service ratio pump 4 | |
| | Service ratio pump 5 | |
| | Service ratio pump 6 | |
| Step: Pump run times | Run time pump 1 | |
| | Run time pump 2 | |
| | Run time pump 3 | |
| | Run time pump 4 | |
| | Run time pump 5 | |
| | Run time pump 6 | |
| Step: On/off setpoints | On setpoint pump 1 | |
| | Off setpoint pump 1 | |
| | On setpoint pump 2 | |
| | Off setpoint pump 2 | |
| | On setpoint pump 3 | |
| | Off setpoint pump 3 | |
| | On setpoint pump 4 | |
| | Off setpoint pump 4 | |
| | On setpoint pump 5 | |
| | Off setpoint pump 5 | |
| | On setpoint pump 6 | |
| | Off setpoint pump 6 | |
| Notes: | | |

3.5 Basic control application

Note

Print two copies, and complete chart for each measurement point if both points configured for a BASIC CONTROL application.

| Wizard - Quick start | | |
|------------------------------------|-----------------------|--|
| Basic control | | |
| Wizard step | Parameter | Options (default noted by asterisk) |
| Step: Select control source | Select control source | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Level (point 1) * <input type="checkbox"/> Level (point 2) <input type="checkbox"/> Level difference <input type="checkbox"/> Level average |
| Step: Control relays | Control relays | <input type="checkbox"/> Relay output 1 <input type="checkbox"/> Relay output 2 <input type="checkbox"/> Relay output 3 <input type="checkbox"/> Relay output 4 <input type="checkbox"/> Relay output 5 <input type="checkbox"/> Relay output 6 |
| Step: On/off setpoints | On setpoint relay 1 | |
| | Off setpoint relay 1 | |
| | On setpoint relay 2 | |
| | Off setpoint relay 2 | |
| | On setpoint relay 3 | |
| | Off setpoint relay 3 | |
| | On setpoint relay 4 | |
| | Off setpoint relay 4 | |
| | On setpoint relay 5 | |
| | Off setpoint relay 5 | |
| | On setpoint relay 6 | |
| | Off setpoint relay 6 | |
| Notes: | | |

3.6 Alarms application

Note

Print two copies, and complete chart for each measurement point if both points configured for an ALARMS application.

| Wizard - Quick start | | |
|--------------------------------|--------------------------|--|
| Alarms | | |
| Wizard step | Parameter | Options (default noted by asterisk) |
| Step: Select measurement point | Select measurement point | <ul style="list-style-type: none">• Measurement point 1 *• Measurement point 2 |
| Step: Alarm sources | Alarm sources | <ul style="list-style-type: none">• Level• Space• Distance• Head• Volume• Volume flow• Sensor temperature• Sensor diagnostics |

Wizard - Quick start**Alarms**

| | | | |
|----------------------------|---------------|--|--|
| Step: Enable alarms | Enable alarms | <input type="checkbox"/> 320 Level (point 1) above alarm limit <input type="checkbox"/> 321 Level (point 1) above warning limit <input type="checkbox"/> 322 Level (point 1) below warning limit <input type="checkbox"/> 323 Level (point 1) below alarm limit <input type="checkbox"/> 324 Space (point 1) above alarm limit <input type="checkbox"/> 325 Space (point 1) above warning limit <input type="checkbox"/> 326 Space (point 1) below warning limit <input type="checkbox"/> 327 Space (point 1) below alarm limit <input type="checkbox"/> 328 Distance (point 1) above alarm limit <input type="checkbox"/> 329 Distance (point 1) above warning limit <input type="checkbox"/> 330 Distance (point 1) below warning limit <input type="checkbox"/> 331 Distance (point 1) below alarm limit <input type="checkbox"/> 336 Head (point 1) above alarm limit <input type="checkbox"/> 337 Head (point 1) above warning limit <input type="checkbox"/> 338 Head (point 1) below warning limit <input type="checkbox"/> 339 Head (point 1) below alarm limit <input type="checkbox"/> 332 Volume (point 1) above alarm limit <input type="checkbox"/> 333 Volume (point 1) above warning limit <input type="checkbox"/> 334 Volume (point 1) below warning limit <input type="checkbox"/> 335 Volume (point 1) below alarm limit <input type="checkbox"/> 100 Volume flow (point 1) above alarm limit <input type="checkbox"/> 101 Volume flow (point 1) above warning limit <input type="checkbox"/> 102 Volume flow (point 1) below warning limit <input type="checkbox"/> 103 Volume flow (point 1) below alarm limit <input type="checkbox"/> 108 Sensor temperature (point 1) above alarm limit <input type="checkbox"/> 109 Sensor temperature (point 1) above warning limit <input type="checkbox"/> 110 Sensor temperature (point 1) below warning limit <input type="checkbox"/> 111 Sensor temperature (point 1) below alarm limit | <input type="checkbox"/> 340 Level (point 2) above alarm limit <input type="checkbox"/> 341 Level (point 2) above warning limit <input type="checkbox"/> 342 Level (point 2) below warning limit <input type="checkbox"/> 343 Level (point 2) below alarm limit <input type="checkbox"/> 344 Space (point 2) above alarm limit <input type="checkbox"/> 345 Space (point 2) above warning limit <input type="checkbox"/> 346 Space (point 2) below warning limit <input type="checkbox"/> 347 Space (point 2) below alarm limit <input type="checkbox"/> 348 Distance (point 2) above alarm limit <input type="checkbox"/> 349 Distance (point 2) above warning limit <input type="checkbox"/> 350 Distance (point 2) below warning limit <input type="checkbox"/> 351 Distance (point 2) below alarm limit <input type="checkbox"/> 356 Head (point 2) above alarm limit <input type="checkbox"/> 357 Head (point 2) above warning limit <input type="checkbox"/> 358 Head (point 2) below warning limit <input type="checkbox"/> 359 Head (point 2) below alarm limit <input type="checkbox"/> 352 Volume (point 2) above alarm limit <input type="checkbox"/> 353 Volume (point 2) above warning limit <input type="checkbox"/> 354 Volume (point 2) below warning limit <input type="checkbox"/> 355 Volume (point 2) below alarm limit <input type="checkbox"/> 360 Volume flow (point 2) above alarm limit <input type="checkbox"/> 361 Volume flow (point 2) above warning limit <input type="checkbox"/> 362 Volume flow (point 2) below warning limit <input type="checkbox"/> 363 Volume flow (point 2) below alarm limit <input type="checkbox"/> 364 Sensor temperature (point 2) above alarm limit <input type="checkbox"/> 365 Sensor temperature (point 2) above warning limit <input type="checkbox"/> 366 Sensor temperature (point 2) below warning limit <input type="checkbox"/> 367 Sensor temperature (point 2) below alarm limit |
|----------------------------|---------------|--|--|

| Wizard - Quick start | | |
|---|---------------------|--|
| Alarms | | |
| Step: <Process value> limits | Upper alarm limit | |
| | Lower alarm limit | |
| | Upper warning limit | |
| | Lower warning limit | |
| | Hysteresis | |
| Step: Alarm relays | Alarm relays | <input type="checkbox"/> Relay output 1 <input type="checkbox"/> Relay output 2 <input type="checkbox"/> Relay output 3 <input type="checkbox"/> Relay output 4 <input type="checkbox"/> Relay output 5 <input type="checkbox"/> Relay output 6 |

Wizard - Quick start**Alarms**

| | | | |
|---------------------------------|---------------------------|---|---|
| Step: Alarms for relay x | Alarms for relay 1 | <input type="checkbox"/> 320 Level (point 1) above alarm limit <input type="checkbox"/> 321 Level (point 1) above warning limit <input type="checkbox"/> 322 Level (point 1) below warning limit <input type="checkbox"/> 323 Level (point 1) below alarm limit <input type="checkbox"/> 324 Space (point 1) above alarm limit <input type="checkbox"/> 325 Space (point 1) above warning limit <input type="checkbox"/> 326 Space (point 1) below warning limit <input type="checkbox"/> 327 Space (point 1) below alarm limit <input type="checkbox"/> 328 Distance (point 1) above alarm limit <input type="checkbox"/> 329 Distance (point 1) above warning limit <input type="checkbox"/> 330 Distance (point 1) below warning limit <input type="checkbox"/> 331 Distance (point 1) below alarm limit <input type="checkbox"/> 336 Head (point 1) above alarm limit <input type="checkbox"/> 337 Head (point 1) above warning limit <input type="checkbox"/> 338 Head (point 1) below warning limit <input type="checkbox"/> 339 Head (point 1) below alarm limit <input type="checkbox"/> 332 Volume (point 1) above alarm limit <input type="checkbox"/> 333 Volume (point 1) above warning limit <input type="checkbox"/> 334 Volume (point 1) below warning limit <input type="checkbox"/> 335 Volume (point 1) below alarm limit <input type="checkbox"/> 100 Volume flow (point 1) above alarm limit <input type="checkbox"/> 101 Volume flow (point 1) above warning limit <input type="checkbox"/> 102 Volume flow (point 1) below warning limit <input type="checkbox"/> 103 Volume flow (point 1) below alarm limit <input type="checkbox"/> 108 Sensor temperature (point 1) above alarm limit <input type="checkbox"/> 109 Sensor temperature (point 1) above warning limit <input type="checkbox"/> 110 Sensor temperature (point 1) below warning limit <input type="checkbox"/> 111 Sensor temperature (point 1) below alarm limit <input type="checkbox"/> Sensor diagnostics | <input type="checkbox"/> 340 Level (point 2) above alarm limit <input type="checkbox"/> 341 Level (point 2) above warning limit <input type="checkbox"/> 342 Level (point 2) below warning limit <input type="checkbox"/> 343 Level (point 2) below alarm limit <input type="checkbox"/> 344 Space (point 2) above alarm limit <input type="checkbox"/> 345 Space (point 2) above warning limit <input type="checkbox"/> 346 Space (point 2) below warning limit <input type="checkbox"/> 347 Space (point 2) below alarm limit <input type="checkbox"/> 348 Distance (point 2) above alarm limit <input type="checkbox"/> 349 Distance (point 2) above warning limit <input type="checkbox"/> 350 Distance (point 2) below warning limit <input type="checkbox"/> 351 Distance (point 2) below alarm limit <input type="checkbox"/> 356 Head (point 2) above alarm limit <input type="checkbox"/> 357 Head (point 2) above warning limit <input type="checkbox"/> 358 Head (point 2) below warning limit <input type="checkbox"/> 359 Head (point 2) below alarm limit <input type="checkbox"/> 352 Volume (point 2) above alarm limit <input type="checkbox"/> 353 Volume (point 2) above warning limit <input type="checkbox"/> 354 Volume (point 2) below warning limit <input type="checkbox"/> 355 Volume (point 2) below alarm limit <input type="checkbox"/> 360 Volume flow (point 2) above alarm limit <input type="checkbox"/> 361 Volume flow (point 2) above warning limit <input type="checkbox"/> 362 Volume flow (point 2) below warning limit <input type="checkbox"/> 363 Volume flow (point 2) below alarm limit <input type="checkbox"/> 364 Sensor temperature (point 2) above alarm limit <input type="checkbox"/> 365 Sensor temperature (point 2) above warning limit <input type="checkbox"/> 366 Sensor temperature (point 2) below warning limit <input type="checkbox"/> 367 Sensor temperature (point 2) below alarm limit <input type="checkbox"/> Sensor diagnostics |
|---------------------------------|---------------------------|---|---|

| Wizard - Quick start | |
|----------------------|---|
| Alarms | |
| | <p>Alarms for relay 2</p> <p>[] 320 Level (point 1) above alarm limit [] 321 Level (point 1) above warning limit [] 322 Level (point 1) below warning limit [] 323 Level (point 1) below alarm limit [] 324 Space (point 1) above alarm limit [] 325 Space (point 1) above warning limit [] 326 Space (point 1) below warning limit [] 327 Space (point 1) below alarm limit [] 328 Distance (point 1) above alarm limit [] 329 Distance (point 1) above warning limit [] 330 Distance (point 1) below warning limit [] 331 Distance (point 1) below alarm limit [] 336 Head (point 1) above alarm limit [] 337 Head (point 1) above warning limit [] 338 Head (point 1) below warning limit [] 339 Head (point 1) below alarm limit [] 332 Volume (point 1) above alarm limit [] 333 Volume (point 1) above warning limit [] 334 Volume (point 1) below warning limit [] 335 Volume (point 1) below alarm limit [] 100 Volume flow (point 1) above alarm limit [] 101 Volume flow (point 1) above warning limit [] 102 Volume flow (point 1) below warning limit [] 103 Volume flow (point 1) below alarm limit [] 108 Sensor temperature (point 1) above alarm limit [] 109 Sensor temperature (point 1) above warning limit [] 110 Sensor temperature (point 1) below warning limit [] 111 Sensor temperature (point 1) below alarm limit [] Sensor diagnostics</p> <p>[] 340 Level (point 2) above alarm limit [] 341 Level (point 2) above warning limit [] 342 Level (point 2) below warning limit [] 343 Level (point 2) below alarm limit [] 344 Space (point 2) above alarm limit [] 345 Space (point 2) above warning limit [] 346 Space (point 2) below warning limit [] 347 Space (point 2) below alarm limit [] 348 Distance (point 2) above alarm limit [] 349 Distance (point 2) above warning limit [] 350 Distance (point 2) below warning limit [] 351 Distance (point 2) below alarm limit [] 356 Head (point 2) above alarm limit [] 357 Head (point 2) above warning limit [] 358 Head (point 2) below warning limit [] 359 Head (point 2) below alarm limit [] 352 Volume (point 2) above alarm limit [] 353 Volume (point 2) above warning limit [] 354 Volume (point 2) below warning limit [] 355 Volume (point 2) below alarm limit [] 360 Volume flow (point 2) above alarm limit [] 361 Volume flow (point 2) above warning limit [] 362 Volume flow (point 2) below warning limit [] 363 Volume flow (point 2) below alarm limit [] 364 Sensor temperature (point 2) above alarm limit [] 365 Sensor temperature (point 2) above warning limit [] 366 Sensor temperature (point 2) below warning limit [] 367 Sensor temperature (point 2) below alarm limit [] Sensor diagnostics</p> |

Wizard - Quick start**Alarms**

| | | | |
|--|--------------------|---|---|
| | Alarms for relay 3 | <input type="checkbox"/> 320 Level (point 1) above alarm limit <input type="checkbox"/> 321 Level (point 1) above warning limit <input type="checkbox"/> 322 Level (point 1) below warning limit <input type="checkbox"/> 323 Level (point 1) below alarm limit <input type="checkbox"/> 324 Space (point 1) above alarm limit <input type="checkbox"/> 325 Space (point 1) above warning limit <input type="checkbox"/> 326 Space (point 1) below warning limit <input type="checkbox"/> 327 Space (point 1) below alarm limit <input type="checkbox"/> 328 Distance (point 1) above alarm limit <input type="checkbox"/> 329 Distance (point 1) above warning limit <input type="checkbox"/> 330 Distance (point 1) below warning limit <input type="checkbox"/> 331 Distance (point 1) below alarm limit <input type="checkbox"/> 336 Head (point 1) above alarm limit <input type="checkbox"/> 337 Head (point 1) above warning limit <input type="checkbox"/> 338 Head (point 1) below warning limit <input type="checkbox"/> 339 Head (point 1) below alarm limit <input type="checkbox"/> 332 Volume (point 1) above alarm limit <input type="checkbox"/> 333 Volume (point 1) above warning limit <input type="checkbox"/> 334 Volume (point 1) below warning limit <input type="checkbox"/> 335 Volume (point 1) below alarm limit <input type="checkbox"/> 100 Volume flow (point 1) above alarm limit <input type="checkbox"/> 101 Volume flow (point 1) above warning limit <input type="checkbox"/> 102 Volume flow (point 1) below warning limit <input type="checkbox"/> 103 Volume flow (point 1) below alarm limit <input type="checkbox"/> 108 Sensor temperature (point 1) above alarm limit <input type="checkbox"/> 109 Sensor temperature (point 1) above warning limit <input type="checkbox"/> 110 Sensor temperature (point 1) below warning limit <input type="checkbox"/> 111 Sensor temperature (point 1) below alarm limit <input type="checkbox"/> Sensor diagnostics | <input type="checkbox"/> 340 Level (point 2) above alarm limit <input type="checkbox"/> 341 Level (point 2) above warning limit <input type="checkbox"/> 342 Level (point 2) below warning limit <input type="checkbox"/> 343 Level (point 2) below alarm limit <input type="checkbox"/> 344 Space (point 2) above alarm limit <input type="checkbox"/> 345 Space (point 2) above warning limit <input type="checkbox"/> 346 Space (point 2) below warning limit <input type="checkbox"/> 347 Space (point 2) below alarm limit <input type="checkbox"/> 348 Distance (point 2) above alarm limit <input type="checkbox"/> 349 Distance (point 2) above warning limit <input type="checkbox"/> 350 Distance (point 2) below warning limit <input type="checkbox"/> 351 Distance (point 2) below alarm limit <input type="checkbox"/> 356 Head (point 2) above alarm limit <input type="checkbox"/> 357 Head (point 2) above warning limit <input type="checkbox"/> 358 Head (point 2) below warning limit <input type="checkbox"/> 359 Head (point 2) below alarm limit <input type="checkbox"/> 352 Volume (point 2) above alarm limit <input type="checkbox"/> 353 Volume (point 2) above warning limit <input type="checkbox"/> 354 Volume (point 2) below warning limit <input type="checkbox"/> 355 Volume (point 2) below alarm limit <input type="checkbox"/> 360 Volume flow (point 2) above alarm limit <input type="checkbox"/> 361 Volume flow (point 2) above warning limit <input type="checkbox"/> 362 Volume flow (point 2) below warning limit <input type="checkbox"/> 363 Volume flow (point 2) below alarm limit <input type="checkbox"/> 364 Sensor temperature (point 2) above alarm limit <input type="checkbox"/> 365 Sensor temperature (point 2) above warning limit <input type="checkbox"/> 366 Sensor temperature (point 2) below warning limit <input type="checkbox"/> 367 Sensor temperature (point 2) below alarm limit <input type="checkbox"/> Sensor diagnostics |
|--|--------------------|---|---|

| Wizard - Quick start | |
|----------------------|---|
| Alarms | |
| | <p>Alarms for relay 4</p> <p>[] 320 Level (point 1) above alarm limit [] 321 Level (point 1) above warning limit [] 322 Level (point 1) below warning limit [] 323 Level (point 1) below alarm limit [] 324 Space (point 1) above alarm limit [] 325 Space (point 1) above warning limit [] 326 Space (point 1) below warning limit [] 327 Space (point 1) below alarm limit [] 328 Distance (point 1) above alarm limit [] 329 Distance (point 1) above warning limit [] 330 Distance (point 1) below warning limit [] 331 Distance (point 1) below alarm limit [] 336 Head (point 1) above alarm limit [] 337 Head (point 1) above warning limit [] 338 Head (point 1) below warning limit [] 339 Head (point 1) below alarm limit [] 332 Volume (point 1) above alarm limit [] 333 Volume (point 1) above warning limit [] 334 Volume (point 1) below warning limit [] 335 Volume (point 1) below alarm limit [] 100 Volume flow (point 1) above alarm limit [] 101 Volume flow (point 1) above warning limit [] 102 Volume flow (point 1) below warning limit [] 103 Volume flow (point 1) below alarm limit [] 108 Sensor temperature (point 1) above alarm limit [] 109 Sensor temperature (point 1) above warning limit [] 110 Sensor temperature (point 1) below warning limit [] 111 Sensor temperature (point 1) below alarm limit [] Sensor diagnostics</p> <p>[] 340 Level (point 2) above alarm limit [] 341 Level (point 2) above warning limit [] 342 Level (point 2) below warning limit [] 343 Level (point 2) below alarm limit [] 344 Space (point 2) above alarm limit [] 345 Space (point 2) above warning limit [] 346 Space (point 2) below warning limit [] 347 Space (point 2) below alarm limit [] 348 Distance (point 2) above alarm limit [] 349 Distance (point 2) above warning limit [] 350 Distance (point 2) below warning limit [] 351 Distance (point 2) below alarm limit [] 356 Head (point 2) above alarm limit [] 357 Head (point 2) above warning limit [] 358 Head (point 2) below warning limit [] 359 Head (point 2) below alarm limit [] 352 Volume (point 2) above alarm limit [] 353 Volume (point 2) above warning limit [] 354 Volume (point 2) below warning limit [] 355 Volume (point 2) below alarm limit [] 360 Volume flow (point 2) above alarm limit [] 361 Volume flow (point 2) above warning limit [] 362 Volume flow (point 2) below warning limit [] 363 Volume flow (point 2) below alarm limit [] 364 Sensor temperature (point 2) above alarm limit [] 365 Sensor temperature (point 2) above warning limit [] 366 Sensor temperature (point 2) below warning limit [] 367 Sensor temperature (point 2) below alarm limit [] Sensor diagnostics</p> |

Wizard - Quick start**Alarms**

| | | | |
|--|--------------------|---|---|
| | Alarms for relay 5 | <input type="checkbox"/> 320 Level (point 1) above alarm limit <input type="checkbox"/> 321 Level (point 1) above warning limit <input type="checkbox"/> 322 Level (point 1) below warning limit <input type="checkbox"/> 323 Level (point 1) below alarm limit <input type="checkbox"/> 324 Space (point 1) above alarm limit <input type="checkbox"/> 325 Space (point 1) above warning limit <input type="checkbox"/> 326 Space (point 1) below warning limit <input type="checkbox"/> 327 Space (point 1) below alarm limit <input type="checkbox"/> 328 Distance (point 1) above alarm limit <input type="checkbox"/> 329 Distance (point 1) above warning limit <input type="checkbox"/> 330 Distance (point 1) below warning limit <input type="checkbox"/> 331 Distance (point 1) below alarm limit <input type="checkbox"/> 336 Head (point 1) above alarm limit <input type="checkbox"/> 337 Head (point 1) above warning limit <input type="checkbox"/> 338 Head (point 1) below warning limit <input type="checkbox"/> 339 Head (point 1) below alarm limit <input type="checkbox"/> 332 Volume (point 1) above alarm limit <input type="checkbox"/> 333 Volume (point 1) above warning limit <input type="checkbox"/> 334 Volume (point 1) below warning limit <input type="checkbox"/> 335 Volume (point 1) below alarm limit <input type="checkbox"/> 100 Volume flow (point 1) above alarm limit <input type="checkbox"/> 101 Volume flow (point 1) above warning limit <input type="checkbox"/> 102 Volume flow (point 1) below warning limit <input type="checkbox"/> 103 Volume flow (point 1) below alarm limit <input type="checkbox"/> 108 Sensor temperature (point 1) above alarm limit <input type="checkbox"/> 109 Sensor temperature (point 1) above warning limit <input type="checkbox"/> 110 Sensor temperature (point 1) below warning limit <input type="checkbox"/> 111 Sensor temperature (point 1) below alarm limit <input type="checkbox"/> Sensor diagnostics | <input type="checkbox"/> 340 Level (point 2) above alarm limit <input type="checkbox"/> 341 Level (point 2) above warning limit <input type="checkbox"/> 342 Level (point 2) below warning limit <input type="checkbox"/> 343 Level (point 2) below alarm limit <input type="checkbox"/> 344 Space (point 2) above alarm limit <input type="checkbox"/> 345 Space (point 2) above warning limit <input type="checkbox"/> 346 Space (point 2) below warning limit <input type="checkbox"/> 347 Space (point 2) below alarm limit <input type="checkbox"/> 348 Distance (point 2) above alarm limit <input type="checkbox"/> 349 Distance (point 2) above warning limit <input type="checkbox"/> 350 Distance (point 2) below warning limit <input type="checkbox"/> 351 Distance (point 2) below alarm limit <input type="checkbox"/> 356 Head (point 2) above alarm limit <input type="checkbox"/> 357 Head (point 2) above warning limit <input type="checkbox"/> 358 Head (point 2) below warning limit <input type="checkbox"/> 359 Head (point 2) below alarm limit <input type="checkbox"/> 352 Volume (point 2) above alarm limit <input type="checkbox"/> 353 Volume (point 2) above warning limit <input type="checkbox"/> 354 Volume (point 2) below warning limit <input type="checkbox"/> 355 Volume (point 2) below alarm limit <input type="checkbox"/> 360 Volume flow (point 2) above alarm limit <input type="checkbox"/> 361 Volume flow (point 2) above warning limit <input type="checkbox"/> 362 Volume flow (point 2) below warning limit <input type="checkbox"/> 363 Volume flow (point 2) below alarm limit <input type="checkbox"/> 364 Sensor temperature (point 2) above alarm limit <input type="checkbox"/> 365 Sensor temperature (point 2) above warning limit <input type="checkbox"/> 366 Sensor temperature (point 2) below warning limit <input type="checkbox"/> 367 Sensor temperature (point 2) below alarm limit <input type="checkbox"/> Sensor diagnostics |
|--|--------------------|---|---|

| Wizard - Quick start | |
|----------------------|---|
| Alarms | |
| | <p>Alarms for relay 6</p> <p>[] 320 Level (point 1) above alarm limit [] 321 Level (point 1) above warning limit [] 322 Level (point 1) below warning limit [] 323 Level (point 1) below alarm limit [] 324 Space (point 1) above alarm limit [] 325 Space (point 1) above warning limit [] 326 Space (point 1) below warning limit [] 327 Space (point 1) below alarm limit [] 328 Distance (point 1) above alarm limit [] 329 Distance (point 1) above warning limit [] 330 Distance (point 1) below warning limit [] 331 Distance (point 1) below alarm limit [] 336 Head (point 1) above alarm limit [] 337 Head (point 1) above warning limit [] 338 Head (point 1) below warning limit [] 339 Head (point 1) below alarm limit [] 332 Volume (point 1) above alarm limit [] 333 Volume (point 1) above warning limit [] 334 Volume (point 1) below warning limit [] 335 Volume (point 1) below alarm limit [] 100 Volume flow (point 1) above alarm limit [] 101 Volume flow (point 1) above warning limit [] 102 Volume flow (point 1) below warning limit [] 103 Volume flow (point 1) below alarm limit [] 108 Sensor temperature (point 1) above alarm limit [] 109 Sensor temperature (point 1) above warning limit [] 110 Sensor temperature (point 1) below warning limit [] 111 Sensor temperature (point 1) below alarm limit [] Sensor diagnostics</p> <p>[] 340 Level (point 2) above alarm limit [] 341 Level (point 2) above warning limit [] 342 Level (point 2) below warning limit [] 343 Level (point 2) below alarm limit [] 344 Space (point 2) above alarm limit [] 345 Space (point 2) above warning limit [] 346 Space (point 2) below warning limit [] 347 Space (point 2) below alarm limit [] 348 Distance (point 2) above alarm limit [] 349 Distance (point 2) above warning limit [] 350 Distance (point 2) below warning limit [] 351 Distance (point 2) below alarm limit [] 356 Head (point 2) above alarm limit [] 357 Head (point 2) above warning limit [] 358 Head (point 2) below warning limit [] 359 Head (point 2) below alarm limit [] 352 Volume (point 2) above alarm limit [] 353 Volume (point 2) above warning limit [] 354 Volume (point 2) below warning limit [] 355 Volume (point 2) below alarm limit [] 360 Volume flow (point 2) above alarm limit [] 361 Volume flow (point 2) above warning limit [] 362 Volume flow (point 2) below warning limit [] 363 Volume flow (point 2) below alarm limit [] 364 Sensor temperature (point 2) above alarm limit [] 365 Sensor temperature (point 2) above warning limit [] 366 Sensor temperature (point 2) below warning limit [] 367 Sensor temperature (point 2) below alarm limit [] Sensor diagnostics</p> |
| Notes: | |

3.7 Custom application

Use this chart to collect data points for a custom volume or a custom flow application.

Note

Print two copies, and complete chart for each measurement point if both points configured for a CUSTOM application.

| Custom application - Customized volume or Customized flow | | | | |
|---|------------|-------|------------|-------|
| Device menu | Parameter | Value | Parameter | Value |
| Custom <volume or flow> table 1 to 16 | X-value 1 | | Y-value 1 | |
| | X-value 2 | | Y-value 2 | |
| | X-value 3 | | Y-value 3 | |
| | X-value 4 | | Y-value 4 | |
| | X-value 5 | | Y-value 5 | |
| | X-value 6 | | Y-value 6 | |
| | X-value 7 | | Y-value 7 | |
| | X-value 8 | | Y-value 8 | |
| | X-value 9 | | Y-value 9 | |
| | X-value 10 | | Y-value 10 | |
| | X-value 11 | | Y-value 11 | |
| | X-value 12 | | Y-value 12 | |
| | X-value 13 | | Y-value 13 | |
| | X-value 14 | | Y-value 14 | |
| | X-value 15 | | Y-value 15 | |
| | X-value 16 | | Y-value 16 | |
| Custom <volume or flow> table 17 to 32 | X-value 17 | | Y-value 17 | |
| | X-value 18 | | Y-value 18 | |
| | X-value 19 | | Y-value 19 | |
| | X-value 20 | | Y-value 20 | |
| | X-value 21 | | Y-value 21 | |
| | X-value 22 | | Y-value 22 | |
| | X-value 23 | | Y-value 23 | |
| | X-value 24 | | Y-value 24 | |
| | X-value 25 | | Y-value 25 | |
| | X-value 26 | | Y-value 26 | |
| | X-value 27 | | Y-value 27 | |
| | X-value 28 | | Y-value 28 | |
| | X-value 29 | | Y-value 29 | |
| | X-value 30 | | Y-value 30 | |
| | X-value 31 | | Y-value 31 | |
| | X-value 32 | | Y-value 32 | |