

Systembeschreibung | System description | Description du système
Descrizione del sistema | Descripción de sistema | Systembeskrivning

R412028957-BAL-001-AB
2024-04; Replaces: 2023-11
DE/EN/FR/IT/ES/SV

AVENTICS™ AF2

Durchflusssensor
Flow sensor
Capteur de débit
Flussometro
Sensor de caudal
Flödessensor



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1 Zu dieser Dokumentation

Diese Anleitung enthält wichtige Informationen für den sicheren und sachgerechten Umgang mit dem Produkt.

Diese Dokumentation ist eine Ergänzung zur mitgelieferten Montageanleitung. Lesen Sie die Montageanleitung vollständig, bevor Sie mit dem Produkt arbeiten.

1.1 Gültigkeit der Dokumentation

Diese Dokumentation richtet sich an:

Programmierer, Servicepersonal, Anlagenbetreiber

Diese Dokumentation liefert ergänzende Informationen im Umgang mit folgenden Produktvarianten der Serie AF2 und 652/653:

| Serie | Produktvariante | Schnittstelle |
|-------|------------------------------|---------------|
| AF2 | Sensorfilterkombination (AS) | IO-Link |
| | | Ethernet |
| | Sensor High Flow (HF) | IO-Link |
| | | Ethernet |
| 652 | Filter-Produktvariante | IO-Link (A) |
| | | Ethernet (B) |
| | Rohr-Produktvariante | IO-Link (A) |
| | | Ethernet (B) |
| 653 | Filter-Produktvariante | IO-Link (A) |
| | | Ethernet (B) |
| | Rohr-Produktvariante | IO-Link (A) |
| | | Ethernet (B) |

1.2 Zusätzliche Dokumentationen

Beachten Sie folgende mitgelieferte Dokumentationen:

- Anlagendokumentation des Herstellers
- Dokumentation übriger Anlagenkomponenten
- Montageanleitung (R412026496 oder 549411)

1.3 Verwendete Abkürzungen

In dieser Dokumentation werden folgende Abkürzungen verwendet:

| Abkürzung | Bedeutung |
|-----------|---|
| ABS | Acrylnitril-Butadien-Styrol |
| GF | Glasfaser |
| HF | High Flow |
| MBE | Messbereichsendwert |
| MQTT | Message Queuing Telemetry Transport |
| MTTF | Mean Time To Failure (mittlere Betriebsdauer bis zum Ausfall) |
| NPT | National Taper Pipe (Rohrgewindetyp) |
| OLED | Organic Light Emitting Diode (organische Leuchtdiode) |
| OPC UA | Open Platform Communications Unified Architecture |
| PA | Polyamid |
| PC | Polycarbonat |
| PSA | Persönliche Schutzausrüstung |
| Pt | Platin-Messwiderstand |

2 Sicherheit

2.1 Zu diesem Kapitel

- Lesen Sie das Kapitel Sicherheit der Montageanleitung sowie die gesamte Dokumentation gründlich und vollständig, bevor Sie mit dem Produkt arbeiten.
- Bewahren Sie die Dokumentation so auf, dass sie jederzeit für alle Benutzer zugänglich ist.

3 Daten und Parameter

3.1 Hinweise zur Sicherheit

- Keine Parameteränderungen im laufenden Betrieb vornehmen (Verletzungsprävention).

3.2 Parameterdaten

3.2.1 Allgemeine Einstellungen

Die Einstellung der Parameter in diesem Abschnitt gilt für alle Varianten des Produkts.

Allgemein

| Ziel | Menü | Option |
|-------------------------|-----------------|---|
| Einstellungen vornehmen | Standardanzeige | Eine beliebige Pfeiltaste mind. 2 Sekunden lang drücken und im jeweiligen Menü Einstellungen vornehmen. |

Display

| Ziel | Untermenü | Option |
|--|-------------|--|
| Einheiten einstellen | Units | Zwischen folgenden Menüs wählen: <ul style="list-style-type: none">• <i>MassFlowRate</i>• <i>FlowVelocity</i>• <i>Volume</i>• <i>VolFlowRate</i>• <i>Mass</i>• <i>Energy</i>• <i>Temperature</i>• <i>Pressure</i> |
| Anzeige Screen 1.1 einstellen | Pages | <ul style="list-style-type: none">• <i>Disp1Top</i> auswählen• <i>Disp1Btm</i> auswählen |
| Anzeige Screen 1.2 einstellen | Pages | <ul style="list-style-type: none">• <i>Disp2Top</i> auswählen• <i>Disp2Btm</i> auswählen |
| Anzeige Screen 1.3 einstellen | Pages | <ul style="list-style-type: none">• <i>Disp3Top</i> auswählen• <i>Disp3Btm</i> auswählen |
| Anzeige Screen 2.1, 2.2 und 2.3 einstellen | Pages | Im Menü <i>DispHistory</i> Anzeigeparameter auswählen |
| Lesbarkeit optimieren | Rotation | Anzeige 0°, 90°, 180° oder 270° einstellen |
| Aktivieren des Bildschirmschoners | ScreenSaver | Zeit für Aktivierung des Bildschirmschoners einstellen |
| Abschalten des Displays | AutoOff | Zeit für Abschalten des Displays einstellen |
| Helligkeit einstellen | Brightness | Helligkeit in Prozent einstellen |
| Pin für Bedienschutz bzw. Manipulationsschutz vergeben | Display Pin | 4-stellige Pin vergeben |

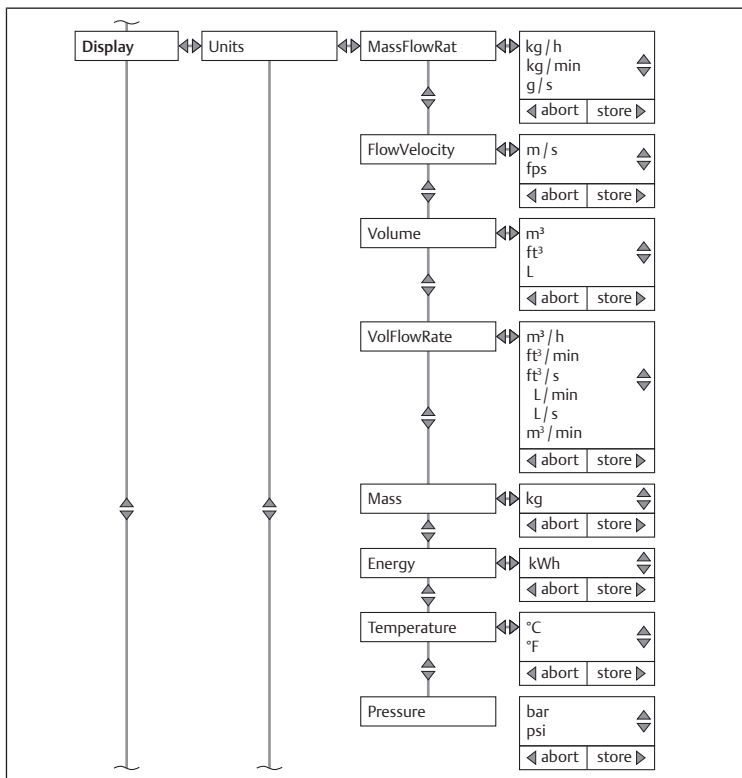


Abb. 1

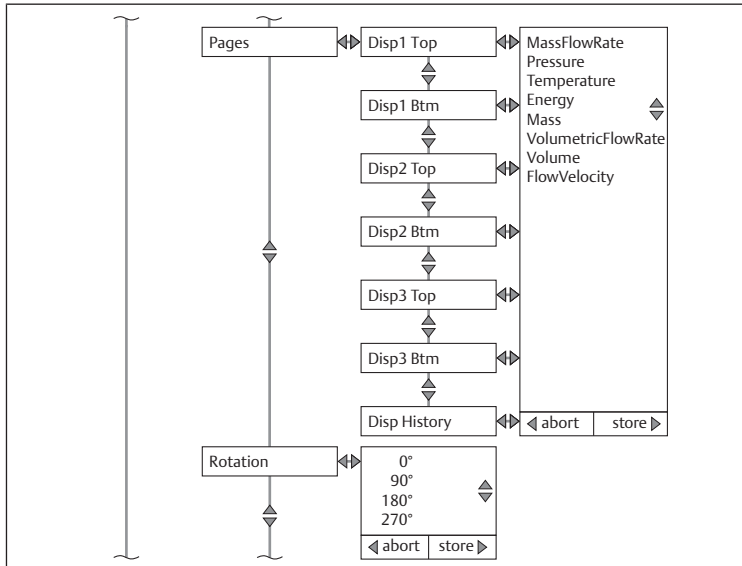


Abb. 2

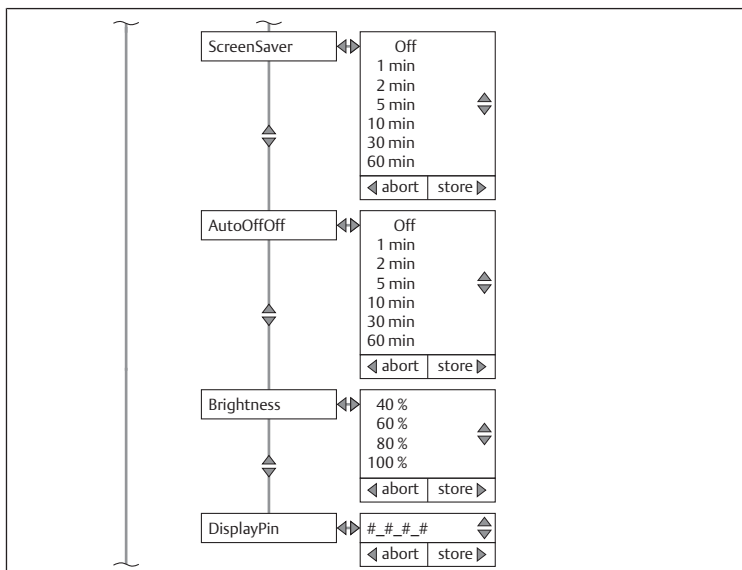


Abb. 3

Simulate

| Ziel | Untermenü | Option |
|-----------------------|-------------|-----------------------|
| Durchfluss simulieren | Flow | Durchfluss simulieren |
| Temperatur simulieren | Temperature | Temperatur simulieren |
| Druck simulieren | Pressure | Druck simulieren |

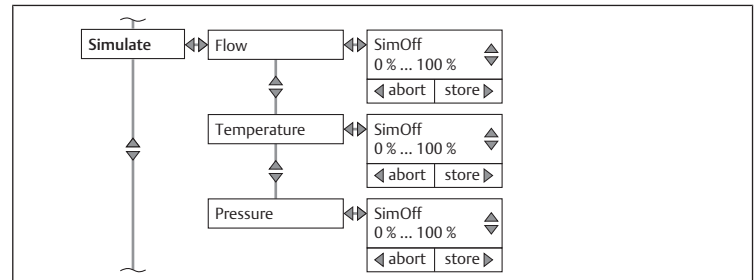


Abb. 4

Measure

| Ziel | Untermenü | Option |
|-----------------------|-----------|---|
| Messmedium einstellen | Flow | Option Medium auswählen und Messmedium einstellen: <ul style="list-style-type: none"> Air Argon CO2 Nitrogen |

| | | |
|--|------|--|
| Referenznorm/Referenzstandard einstellen | Flow | Option RefCond auswählen und Referenznorm/Referenzstandard einstellen: <ul style="list-style-type: none"> ISO2533 ISO1217 DIN1945-1 DIN1343 ISO6358 ISO8778 UserDefined (anwendungsspezifisch) |
|--|------|--|

| | | |
|---|------|--|
| Referenzdruck bei anwendungsspezifischer Einstellung (UserDefined) einstellen | Flow | Option RefCond auswählen und UserDefined (Referenzdruck anwendungsspezifisch) auswählen |
|---|------|--|

| | | |
|----------------------------------|------|--|
| Nullpunktverschiebung einstellen | Flow | Option 0-FlowOff auswählen und Nullpunktverschiebung einstellen |
|----------------------------------|------|--|

| | | |
|--|------|--|
| Schleichmengenunterdrückung einstellen | Flow | Option 0-FlowCut auswählen und Schleichmengenunterdrückung einstellen |
|--|------|--|

| | | |
|---|---------------------------|--|
| Mittelwertsfilter für Messwertglättung an Anzeige und Ausgang | Flow/Pressure/Temperature | Option Filter auswählen und Messwertfilter einstellen |
|---|---------------------------|--|

| | | |
|---|----------------------|--|
| Offset/Nullpunktverschiebung einstellen | Pressure/Temperature | Option Offset auswählen und Offset/Nullpunktverschiebung einstellen |
|---|----------------------|--|

| | | |
|-----------------------|------------|---|
| Signalqualität wählen | SigQuality | Zwischen SigQua1 , SigQua2 , SigQua3 und SigQua4 auswählen. Qualität ist jeweils auf 100 % eingestellt. Signalqualität 1 ist ein Maß für Robustheit |
|-----------------------|------------|---|

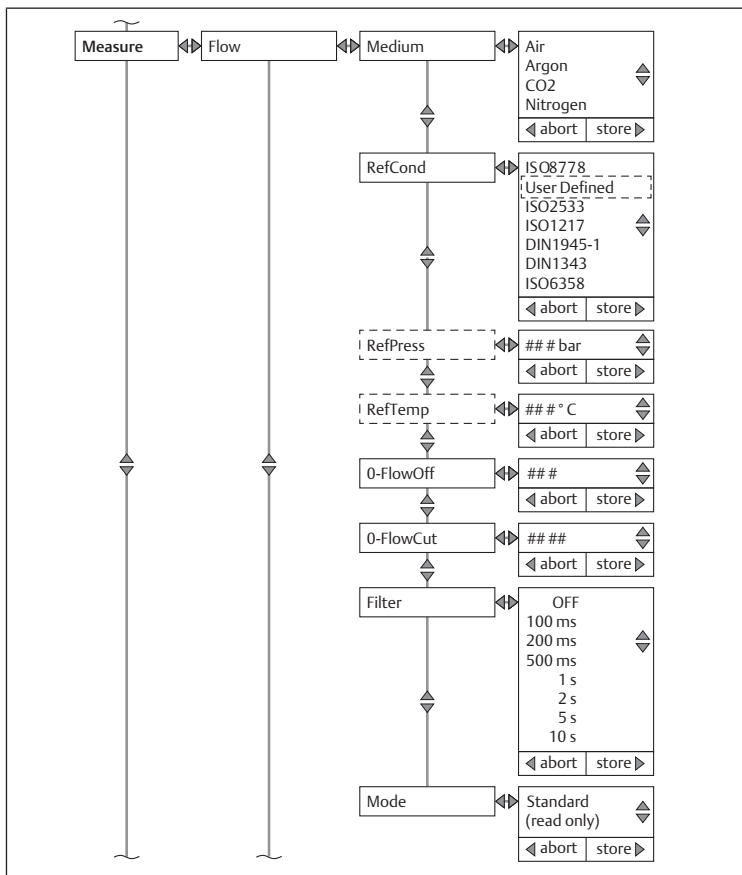


Abb. 5

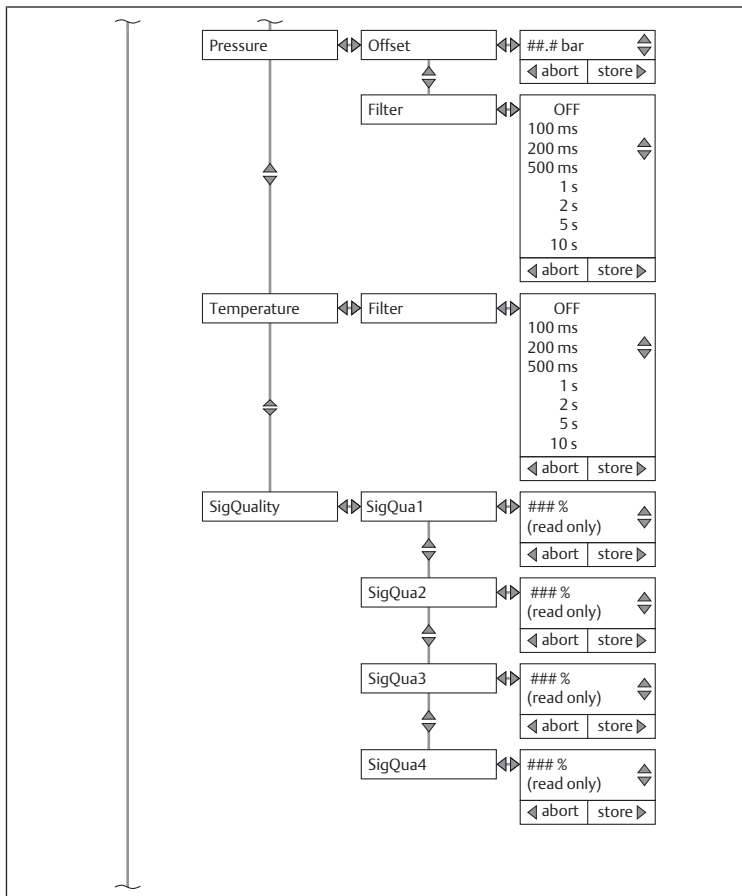


Abb. 6

History

| Ziel | Untermenü | Option |
|---|-----------|--|
| Anzeige/Graph der Messwerte der letzten 60 Minuten wählen | 60 min | Anzeige/Graph der Messwerte letzten 60 Minuten auswählen |

| Ziel | Untermenü | Option |
|---|-----------|--|
| Anzeige/Graph der Messwerte der letzten 24 Stunden wählen | 24 hour | Anzeige/Graph der Messwerte der letzten 24 Stunden auswählen |
| Anzeige/Graph der Messwerte der letzten 7 Tage wählen | 7 days | Anzeige/Graph der Messwerte der letzten 7 Tage auswählen |

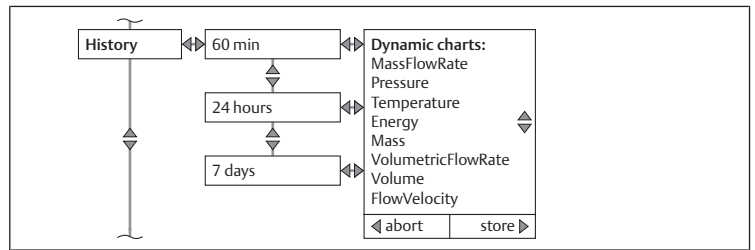


Abb. 7

Statistics

| Ziel | Untermenü | Option |
|---|-----------|--|
| Mindestwerte, Mittelwerte und Maximalwerte der einzelnen Parameter nach dem letzten Reset | View | Max, mean, min values der einzelnen Parameter nach dem letzten Reset anzeigen |
| Zeitpunkt des letzten Resets anzeigen (read only) | LastReset | Zeitpunkt des letzten Resets anzeigen |
| Statistikwerte auf 0 zurücksetzen | Reset | Statistikwerte auf 0 zurücksetzen |

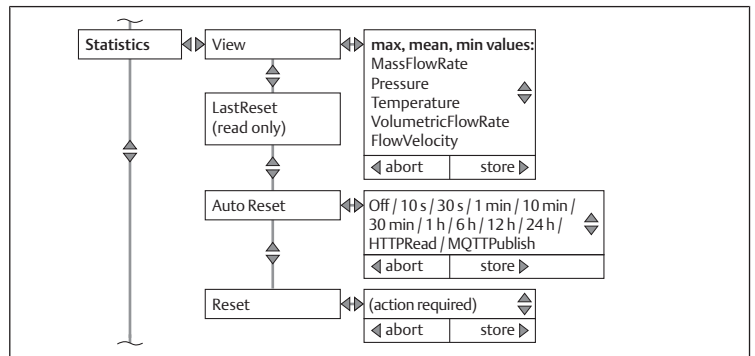


Abb. 8

Counter

| Ziel | Untermenü | Option |
|---------------------|-----------|---|
| Zähler anzeigen | | Zwischen Untermenüs Mass, Volume, Energy und LastReset wählen und Zähler anzeigen |
| Zähler zurücksetzen | Reset | Zähler zurücksetzen |

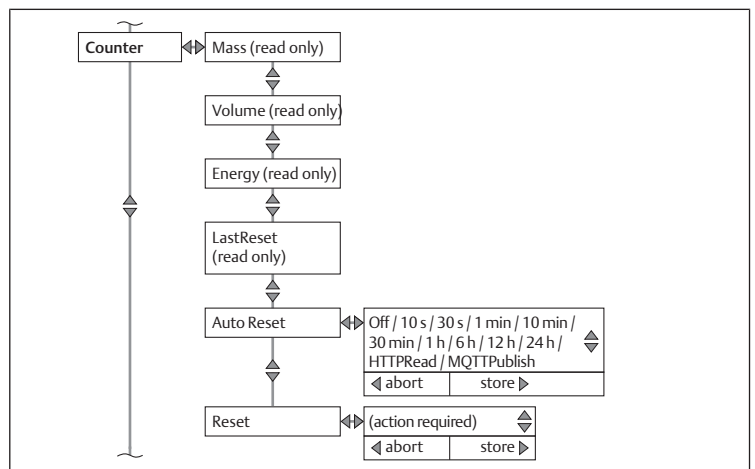


Abb. 9

System

| Ziel | Untermenü | Option |
|---------------|-----------|---|
| Service-Login | Service | Service-Login für autorisierte Anwender vornehmen |

| Ziel | Untermenü | Option |
|-----------------------------------|--------------|--|
| Auf Werkseinstellung zurücksetzen | FactReset | System auf Werkseinstellung zurücksetzen |
| Serial Number (read only) | SerialNumber | Seriennummer anzeigen lassen |
| Device-Tag einstellen | DevTag | Device-Tag einstellen |
| Application-Tag einstellen | AppTag | Application-Tag einstellen |
| FWVersion (read only) | FWVersion | Firmwareversion anzeigen lassen |
| Calibration (read only) | Calibration | Firmware-Defaults anzeigen lassen |
| BLVersion (read only) | BLVersion | Bootloadversion anzeigen lassen |
| HWVersion (read only) | HWVersion | Hardwareversion anzeigen lassen |

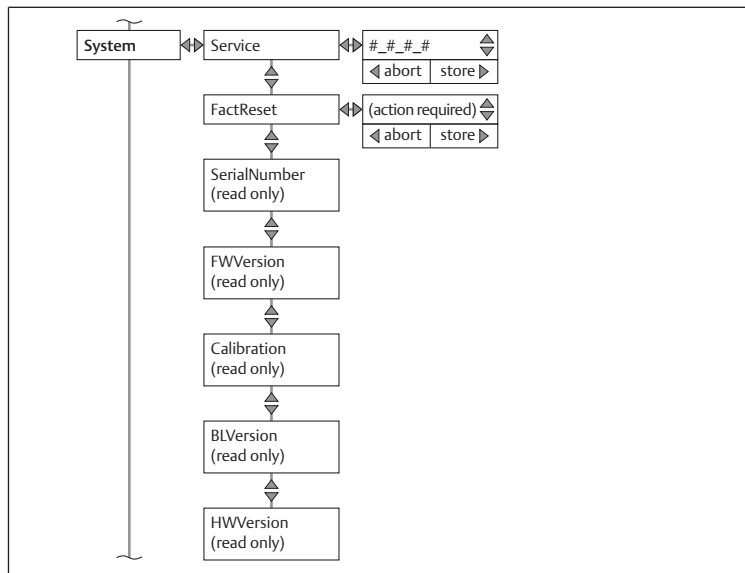


Abb. 10

Tags

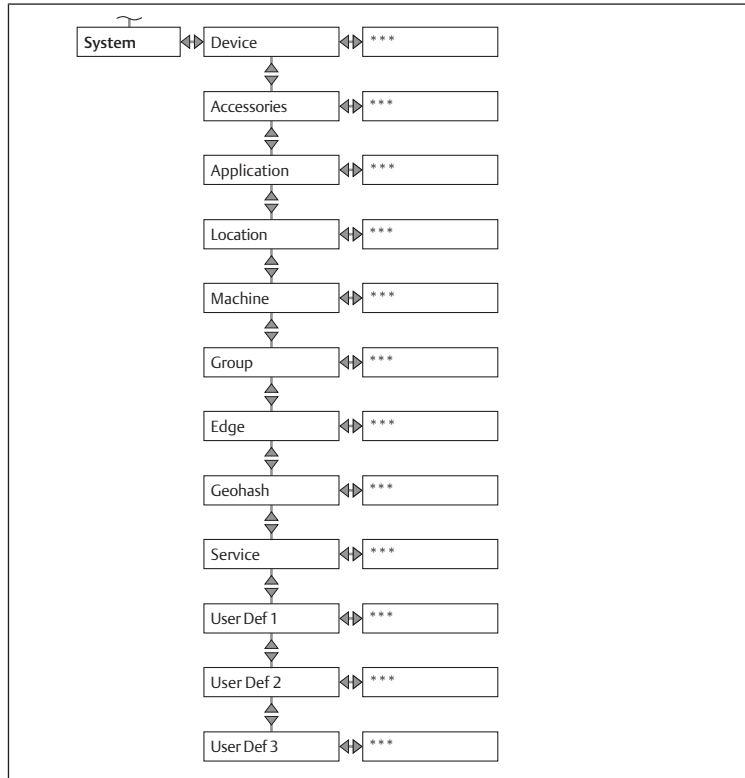


Abb. 11

3.2.2 Einstellungen für Variante IO-Link

Die Einstellungen gelten für alle Varianten des Produkts mit dem elektrischen Anschluss IO-Link.

IO-Link

Das Display zeigt das Messwertmenü mit der Default-Einstellung an (kg/h, m/s).

| Ziel | Menü | Option |
|--------------------------|-----------------|---|
| Menü wählen | Standardanzeige | Eine beliebige Pfeiltaste mind. 2 Sekunden lang drücken und zwischen Q1 Menu , Q2 Menu und Qa Menu wählen. |
| Schaltausgang einstellen | Q1 Menu | Schaltausgang einstellen |
| Schaltausgang einstellen | Q2 Menu | Schaltausgang einstellen |
| Analogausgang einstellen | Qa Menu | Analogausgang einstellen |

Q1 Menu

Das Q1-Menü enthält die Einstellungen des Schaltausgangs 1.

| Ziel | Untermenü | Option |
|--|------------|---|
| Einstellen der Hysterese oder Fensterfunktion | Mode | Einstellung des Modus für Hysterese oder Fensterfunktion mit den zugehörigen Messparametern vornehmen |
| Schaltpunkt einstellen | SetPoint1 | Schaltpunkt einstellen |
| Rückschaltpunkt/Hysterese bzw. untere Fenstergrenze einstellen | SetPoint2 | Rückschaltpunkt/Hysterese bzw. untere Fenstergrenze einstellen |
| Schaltverhalten des Öffners einstellen | Polarity | Zwischen NormallyClosed und NormallyOpen wählen |
| Schaltausgang simulieren | Simulate | Active , Inactive oder Normal (Messbetrieb) wählen |
| PNP/NPN oder Push/Pull (DRV) einstellen | DriverType | PNP/NPN oder Push/Pull (DRV) einstellen |

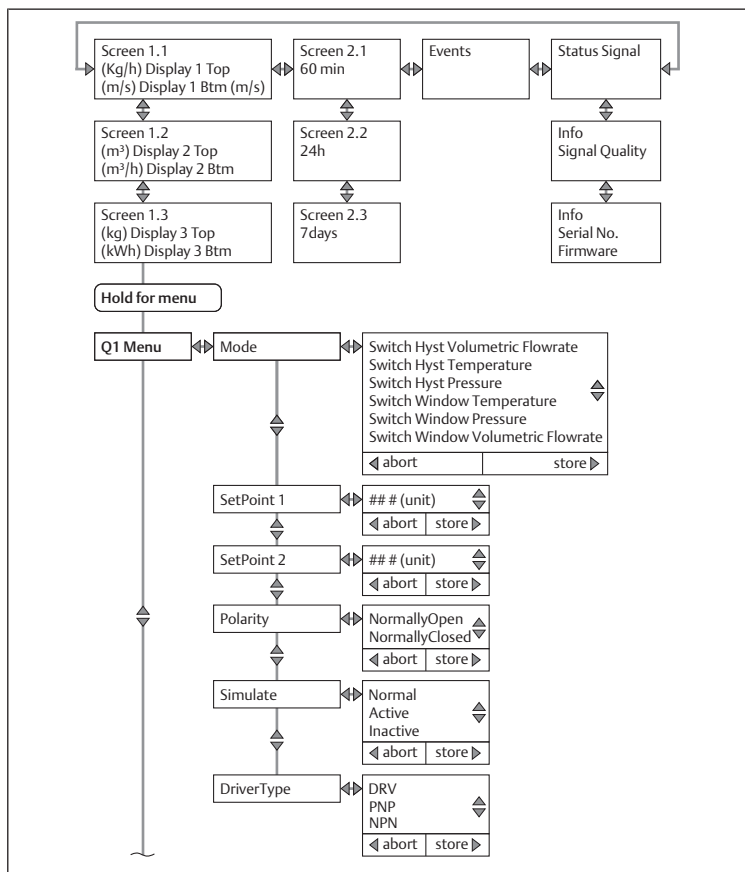


Abb. 12

Q2 Menu

Das Q2-Menü enthält die Einstellungen des Schaltausgangs 2.

| Ziel | Untermenü | Option |
|--|-----------|---|
| Schaltausgang als Schaltausgang, Frequenz, Puls oder Analog einstellen | Function | Schaltausgang als Switch , Frequency , Pulse oder Analog einstellen |
| Modus für Hysterese oder Fensterfunktion einstellen | Mode | Modus für Hysterese oder Fensterfunktion einstellen |
| Schaltpunkt einstellen | SetPoint1 | Schaltpunkt einstellen |

| Ziel | Untermenü | Option |
|---|------------|---|
| Rückschaltpunkt/Hysteresis bzw. untere Fenstergrenze einstellen | SetPoint2 | Rückschaltpunkt/Hysteresis bzw. untere Fenstergrenze einstellen |
| Schaltverhalten des Öffners einstellen | Polarity | Zwischen <i>NormallyClosed</i> und <i>NormallyOpen</i> wählen |
| Schaltausgang simulieren | Simulate | Zwischen <i>Active</i> , <i>Inactive</i> und <i>Normal</i> (Messbetrieb) wählen |
| PNP/NPN oder Push/Pull einstellen | DriverType | <i>PNP/NPN</i> oder <i>Push/Pull</i> einstellen |

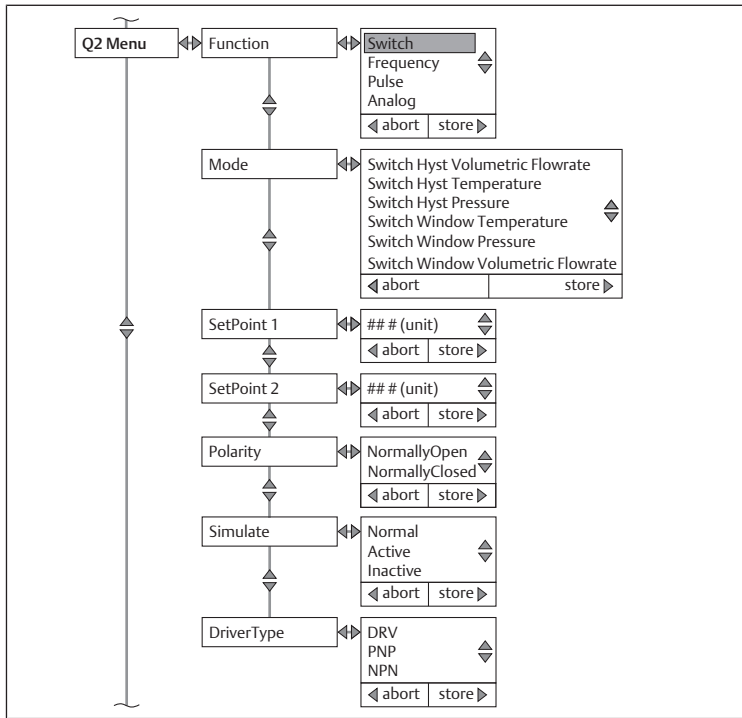


Abb. 13

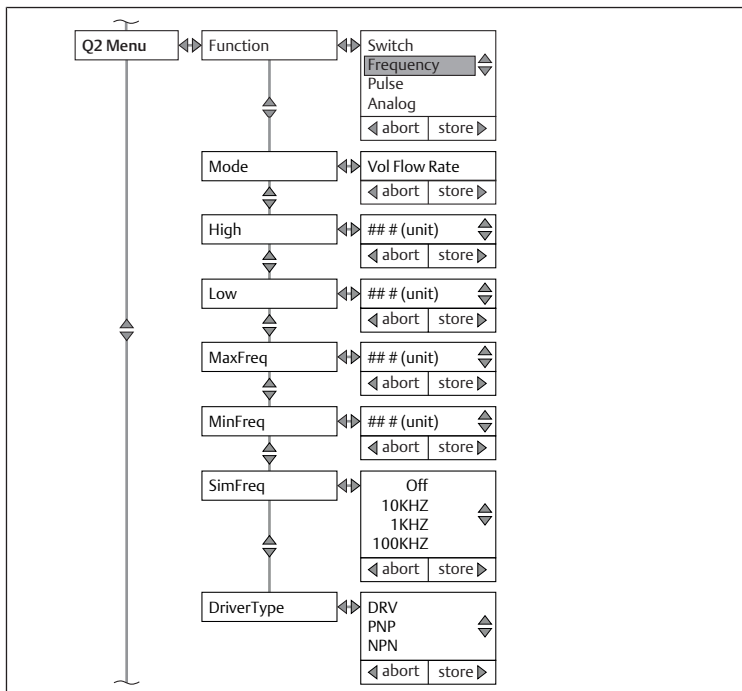


Abb. 14

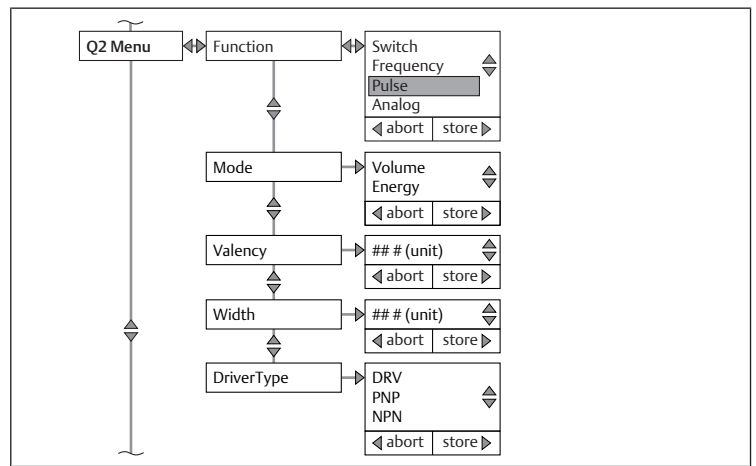


Abb. 15

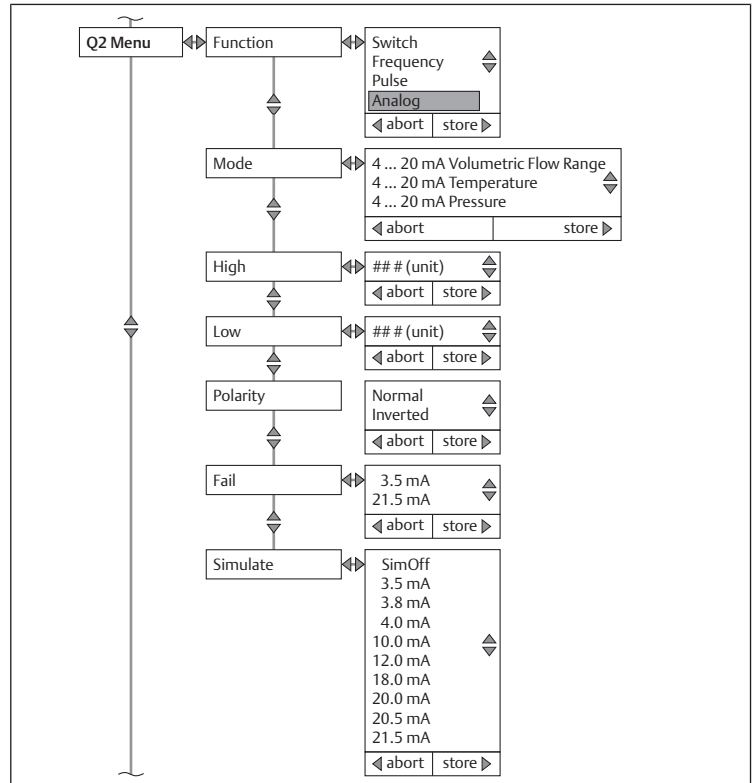


Abb. 16

Qa Menü

Das Qa-Menü enthält die Einstellungen des Analogausgangs.

| Ziel | Untermenü | Option |
|--|-----------|---|
| Stromausgang Messparameter zuordnen | Mode | Messparameter wie Durchfluss, Temperatur oder Druck dem Stromausgang zuordnen |
| Messbereichsendwert zuordnen | High | Messbereichsendwert auf 20 mA setzen |
| Messbereichsanfang zuordnen | Low | Messbereichsanfang auf 4 mA setzen |
| Invertierung des Stromausgangs einstellen | Polarity | Invertierung des Stromausgangs einstellen |
| Verhalten des Stromausgangs bei einem Fehler am Produkt einstellen | Fail | Verhalten des Stromausgangs bei einem Fehler am Produkt einstellen |
| Vordefinierten Stromwert einstellen | Simulate | Vordefinierten Stromwert einstellen |

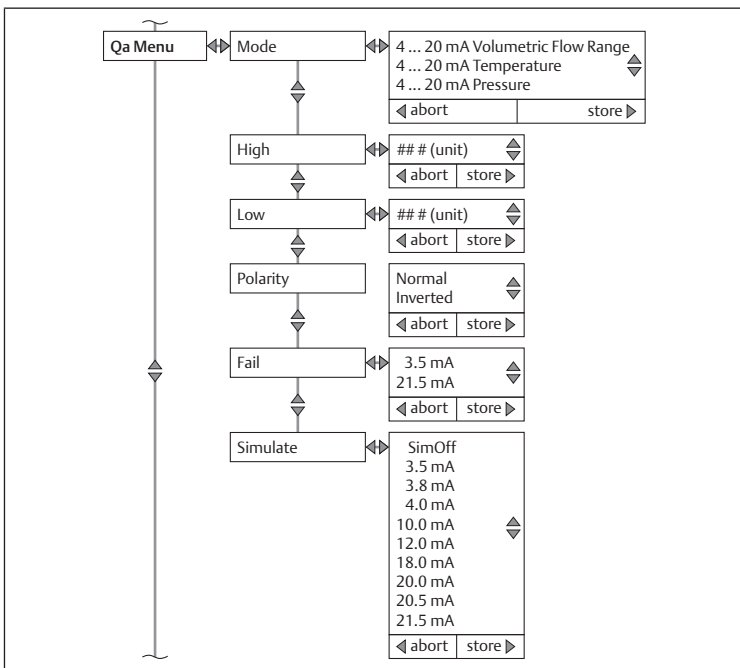


Abb. 17

3.2.3 Einstellungen für Variante Ethernet

Die Einstellungen gelten für alle Varianten des Produkts mit dem elektrischen Anschluss Ethernet.

Ethernet

| Ziel | Untermenü | Option |
|--|------------|---------------------------|
| Statische oder dynamische Adresse zuweisen | DHCP Mode | Adresse zuweisen |
| IP-Adresse einstellen | IP Address | IP-Adresse einstellen |
| SubNetMask | SubNetMask | SubNetMask einstellen |
| Gateway | Gateway | Gatewayadresse einstellen |
| Name | Name | DHCP-Namen einstellen |

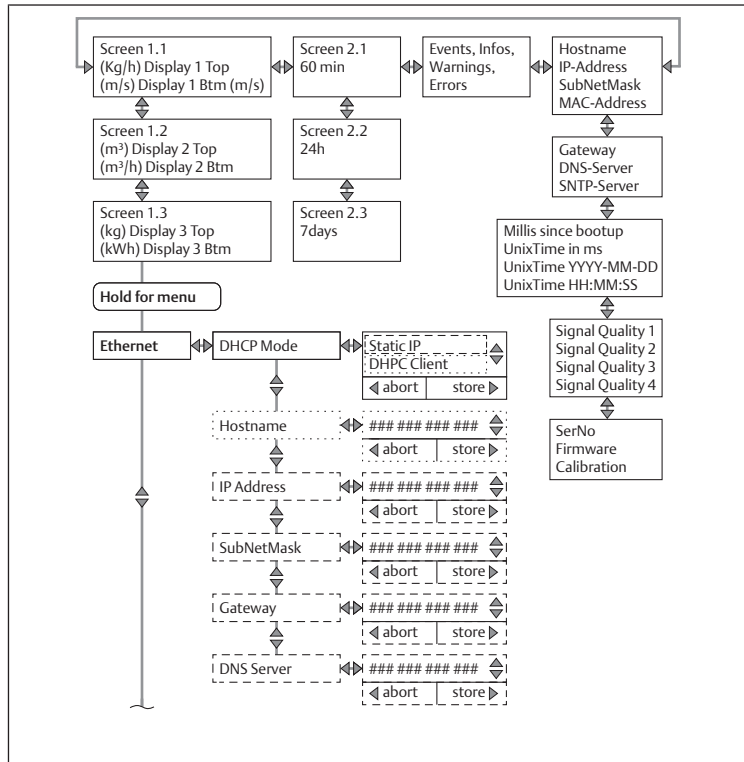
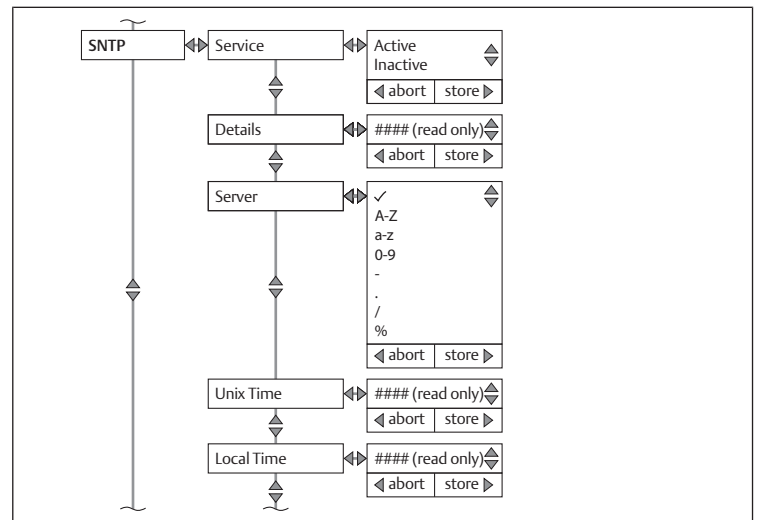


Abb. 18

SNTP



Webserver

| Ziel | Untermenü | Option |
|--|-----------|---|
| Webschnittstelle einschalten und ausschalten | State | Zwischen <i>Active</i> und <i>Inactive</i> wählen |
| Port einstellen | Port | Webserver-Port auswählen. Der Standardport für den HTTP-Dienst ist Port 80 |
| Anwenderseitiges Passwort zurücksetzen | ResetPW | Webserverpasswort für den Anwender „Maintenance“ auf den Auslieferungszustand zurücksetzen. Das Defaultkennwort (Werkseinstellung) lautet „airflowsensor“ |

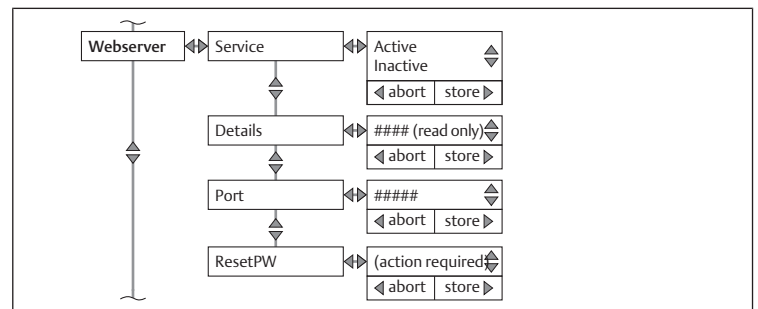


Abb. 19

OPC UA

| Ziel | Untermenü | Option |
|---------------------------------------|-----------|---|
| Webschnittstelle ein- und ausschalten | State | Zwischen <i>Active</i> und <i>Inactive</i> wählen |
| Port einstellen | Port | Port einstellen |
| Username einstellen | User | Usernamen einstellen |
| Passwort vergeben | Password | Passwort einstellen |

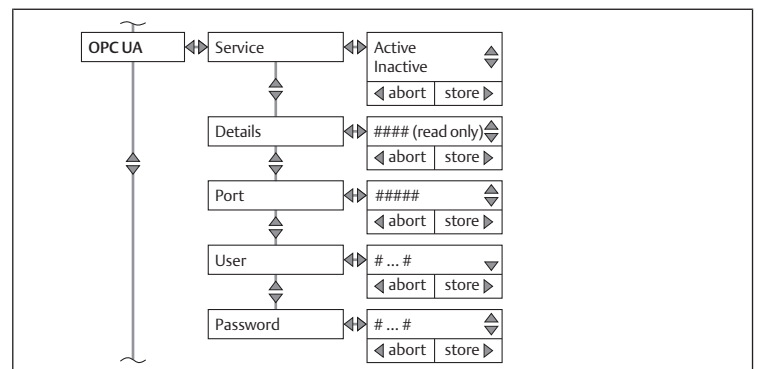


Abb. 20

MQTT

| Ziel | Untermenü | Option |
|---|-----------|--|
| Webschnittstelle ein- und ausschalten | State | Zwischen <i>Active</i> und <i>Inactive</i> wählen |
| Broker | Broker | Broker einstellen |
| Port einstellen | Port | Port einstellen |
| Topic | Topic | Topics anzeigen |
| User | User | Usernamen für Broker eingeben |
| Broker-Passwort erstellen | Password | Broker-Passwort eingeben |
| Schnittintervall an Broker senden | Update | Schnittintervall setzen |
| QoS | QoS | <i>QoS-0</i> , <i>QoS-1</i> oder <i>QoS-2</i> auswählen |
| MQTT-Nachricht an den Broker definieren | Send | Menüpunkt aus zweitem Untermenü wählen und <i>Active</i> oder <i>Inactive</i> einstellen |

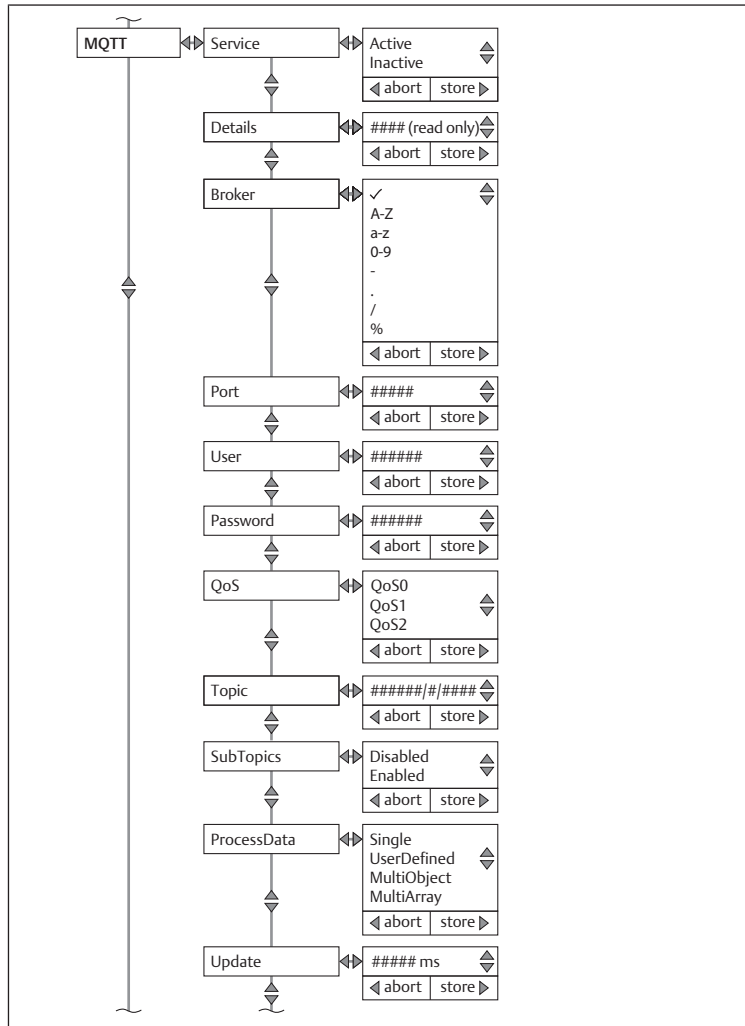


Abb. 21

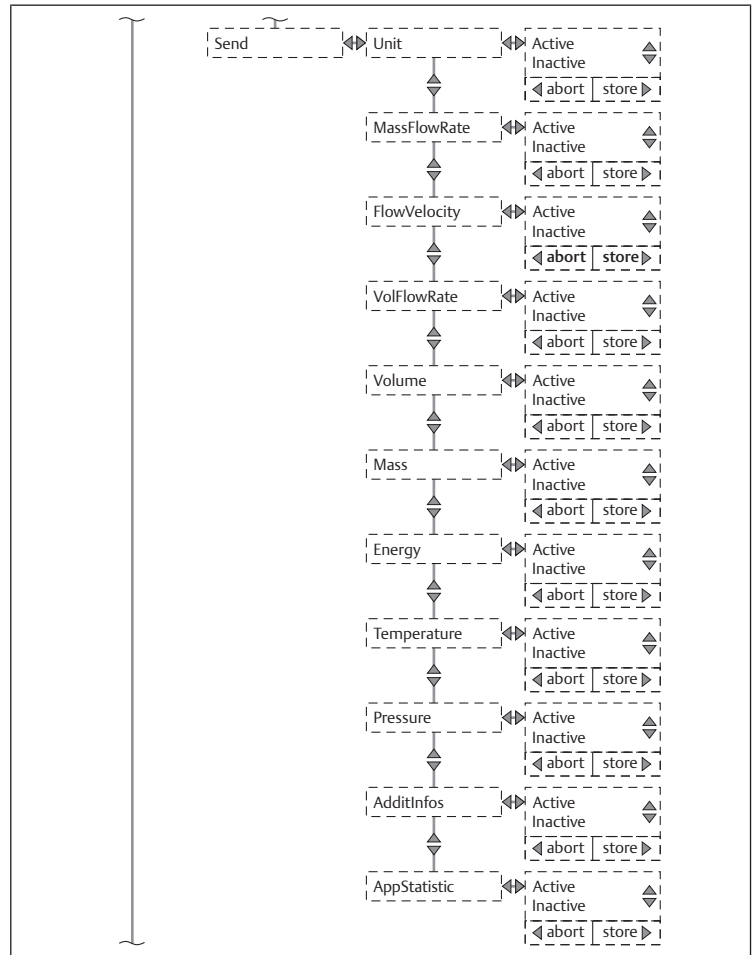


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1 About this documentation

These instructions contain important information for the safe and proper handling of the product.

This documentation is a supplement to the applicable assembly instructions. Read the assembly instructions completely before working with the product.

1.1 Documentation validity

This documentation is intended for:

Programmers, service personnel, system owners

This documentation provides supplementary information for handling the following product variants of series AF2 and 652/653:

| Series | Product variant | Interface |
|--------|--------------------------------|-----------------------------|
| AF2 | Sensor/filter combination (AS) | IO-Link Ethernet |
| | High-flow sensor (HF) | IO-Link Ethernet |
| 652 | Filter product variant | IO-Link (A) Ethernet (B) |
| | Pipe product variant | IO-Link (A) Ethernet (B) |
| 653 | Filter product variant | IO-Link (A) Ethernet (B) |
| | Pipe product variant | IO-Link (A) Ethernet (B) |

1.2 Additional documentation

Observe the following related documents:

- Manufacturer's system documentation
- Documentation of other system components
- Assembly instructions (R412026496 or 549411)

1.3 Abbreviations used

This documentation uses the following abbreviations:

| Abbreviation | Meaning |
|--------------|---|
| ABS | Acrylonitrile butadiene styrene |
| GF | Fiberglass |
| HF | High flow |
| MBE | Full scale value |
| MQTT | Message Queuing Telemetry Transport |
| MTTF | Mean Time To Failure |
| NPT | National Taper Pipe |
| OLED | Organic Light Emitting Diode |
| OPC UA | Open Platform Communications Unified Architecture |
| PA | Polyamide |
| PC | Polycarbonate |
| PPE | Personal protective equipment |
| Pt | Platinum measuring resistor |

2 Safety

2.1 About this chapter

- Read the chapter Safety of the assembly instructions and this documentation completely before working with the product.
- Keep this documentation in a location where it is accessible to all users at all times.

3 Data and parameters

3.1 Notes on safety

- Do not make parameter changes during operation (injury prevention).

3.2 Parameter data

3.2.1 General settings

The parameter settings in this section apply to all variants of the product.

General

| Objective | Menu | Option |
|---------------|-----------------|---|
| Make settings | Standard screen | Press and hold any arrow button for at least 2 seconds and make your settings in the respective menu. |

Display

| Objective | Submenu | Option |
|--|-------------|---|
| Set the units | Units | Select from the following menus: <ul style="list-style-type: none"> • <i>MassFlowRate</i> • <i>FlowVelocity</i> • <i>Volume</i> • <i>VolFlowRate</i> • <i>Mass</i> • <i>Energy</i> • <i>Temperature</i> • <i>Pressure</i> |
| Set the display for screen 1.1 | Pages | <ul style="list-style-type: none"> • Select <i>Disp1Top</i> • Select <i>Disp1Btm</i> |
| Set the display for screen 1.2 | Pages | <ul style="list-style-type: none"> • Select <i>Disp2Top</i> • Select <i>Disp2Btm</i> |
| Set the display for screen 1.3 | Pages | <ul style="list-style-type: none"> • Select <i>Disp3Top</i> • Select <i>Disp3Btm</i> |
| Set the display for screen 2.1, 2.2, and 2.3 | Pages | Select display parameters in the <i>DispHistory</i> menu |
| Optimize readability | Rotation | Set the display to 0°, 90°, 180°, or 270° |
| Activate the screen saver | ScreenSaver | Set the time for screen saver activation |
| Switch off the display | AutoOff | Set the time for switching off the display |
| Setting the brightness | Brightness | Setting the brightness in percent |
| Assign PIN to protect against operation and manipulation | Display Pin | Assign 4-digit PIN |

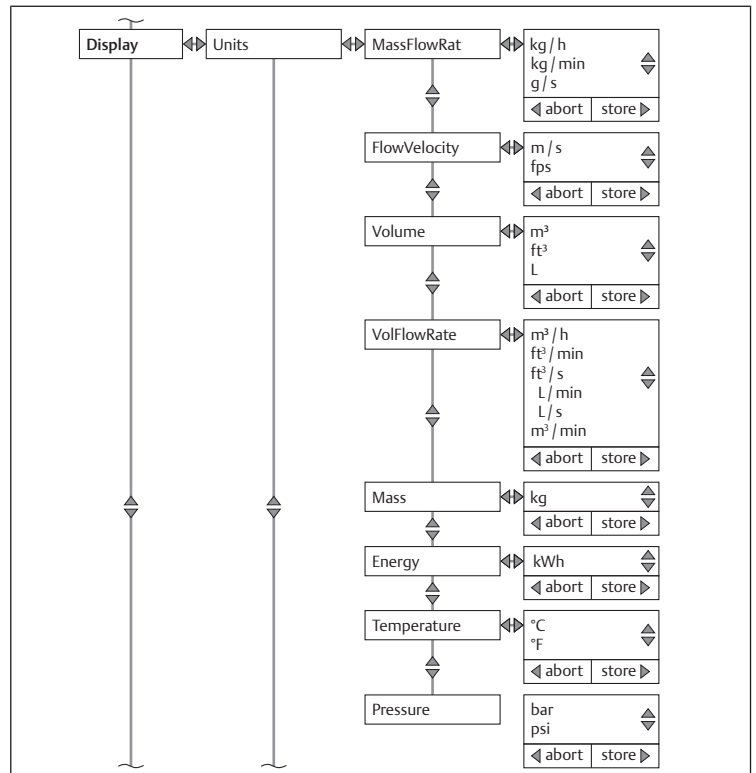


Fig. 1

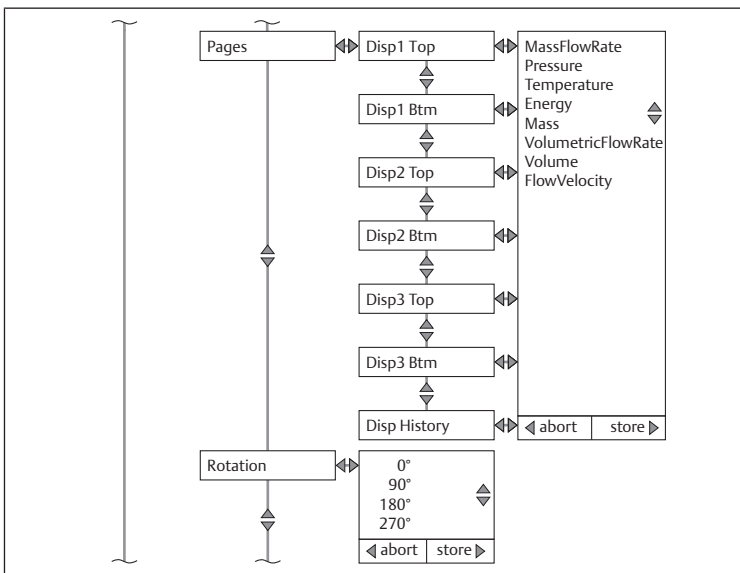


Fig. 2

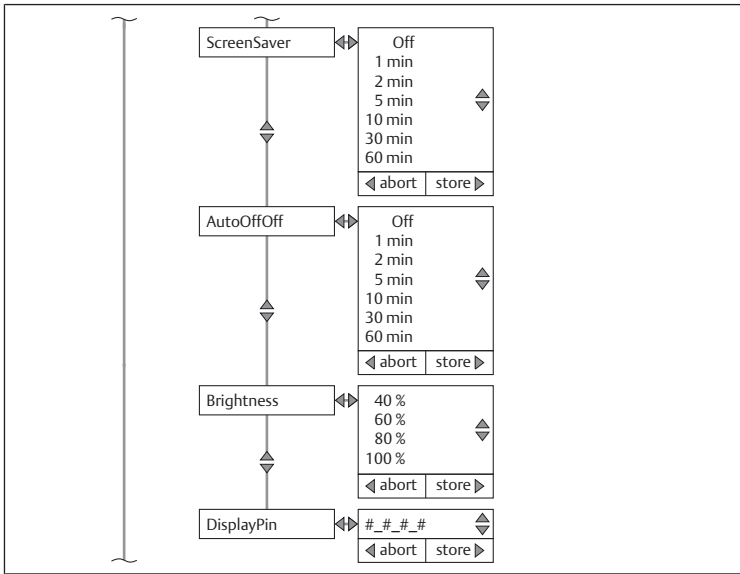


Fig. 3

Simulate

| Objective | Submenu | Option |
|----------------------|-------------|----------------------|
| Simulate media flow | Flow | Simulate media flow |
| Simulate temperature | Temperature | Simulate temperature |
| Simulate pressure | Pressure | Simulate pressure |

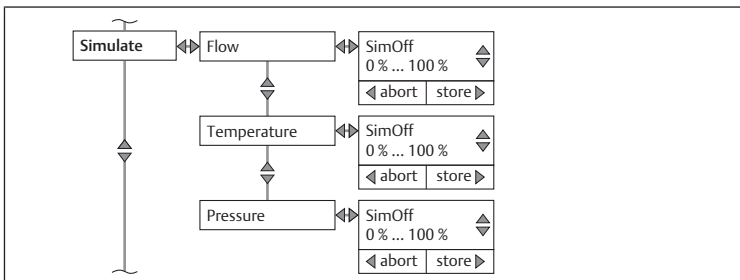


Fig. 4

Measure

| Objective | Submenu | Option |
|--------------------------|---------|---|
| Set the measuring medium | Flow | Select the Medium option and set the measuring medium: <ul style="list-style-type: none"> Air Argon CO2 Nitrogen |

| Objective | Submenu | Option |
|---|---------------------------|---|
| Set the reference standard | Flow | Select the RefCond option and set the reference standard: <ul style="list-style-type: none"> ISO 2533 ISO 1217 DIN 1945-1 DIN 1343 ISO 6358 ISO 8778 UserDefined (application-specific) |
| Set the reference pressure for application-specific setting (UserDefined) | Flow | Select the RefCond option and select UserDefined (application-specific reference pressure) |
| Setting the zero offsets | Flow | Select the 0-FlowOff option and set the zero offsets |
| Setting the low flow cut-off | Flow | Select the 0-FlowCut option and set the low flow cut-off |
| Mean value filter for measuring value smoothing in display and output | Flow/Pressure/Temperature | Select the Filter option and set the measured value filter |
| Setting the offset/zero offsets | Pressure/temperature | Select the Offset option and set the offset/zero offsets |
| Selecting the signal quality | SigQuality | Select between SigQua1 , SigQua2 , SigQua3 , and SigQua4 . Quality is set to 100 % in each case. Signal quality 1 is a measure of robustness |

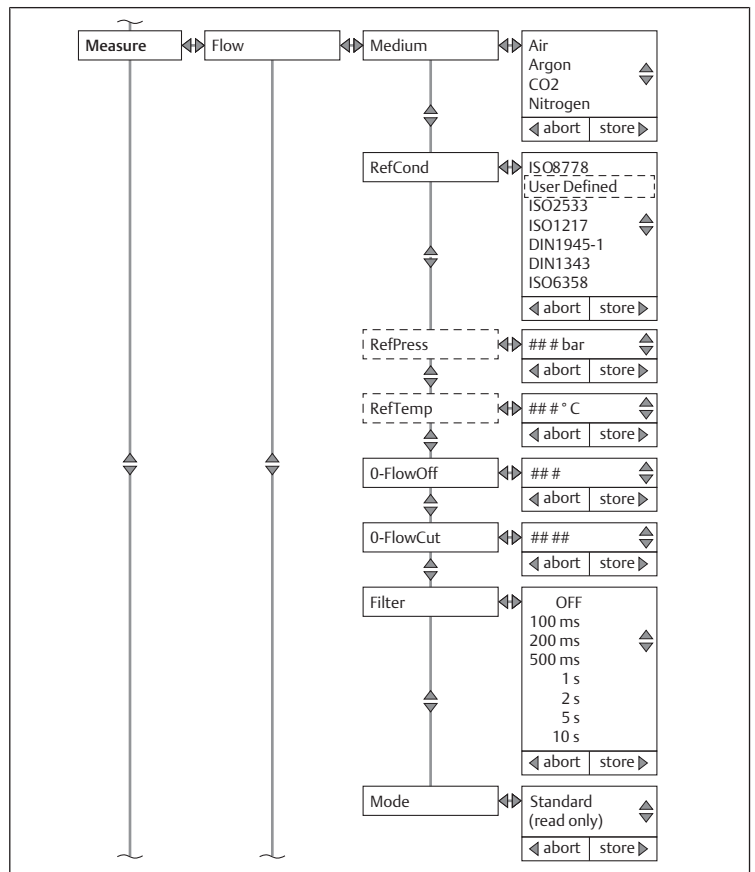


Fig. 5

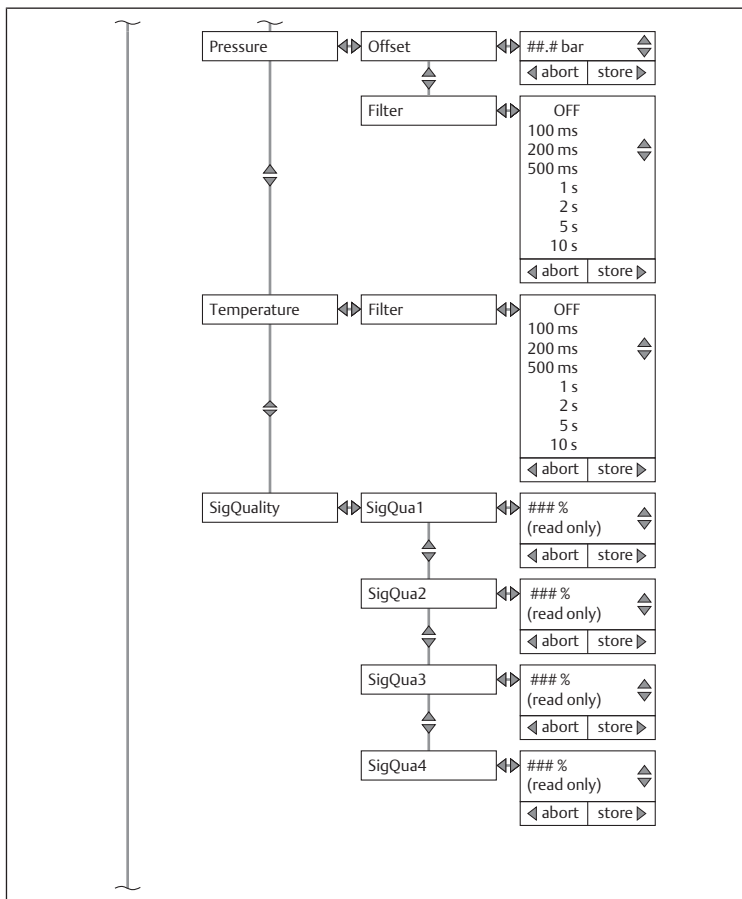


Fig. 6

History

| Objective | Submenu | Option |
|--|---------|--|
| Select the display/graph showing the measured values for the last 60 minutes | 60 min | Select the display/graph showing the measured values for the last 60 minutes |
| Select the display/graph showing the measured values for the last 24 hours | 24 hour | Select the display/graph showing the measured values for the last 24 hours |
| Select the display/graph showing the measured values for the last 7 days | 7 days | Select the display/graph showing the measured values for the last 7 days |

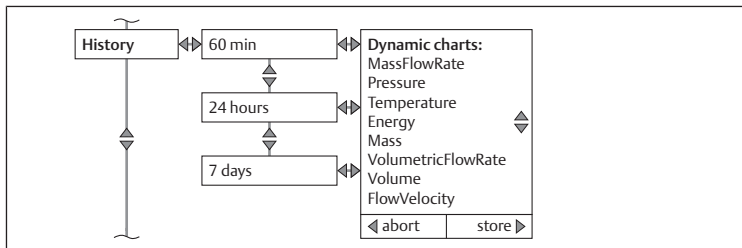


Fig. 7

Statistics

| Objective | Submenu | Option |
|--|-----------------------|--|
| Minimum values, mean values, and maximum values for the individual parameters after the last reset | View | View the <i>Max, mean, min values</i> for the individual parameters after the last reset |
| View the time of the last reset | LastReset (read only) | View the time of the last reset |
| Reset the statistics values to 0 | Reset | Reset the statistics values to 0 |

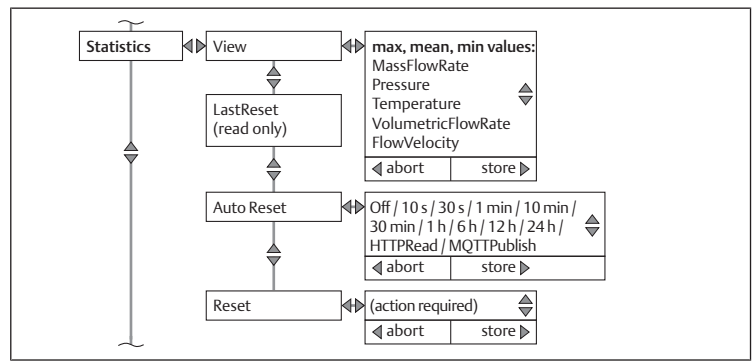


Fig. 8

Counter

| Objective | Submenu | Option |
|-------------------|---------|--|
| View the counter | | Select from the <i>Mass, Volume, Energy</i> , and <i>LastReset</i> submenus and view the counter |
| Reset the counter | Reset | Reset the counter |

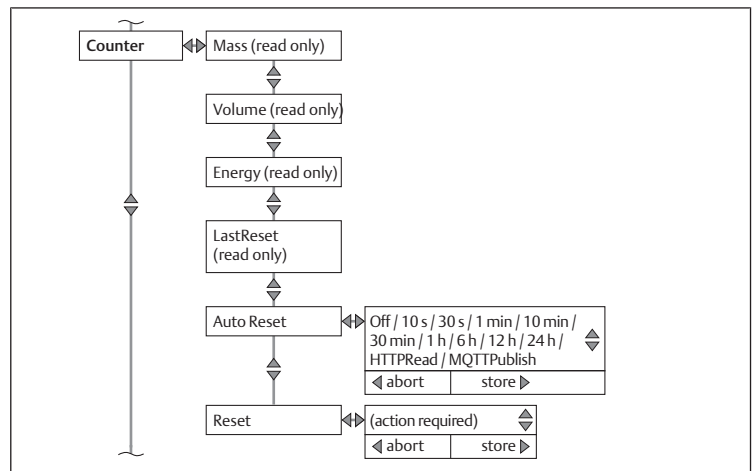


Fig. 9

System

| Objective | Submenu | Option |
|---------------------------|--------------|--|
| Service login | Service | Perform a service login for authorized users |
| Reset to factory settings | FactReset | Reset the system to the factory settings |
| Serial Number (read only) | SerialNumber | View the part number (serial number) |
| Set the device tag | DevTag | Set the device tag |
| Set the Application tag | AppTag | Set the Application tag |
| FWVersion (read only) | FWVersion | View the firmware version |
| Calibration (read only) | Calibration | View the firmware defaults |
| BLVersion (read only) | BLVersion | View the bootloader version |
| HWVersion (read only) | HWVersion | View the hardware version |

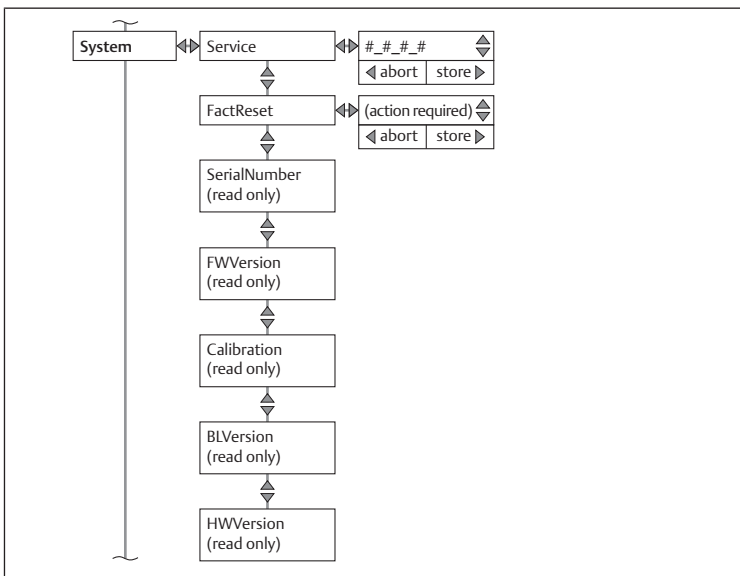


Fig. 10

Tags

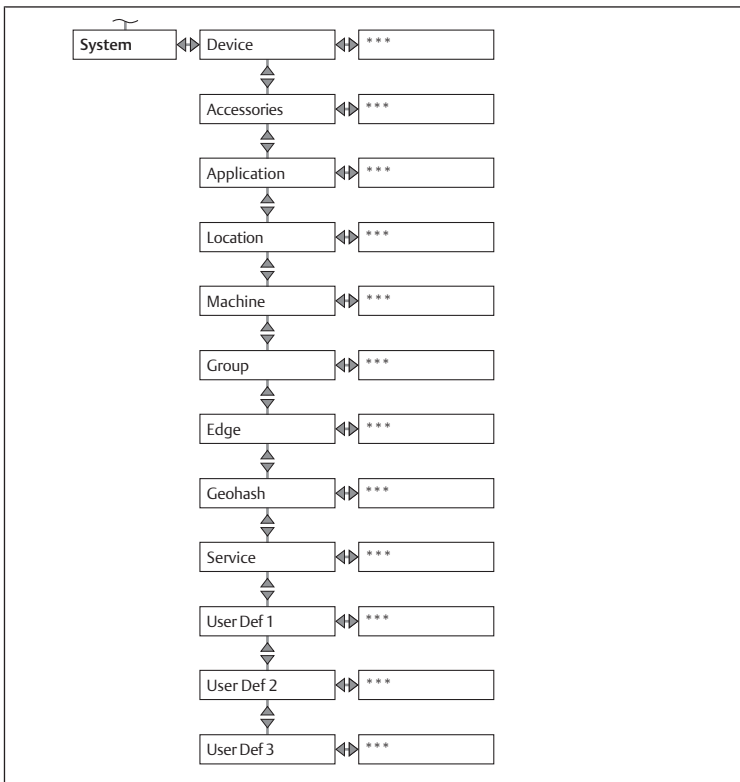


Fig. 11

3.2.2 Settings for the IO-Link variant

The settings apply to all variants of the product with IO-Link electrical connection.

IO-Link

The display shows the measured value menu with the default setting (kg/h, m/s).

| Objective | Menu | Option |
|-----------------------|-----------------|--|
| Select menu | Standard screen | Press and hold any arrow button for at least 2 seconds and select between <i>Q1 Menu</i> , <i>Q2 Menu</i> , and <i>Qa Menu</i> . |
| Set the switch output | Q1 Menu | Set the switch output |
| Set the switch output | Q2 Menu | Set the switch output |
| Set the analog output | Qa Menu | Set the analog output |

Q1 Menu

The Q1 menu contains the settings for switch output 1.

| Objective | Submenu | Option |
|--|------------|---|
| Set the hysteresis or window function | Mode | Set the mode for hysteresis or window function with the associated measurement parameters |
| Set the switching point | SetPoint1 | Set the switching point |
| Set the resetting point/hysteresis or lower window limit | SetPoint2 | Set the resetting point/hysteresis or lower window limit |
| Set the switching characteristics of the break contact | Polarity | Select between <i>Normally-Closed</i> and <i>NormallyOpen</i> |
| Simulate the switch output | Simulate | Select <i>Active</i> , <i>Inactive</i> , or <i>Normal</i> (measuring operation) |
| Set PNP/NPN or push/pull (DRV) | DriverType | Set to <i>PNP/NPN</i> or <i>push/pull (DRV)</i> |

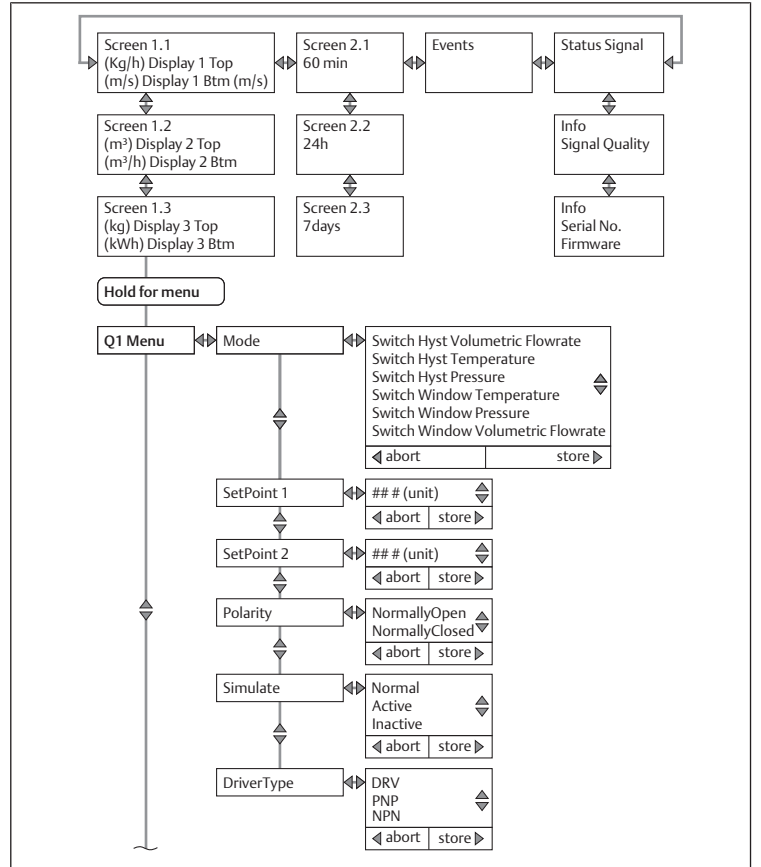


Fig. 12

Q2 Menu

The Q2 menu contains the settings for switch output 2.

| Objective | Submenu | Option |
|---|------------|---|
| Set the switch output as switch output, frequency, pulse, or analog | Function | Set the switch output as <i>Switch</i> , <i>Frequency</i> , <i>Pulse</i> , or <i>Analog</i> |
| Set the mode for hysteresis or window function | Mode | Set the mode for hysteresis or window function |
| Set the switching point | SetPoint1 | Set the switching point |
| Set the resetting point/hysteresis or lower window limit | SetPoint2 | Set the resetting point/hysteresis or lower window limit |
| Set the switching characteristics of the break contact | Polarity | Select between <i>Normally-Closed</i> and <i>NormallyOpen</i> |
| Simulate the switch output | Simulate | Select between <i>Active</i> , <i>Inactive</i> , and <i>Normal</i> (measuring operation) |
| Set to PNP/NPN or push/pull | DriverType | Set to <i>PNP/NPN</i> or <i>push/pull</i> |

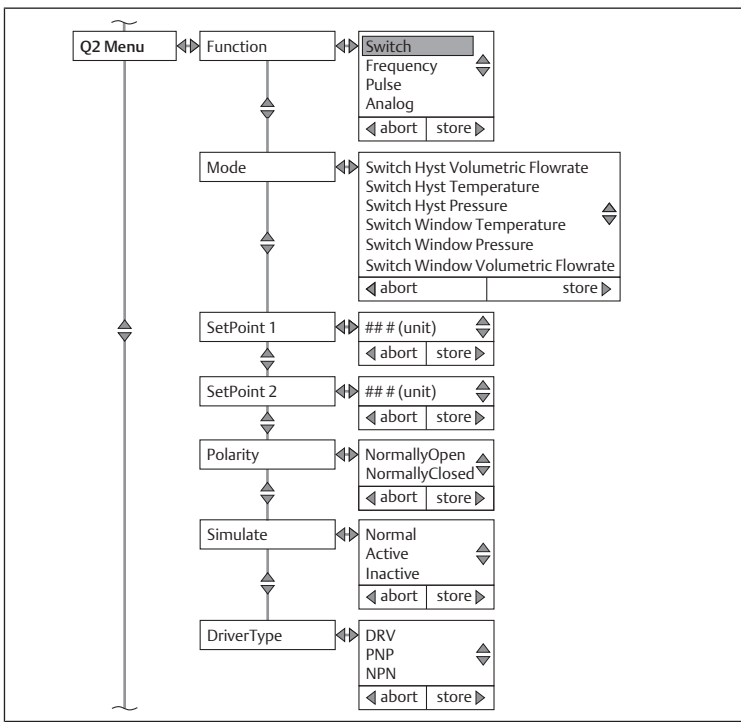


Fig. 13

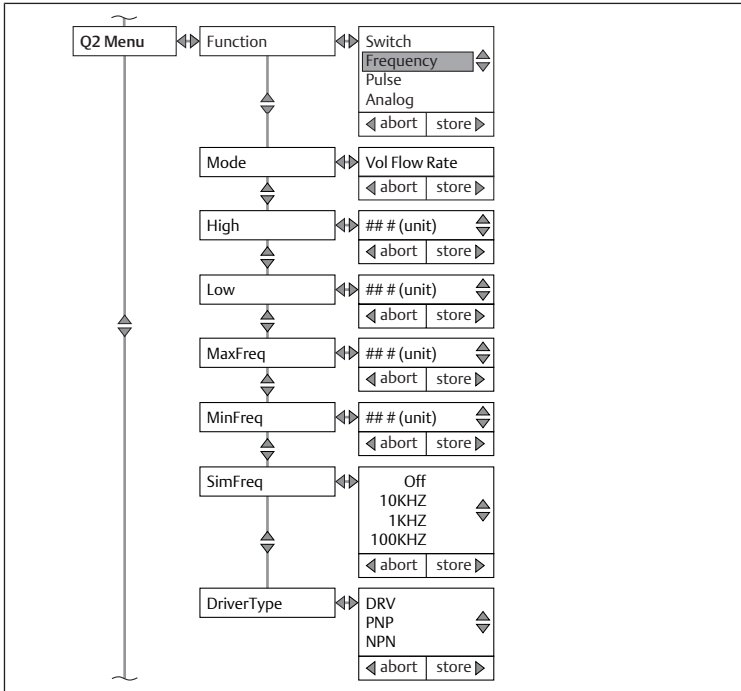


Fig. 14

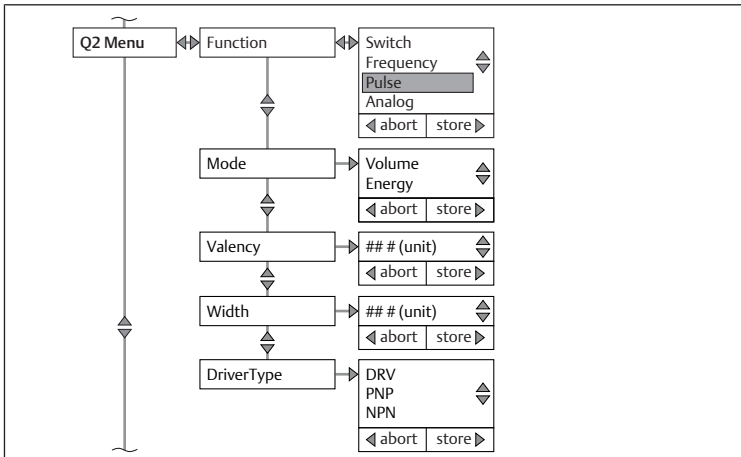


Fig. 15

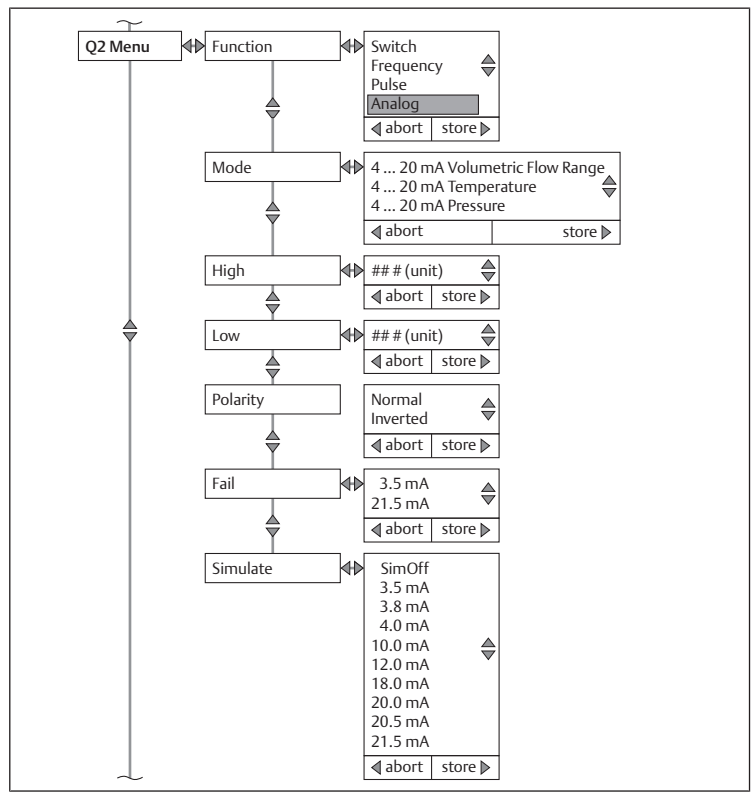


Fig. 16

Qa Menu

The Qa menu contains the settings for the analog output.

| Objective | Submenu | Option |
|---|----------|--|
| Assign measurement parameters to the current output | Mode | Assign measurement parameters such as flow, temperature, or pressure to the current output |
| Assign the full scale value | High | Set the full scale value to 20 mA |
| Assign the measurement range start value | Low | Set the measurement range start value to 4 mA |
| Set the inversion of the current output | Polarity | Set the inversion of the current output |
| Set the behavior of the current output if a failure occurs on the product | Fail | Set the behavior of the current output if a failure occurs on the product |
| Set a predefined current value | Simulate | Set a predefined current value |

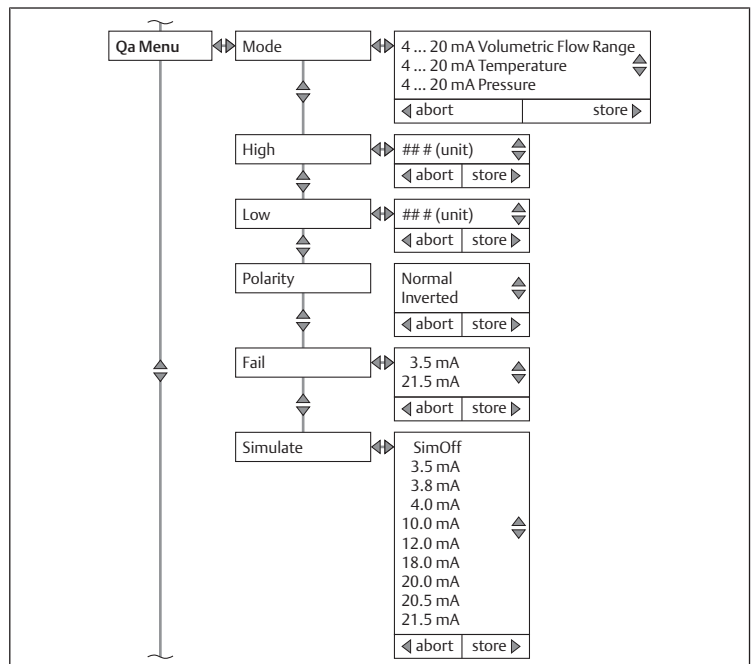


Fig. 17

3.2.3 Settings for the Ethernet variant

The settings apply to all variants of the product with Ethernet electrical connection.

Ethernet

| Objective | Submenu | Option |
|------------------------------------|------------|-------------------------|
| Assign a static or dynamic address | DHCP Mode | Assign an address |
| Set the IP address | IP Address | Set the IP address |
| SubNetMask | SubNetMask | Set the subnet mask |
| Gateway | Gateway | Set the gateway address |
| Name | Name | Set the DHCP name |

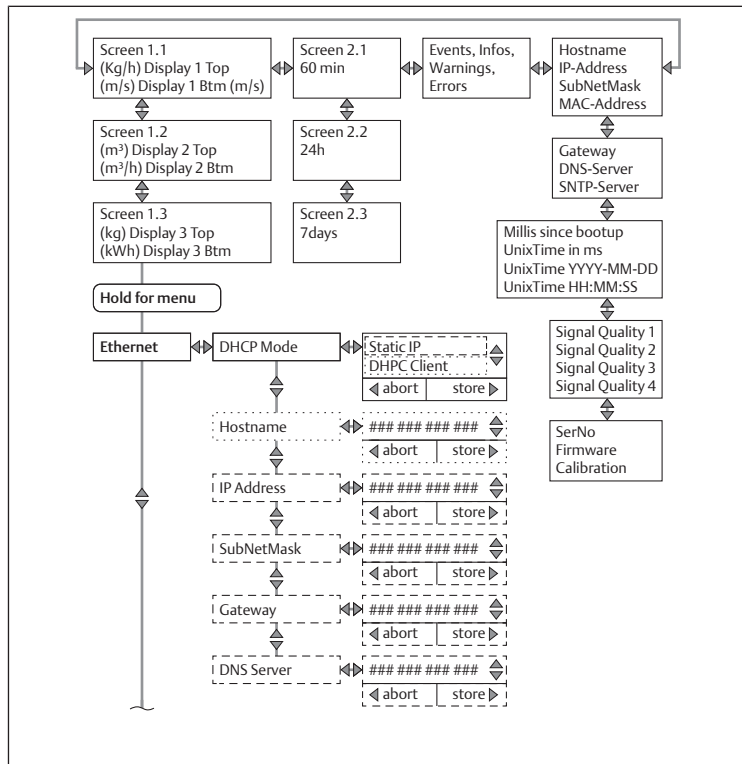
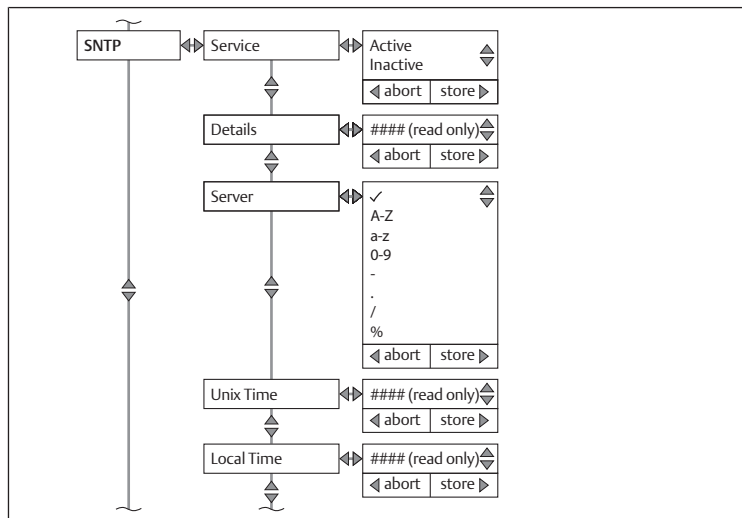


Fig. 18

SNTP



Web server

| Objective | Submenu | Option |
|-------------------------------------|---------|--|
| Switch the web interface on and off | State | Select between Active and In-active |
| Set the port | Port | Select the web server port. The default port for the HTTP service is port 80 |

| Objective | Submenu | Option |
|---------------------------------|---------|--|
| Reset the user-defined password | ResetPW | Reset the web server password for the "Maintenance" user to factory default. The default password (factory setting) is "airflowsensor" |

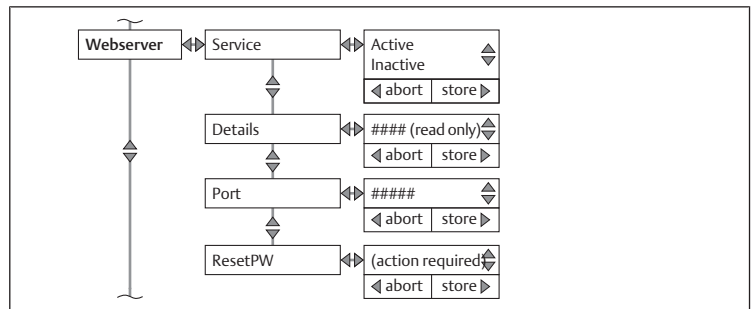


Fig. 19

OPC UA

| Objective | Submenu | Option |
|-------------------------------------|----------|---|
| Switch the web interface on and off | State | Select between Active and In-active |
| Set the port | Port | Set the port |
| Set the user name | User | Set the user name |
| Assign a password | Password | Set the password |

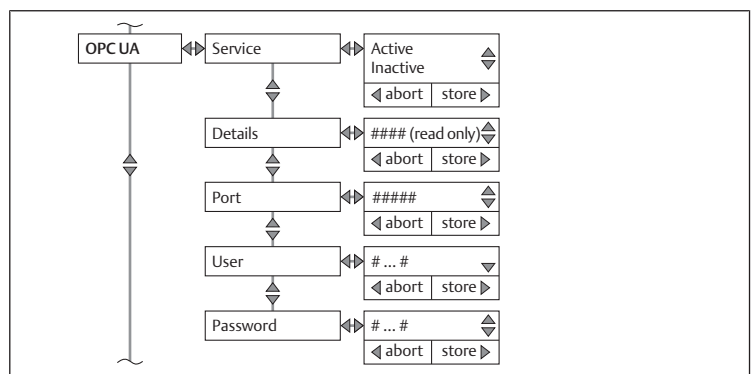


Fig. 20

MQTT

| Objective | Submenu | Option |
|--|----------|---|
| Switch the web interface on and off | State | Select between Active and In-active |
| Broker | Broker | Set the broker |
| Set the port | Port | Set the port |
| Topic | Topic | View the topics |
| User | User | Enter a user name for the broker |
| Create the broker password | Password | Enter the broker password |
| Send the update interval to the broker | Update | Set the update interval |
| QoS | QoS | Select QoS-0 , QoS-1 , or QoS-2 |
| Define MQTT message to the broker | Send | Select a menu item from the second submenu and set to Active or In-active |

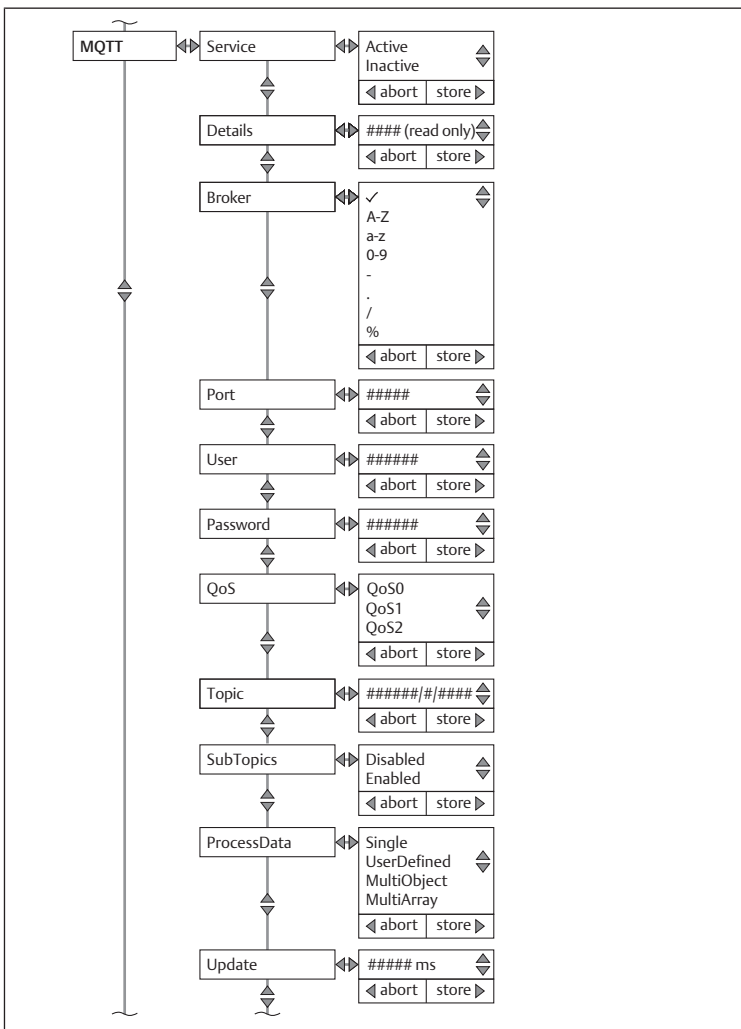


Fig. 21

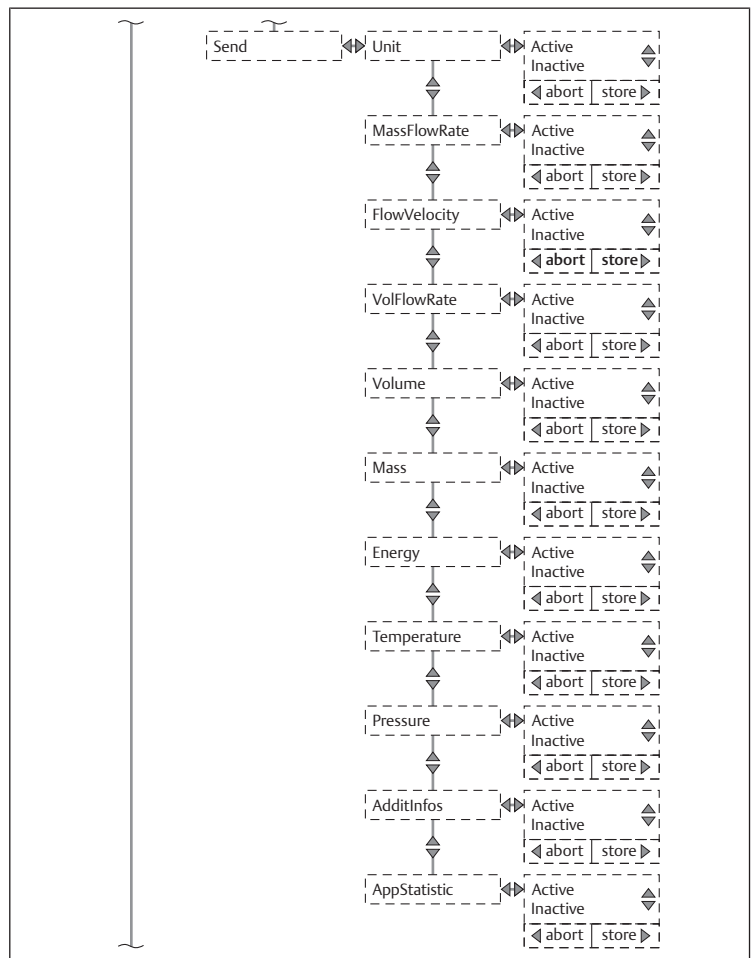


Fig. 22

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1 A propos de cette documentation

Les présentes instructions contiennent d'importantes informations pour une utilisation du produit en toute sécurité et conformité.

Cette documentation complète les instructions de montage également applicables. Lire intégralement les instructions de montage avant de travailler avec le produit.

1.1 Validité de la documentation

Cette documentation s'adresse à :

Programmateurs, personnel de service, exploitants d'installation

Cette documentation fournit des informations complémentaires pour le manie- ment des variantes de produit suivantes de la série AF2 et 652/653 :

| Série | Variante de produit | Interface |
|-------|---------------------------------|-----------------------------|
| AF2 | Combinaison filtre/capteur (AS) | IO-Link Ethernet |
| | Capteur High Flow (HF) | IO-Link Ethernet |
| 652 | Variante de produit avec filtre | IO-Link (A) Ethernet (B) |
| | Variante de produit avec tuyau | IO-Link (A) Ethernet (B) |
| 653 | Variante de produit avec filtre | IO-Link (A) Ethernet (B) |
| | Variante de produit avec tuyau | IO-Link (A) Ethernet (B) |

1.2 Documentation supplémentaire

Tenez compte de la documentation de référence obligatoire suivante :

- Documentation d'installation du fabricant
- Documentation des autres composants de l'installation
- Instructions de montage (R41 2026496 ou 549411)

1.3 Abréviations utilisées

Les abréviations suivantes sont utilisées dans cette documentation :

| Abréviation | Signification |
|-------------|--|
| ABS | Acrylonitrile butadiène styrène |
| GF | Fibre de verre |
| HF | High Flow |
| MBE | Valeur finale de la plage de mesure |
| MQTT | Message Queuing Telemetry Transport |
| MTTF | Mean Time To Failure (durée moyenne de service jusqu'à la panne) |
| NPT | National Taper Pipe (type de filetage de tube) |
| OLED | Organic Light Emitting Diode (diode luminescente organique) |
| OPC UA | Open Platform Communications Unified Architecture |
| PA | Polyamide |
| PC | Polycarbonate |
| EPI | Equipement de protection individuel |
| Pt | Résistance de mesure en platine |

2 Sécurité

2.1 À propos de ce chapitre

- Lire attentivement et intégralement le chapitre Sécurité des instructions de montage ainsi que toute la documentation avant de travailler avec le produit.
- Conserver la documentation de manière à ce qu'elle soit toujours accessible à tous les utilisateurs.

3 Données et paramètres

3.1 Consignes relatives à la sécurité

- Ne procéder à aucune modification des paramètres en cours de fonctionne- ment (prévention des blessures).

3.2 Données de paramètres

3.2.1 Réglages généraux

Le réglage des paramètres dans cette section s'applique à toutes les variantes du produit.

Généralités

| Objectif | Menu | Option |
|-----------------------|----------------------|--|
| Procéder aux réglages | Affichage par défaut | Pour effectuer des réglages dans le menu correspondant, appuyer sur n'importe quelle touche fléchée pendant au moins 2 secondes. |

Display

| Objectif | Sous-menu | Option |
|--|-------------|--|
| Réglage des unités | Unités | Sélectionner l'un des menus sui- vants : <ul style="list-style-type: none">• <i>MassFlowRate</i>• <i>FlowVelocity</i>• <i>Volume</i>• <i>VolFlowRate</i>• <i>Mass</i>• <i>Energy</i>• <i>Temperature</i>• <i>Pressure</i> |
| Régler l'afficheur 1.1 | Pages | <ul style="list-style-type: none">• Sélectionner <i>Disp1Top</i>• Sélectionner <i>Disp1Btm</i> |
| Régler l'afficheur 1.2 | Pages | <ul style="list-style-type: none">• Sélectionner <i>Disp2Top</i>• Sélectionner <i>Disp2Btm</i> |
| Régler l'afficheur 1.3 | Pages | <ul style="list-style-type: none">• Sélectionner <i>Disp3Top</i>• Sélectionner <i>Disp3Btm</i> |
| Régler l'afficheur 2.1, 2.2 et 2.3 | Pages | Dans le menu <i>DispHistory</i> , sélection- ner les paramètres de l'afficheur |
| Optimiser la lisibilité | Rotation | Régler l'afficheur sur <i>0°</i> , <i>90°</i> , <i>180°</i> ou <i>270°</i> |
| Activation du protecteur | ScreenSaver | Régler le délai d'activation du pro- tecteur d'écran |
| Désactivation de l'affichage | AutoOff | Régler le délai de désactivation de l'affichage |
| Régler la luminosité | Brightness | Régler la luminosité en pourcentage |
| Attribuer un code PIN pour la protection de commande ou la protection contre les manipula- tions | Display Pin | Affecter un code PIN à 4 chiffres |

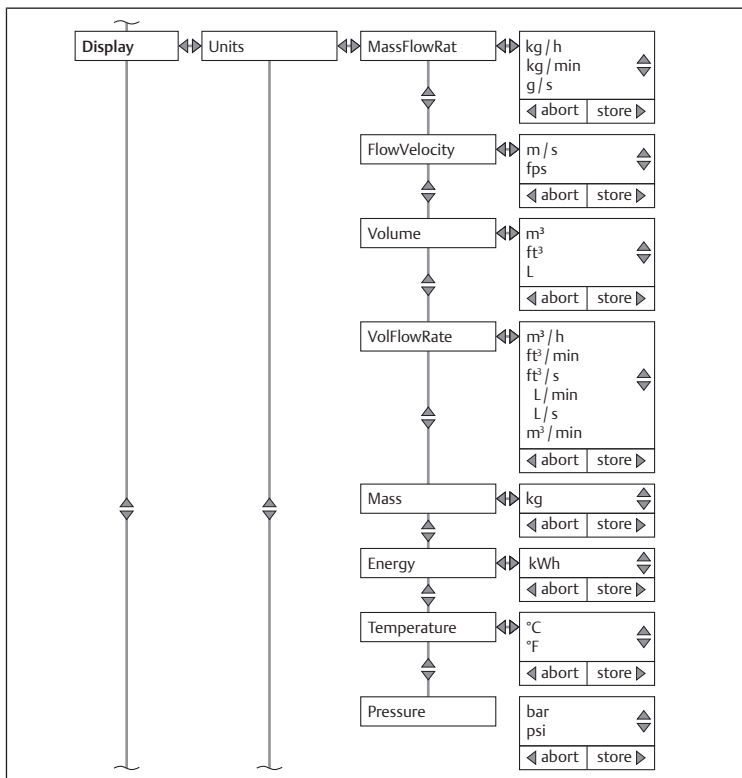


Fig. 1

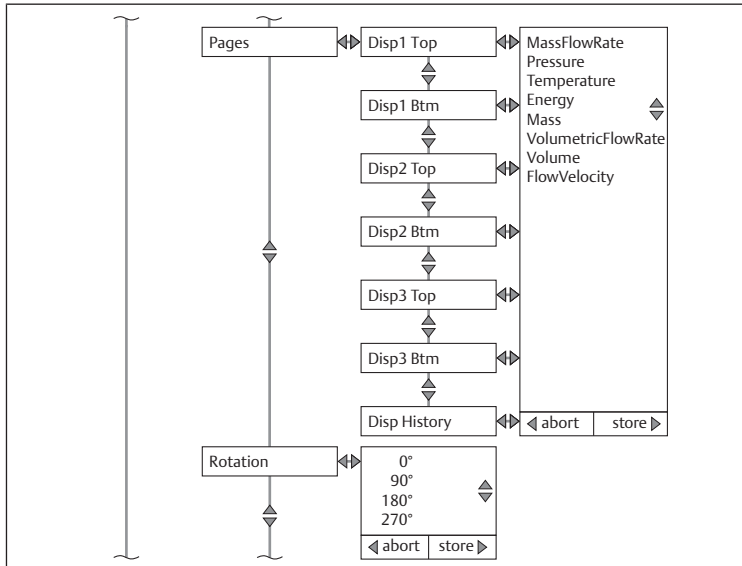


Fig. 2

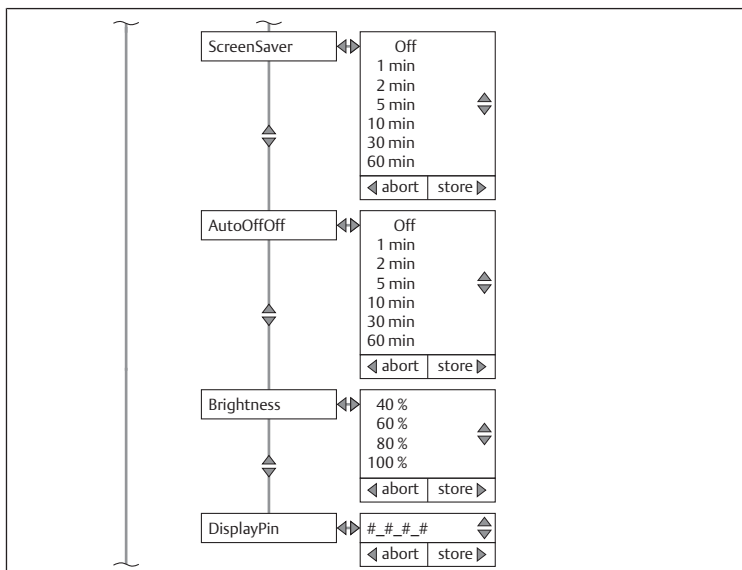


Fig. 3

Simulate

| Objectif | Sous-menu | Option |
|------------------------|-------------|------------------------|
| Simuler le débit | Flow | Simuler le débit |
| Simuler la température | Temperature | Simuler la température |
| Simuler la pression | Pressure | Simuler la pression |

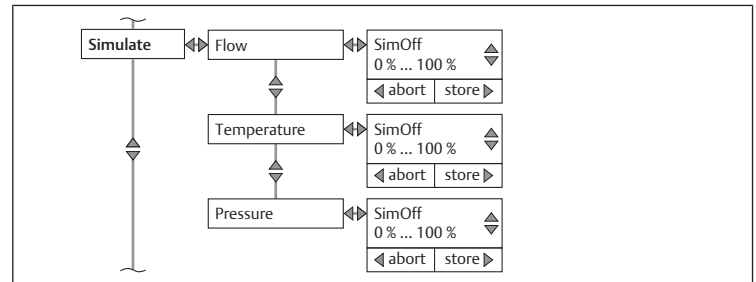


Fig. 4

Mesure

| Objectif | Sous-menu | Option |
|----------------------------|-----------|---|
| Régler le fluide de mesure | Flow | Sélectionner l'option Medium et régler le fluide de mesure : <ul style="list-style-type: none"> Air Argon CO2 Nitrogen |

| | | |
|--|------|--|
| Régler la norme de référence/ le standard de référence | Flow | Sélectionner l'option RefCond et régler la norme de référence/le standard de référence : <ul style="list-style-type: none"> ISO 2533 ISO 1217 DIN 1945-1 DIN 1343 ISO 6358 ISO 8778 UserDefined (spécifique à l'application) |
|--|------|--|

| | | |
|--|------|---|
| Régler la pression de référence spécifique à l'application (UserDefined) | Flow | Sélectionner l'option RefCond et sélectionner UserDefined (pression de référence spécifique à l'application) |
|--|------|---|

| | | |
|----------------------------------|------|---|
| Régler le décalage du point zéro | Flow | Sélectionner l'option 0-Flow-Off et régler le décalage du point zéro |
|----------------------------------|------|---|

| | | |
|---|------|--|
| Régler la suppression du débit de fuite | Flow | Sélectionner l'option 0-Flow-Cut et régler la suppression du débit de fuite |
|---|------|--|

| | | |
|--|---------------------------|---|
| Filtre de valeur moyenne pour l'ajustement de la valeur mesurée sur l'afficheur et la sortie | Flow/Pressure/Temperature | Sélectionner l'option Filter et régler le filtre de valeur mesurée |
|--|---------------------------|---|

| | | |
|---|----------------------|--|
| Régler l'offset/le décalage du point zéro | Pressure/Temperature | Sélectionner l'option Offset et régler l'offset/le décalage du point zéro |
|---|----------------------|--|

| | | |
|-----------------------------------|------------|---|
| Sélectionner la qualité du signal | SigQuality | Sélectionner SigQua1 , SigQua2 , SigQua3 ou SigQua4 . La qualité est réglée à 100% dans chaque cas. La qualité du signal 1 est un signe de robustesse |
|-----------------------------------|------------|---|

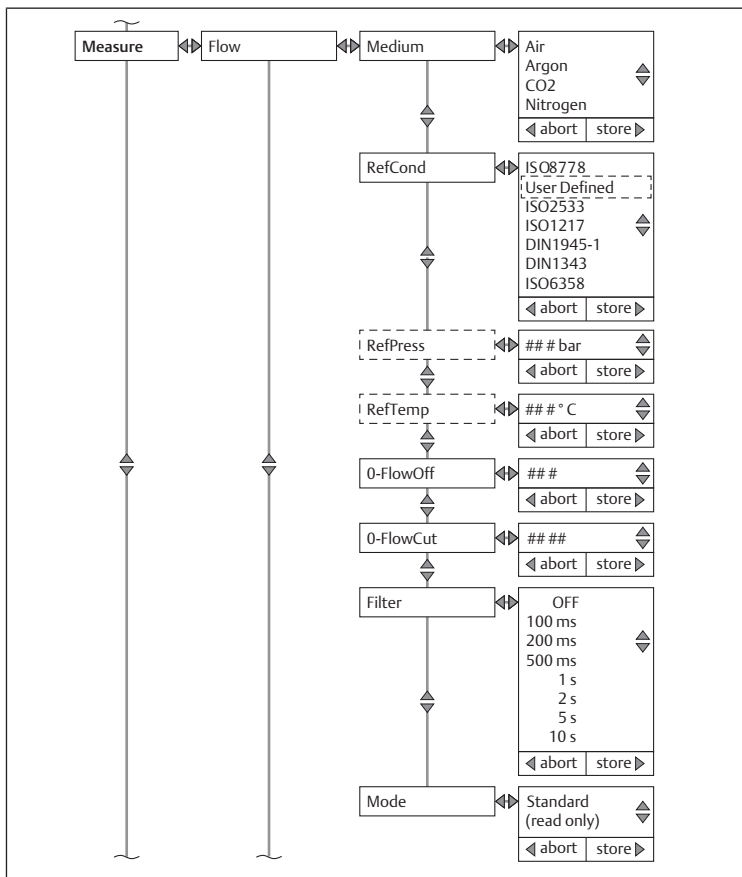


Fig. 5

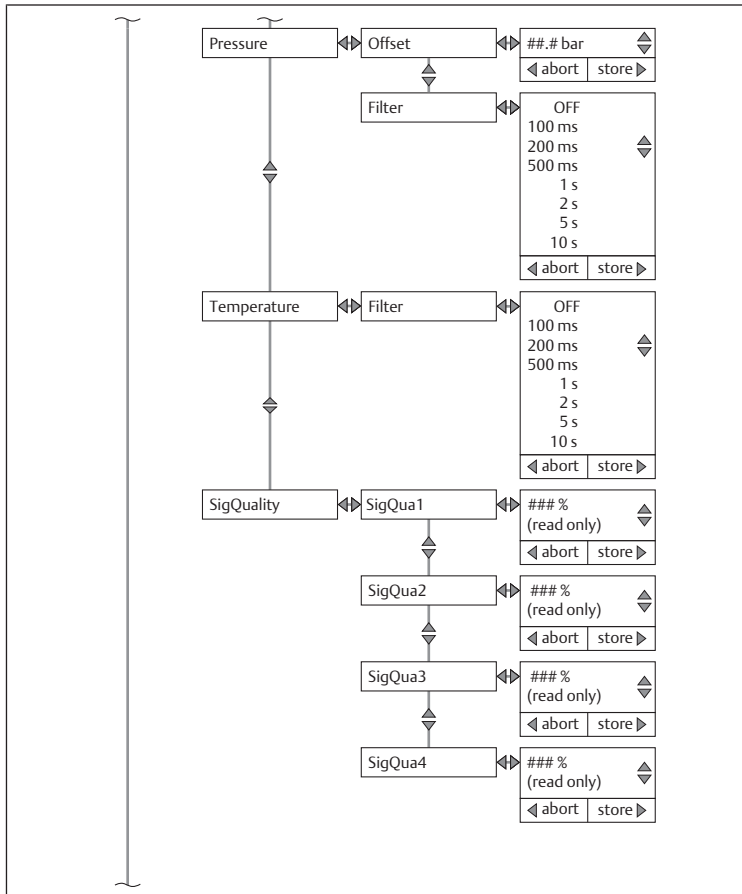


Fig. 6

History

| Objectif | Sous-menu | Option |
|---|-----------|---|
| Sélectionner l'affichage/le graphique des valeurs mesurées des dernières 60 minutes | 60 min | Sélectionner l'affichage/le graphique des valeurs mesurées des dernières 60 minutes |

| Objectif | Sous-menu | Option |
|--|-----------|--|
| Sélectionner l'affichage/le graphique des valeurs mesurées des dernières 24 heures | 24 hour | Sélectionner l'affichage/le graphique des valeurs mesurées des dernières 24 heures |
| Sélectionner l'affichage/le graphique des valeurs mesurées des derniers 7 jours | 7 days | Sélectionner l'affichage/le graphique des valeurs mesurées des derniers 7 jours |

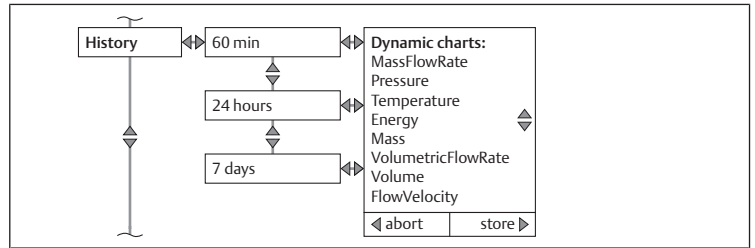


Fig. 7

Statistics

| Objectif | Sous-menu | Option |
|---|-----------|--|
| Valeurs minimales, moyennes et maximales de chaque paramètre après la dernière réinitialisation | View | Afficher <i>Max, mean, min values</i> de chaque paramètre après la dernière réinitialisation |
| Afficher l'heure de la dernière réinitialisation (read only) | LastReset | Afficher l'heure de la dernière réinitialisation |
| Réinitialiser les valeurs statistiques à 0 | Reset | Réinitialiser les valeurs statistiques à 0 |

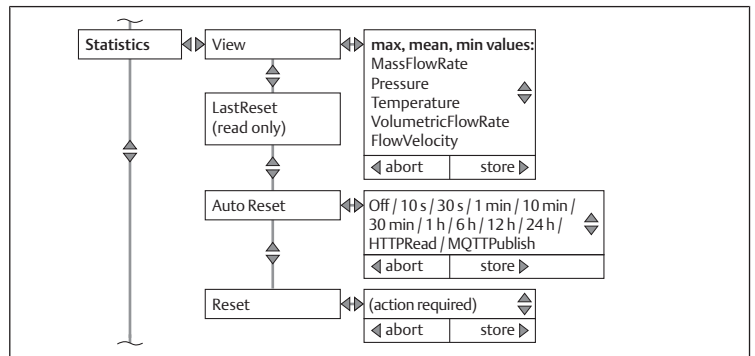


Fig. 8

Counter

| Objectif | Sous-menu | Option |
|---------------------------|-----------|---|
| Afficher le compteur | | Sélectionner les sous-menus <i>Mass, Volume, Energy</i> ou <i>LastReset</i> et afficher le compteur |
| Réinitialiser le compteur | Reset | Réinitialiser le compteur |

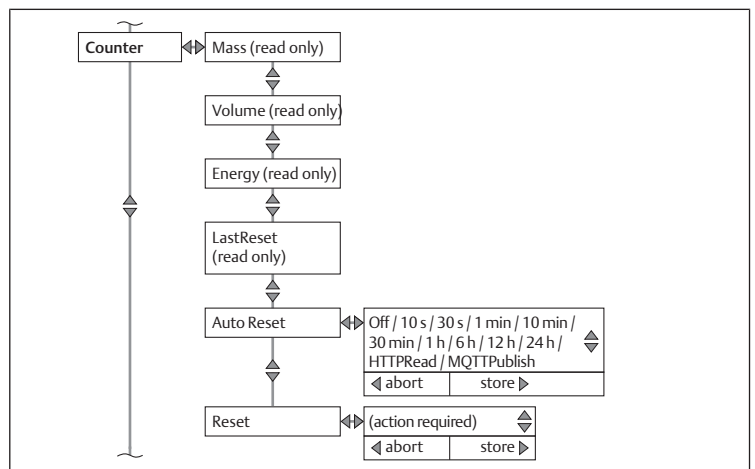


Fig. 9

System

| Objectif | Sous-menu | Option |
|-----------------------------------|--------------|---|
| Identifiant de service | Service | Procéder à l'attribution d'un identifiant de service pour un utilisateur autorisé |
| Réinitialiser aux valeurs d'usine | FactReset | Réinitialiser le système aux valeurs d'usine |
| Serial Number (read only) | SerialNumber | Afficher le numéro de série |
| Régler Device-Tag | DevTag | Régler Device-Tag |
| Régler Application-Tag | AppTag | Régler Application-Tag |
| FWVersion (read only) | FWVersion | Afficher la version du logiciel |
| Calibration (read only) | Calibration | Afficher les défauts du logiciel |
| BLVersion (read only) | BLVersion | Afficher la version du bootload |
| HWVersion (read only) | HWVersion | Afficher la version de matériel |

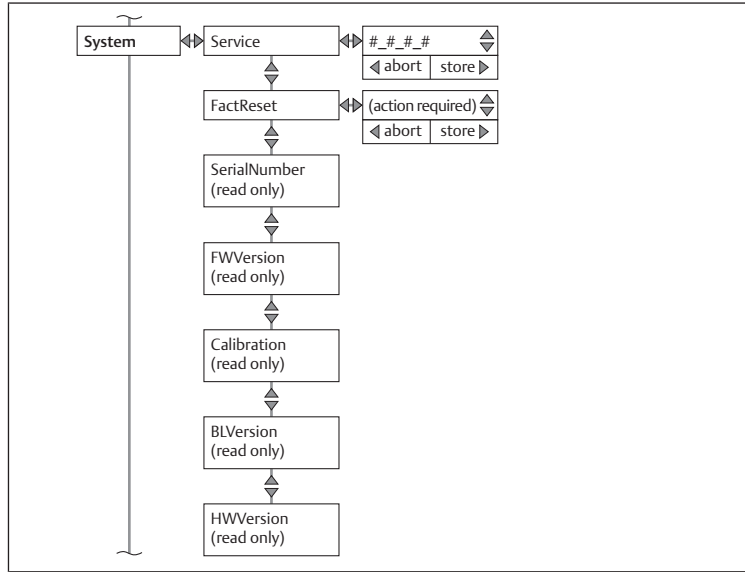


Fig. 10

Tags

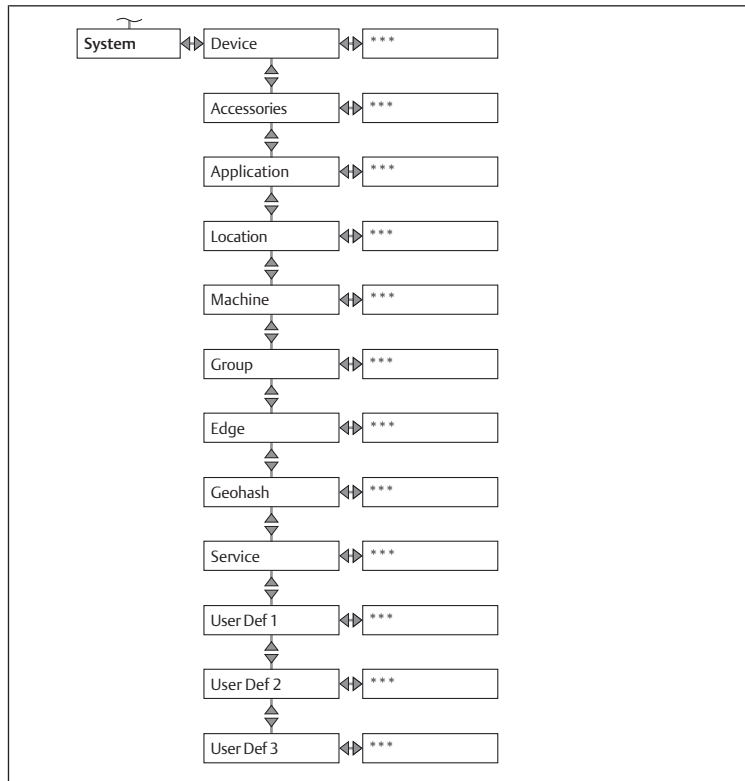


Fig. 11

3.2.2 Réglages pour la variante Ethernet IO-Link

Les réglages s'appliquent à toutes les variantes du produit avec le raccord électrique IO-Link.

IO-Link

L'affichage montre le menu de valeurs mesurées avec le réglage par défaut (kg/h, m/s).

| Objectif | Menu | Option |
|---------------------------------|----------------------|---|
| Sélectionner le menu | Affichage par défaut | Appuyer sur n'importe quelle touche fléchée pendant au moins 2 secondes et sélectionner Q1 Menu , Q2 Menu ou Qa Menu . |
| Régler la sortie de commutation | Q1 Menu | Régler la sortie de commutation |
| Régler la sortie de commutation | Q2 Menu | Régler la sortie de commutation |
| Régler la sortie analogique | Qa Menu | Régler la sortie analogique |

Q1 Menu

Le menu Q1 contient les réglages de la sortie de commutation 1.

| Objectif | Sous-menu | Option |
|--|------------|---|
| Régler de l'hystérèse ou de la fonction de fenêtre | Mode | Procéder au réglage du mode pour l'hystérèse ou la fonction de fenêtre avec les paramètres de mesure correspondants |
| Régler le point de commutation | SetPoint1 | Régler le point de commutation |
| Régler le point de commutation vers un niveau inférieur/hystérèse ou la limite inférieure de fenêtre | SetPoint2 | Régler le point de commutation vers un niveau inférieur/hystérèse ou la limite inférieure de fenêtre |
| Régler le comportement de commutation du contact de travail | Polarity | Sélectionner NormallyClosed ou NormallyOpen |
| Simuler la sortie de commutation | Simulate | Sélectionner Active , Inactive ou Normal (mode de mesure) |
| Régler PNP/NPN ou Push/Pull (DRV) | DriverType | Régler PNP/NPN ou Push/Pull (DRV) |

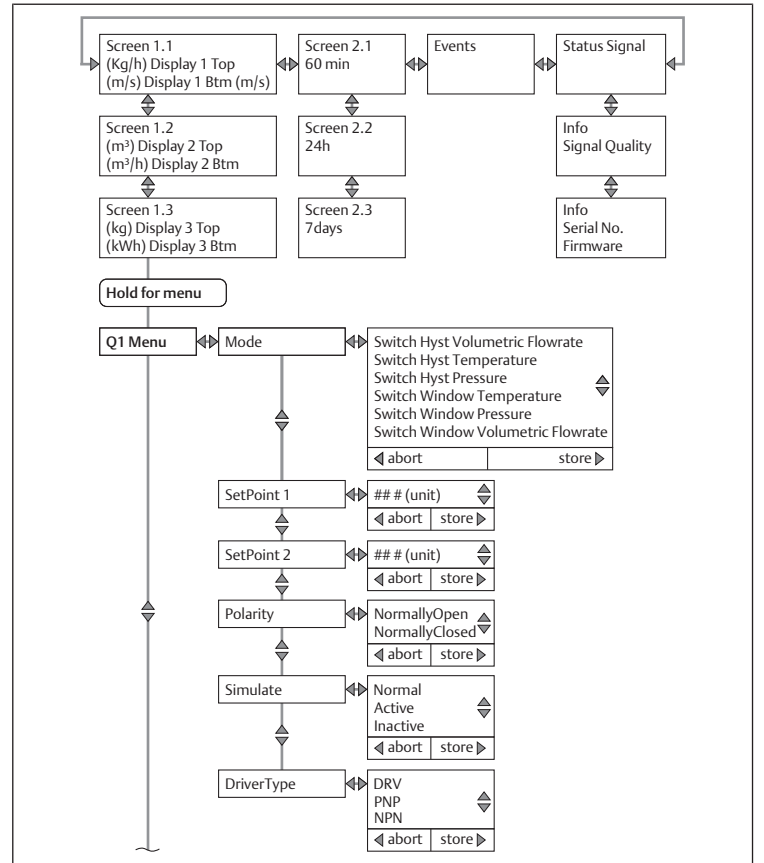


Fig. 12

Q2 Menu

Le menu Q2 contient les réglages de la sortie de commutation 2.

| Objectif | Sous-menu | Option |
|--|------------|--|
| Régler la sortie de commutation comme sortie de commutation, fréquence, impulsion ou analogique | Function | Régler la sortie de commutation comme <i>Switch</i> , <i>Frequency</i> , <i>Pulse</i> ou <i>Analog</i> |
| Régler mode pour hystérèse ou fonction de fenêtre | Mode | Régler mode pour hystérèse ou fonction de fenêtre |
| Régler le point de commutation | SetPoint1 | Régler le point de commutation |
| Régler le point de commutation vers un niveau inférieur/hystérèse ou la limite inférieure de fenêtre | SetPoint2 | Régler le point de commutation vers un niveau inférieur/hystérèse ou la limite inférieure de fenêtre |
| Régler le comportement de commutation du contact de travail | Polarity | Sélectionner <i>NormallyClosed</i> ou <i>NormallyOpen</i> |
| Simuler la sortie de commutation | Simulate | Sélectionner <i>Active</i> , <i>Inactive</i> ou <i>Normal</i> (mode de mesure) |
| Régler PNP/NPN ou Push/Pull | DriverType | Régler <i>PNP/NPN</i> ou <i>Push/Pull</i> |

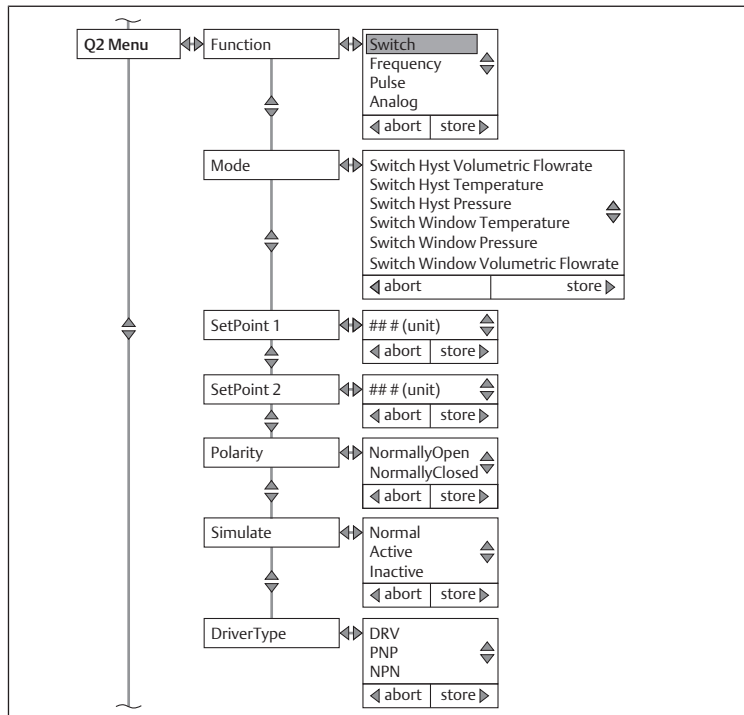


Fig. 13

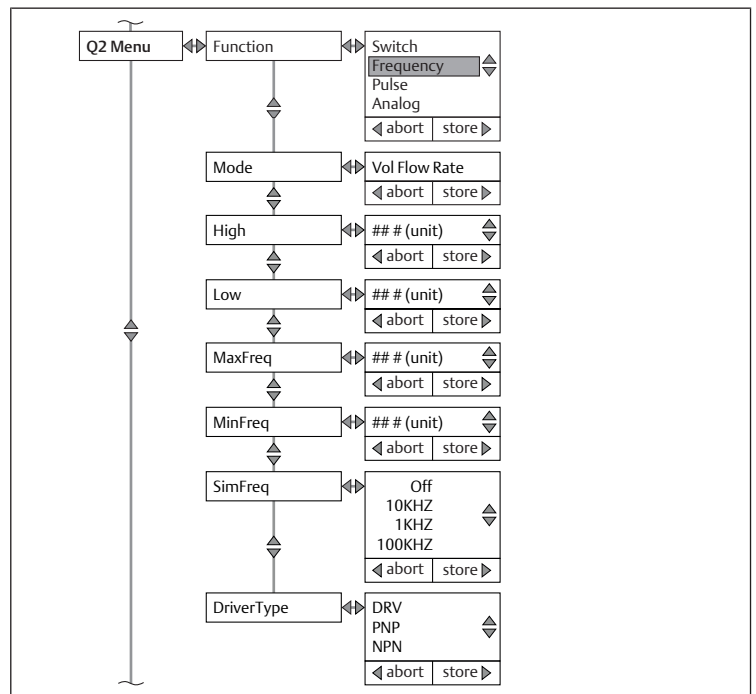


Fig. 14

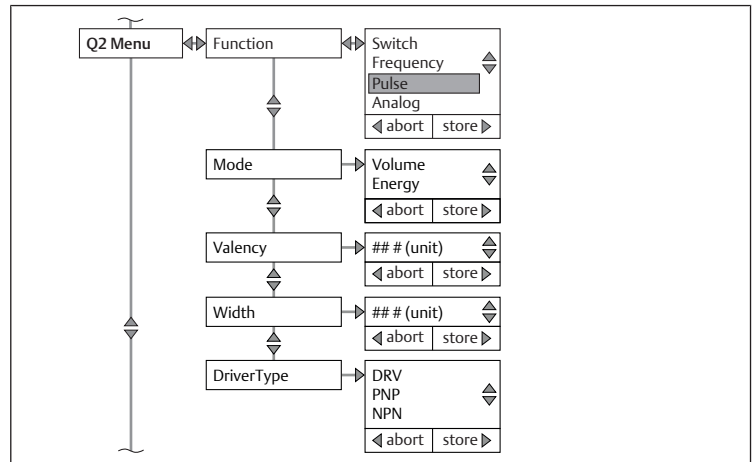


Fig. 15

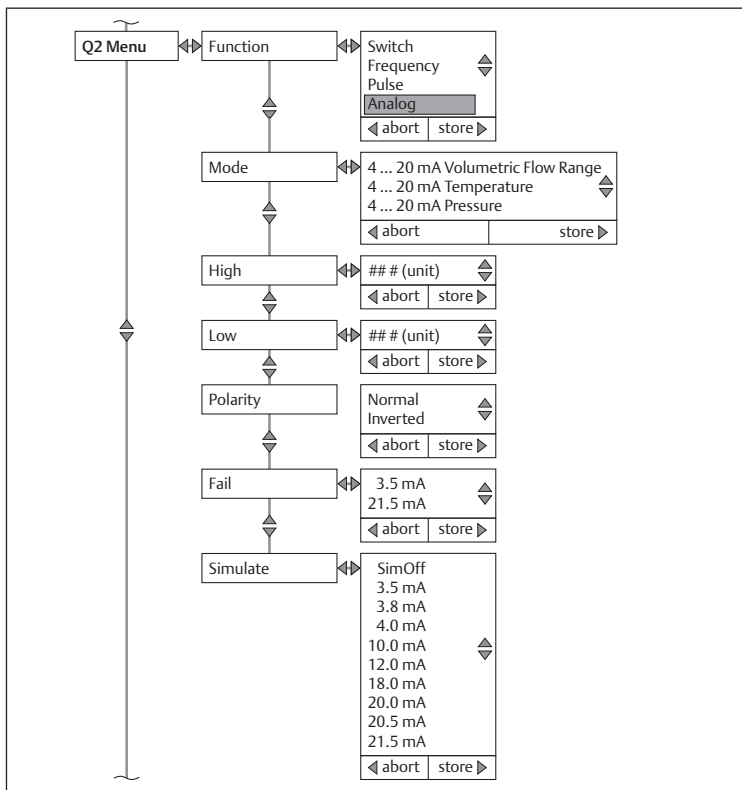


Fig. 16

Qa Menu

Le menu Qa contient les réglages de la sortie analogique.

| Objectif | Sous-menu | Option |
|---|-----------|--|
| Affecter les paramètres de mesure à la sortie de courant | Mode | Affecter les paramètres de mesure tels que débit, température ou pression à la sortie de courant |
| Affecter la valeur finale de la plage de mesure | High | Régler la valeur finale de la plage de mesure sur 20 mA |
| Affecter le début de la plage de mesure | Low | Régler le début de la plage de mesure sur 4 mA |
| Régler l'inversion de la sortie de courant | Polarity | Régler l'inversion de la sortie de courant |
| Régler le comportement de la sortie de courant en cas d'anomalie du produit | Fail | Régler le comportement de la sortie de courant en cas d'anomalie du produit |
| Régler la valeur de courant prédéfinie | Simulate | Régler la valeur de courant prédéfinie |

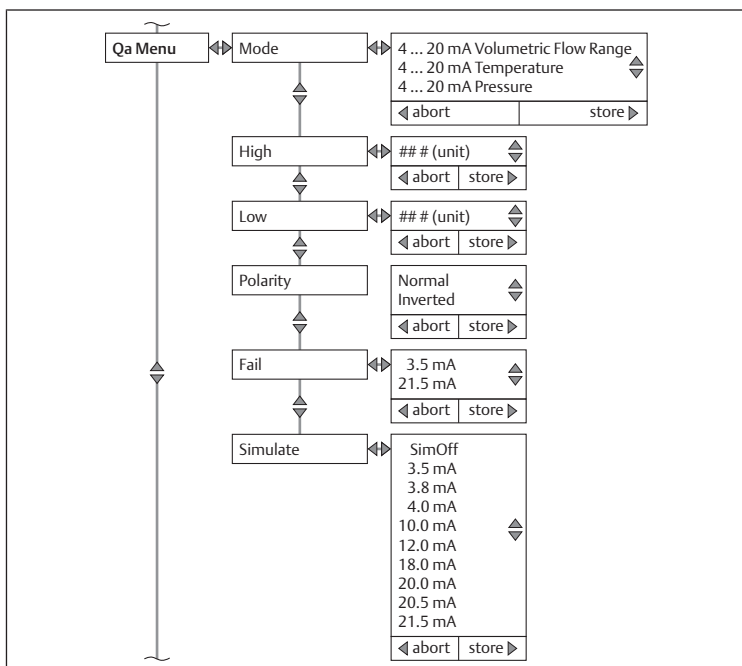


Fig. 17

3.2.3 Réglages pour la variante Ethernet

Les réglages s'appliquent à toutes les variantes du produit avec le raccord électrique Ethernet.

Ethernet

| Objectif | Sous-menu | Option |
|--|------------|--------------------------------|
| Affecter une adresse statique ou dynamique | DHCP Mode | Affecter une adresse |
| Régler l'adresse IP | IP Address | Régler l'adresse IP |
| | SubNetMask | Régler SubNetMask |
| | Gateway | Régler l'adresse de passerelle |
| | Nom | Régler le nom DHCP |

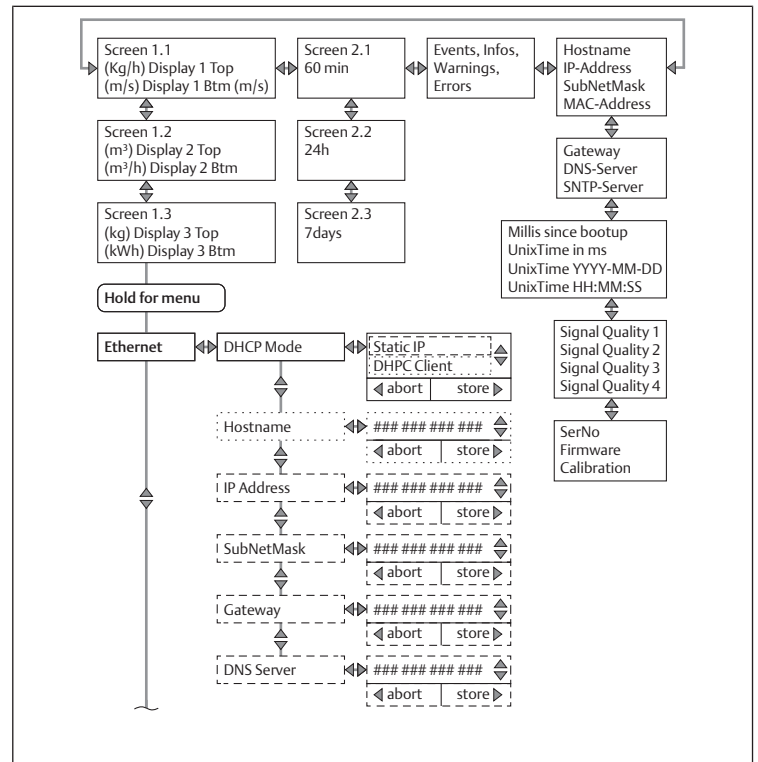
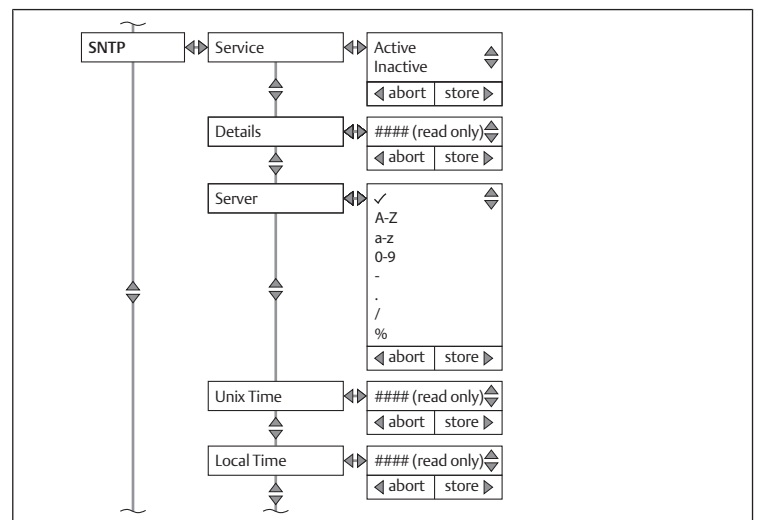


Fig. 18

SNTP



Webserver

| Objectif | Sous-menu | Option |
|------------------------------------|-----------|---|
| Activer/désactiver l'interface web | State | Sélectionner Active ou Inactive |
| Régler le port | Port | Sélectionner le port du serveur web. Le port par défaut pour le service HTTP est le port 80 |

| Objectif | Sous-menu | Option |
|--|-----------|---|
| Réinitialiser le mot de passe côté utilisateur | ResetPW | Réinitialiser le mot de passe du serveur web pour l'utilisateur « Maintenance » à l'état de livraison. Le mot de passe par défaut (réglage d'usine) est « airflowsensor » |

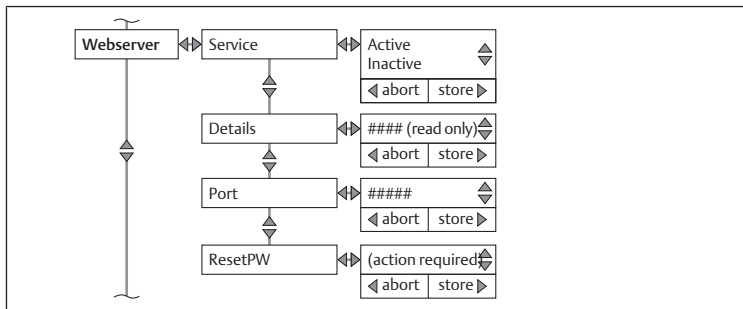


Fig. 19

OPC UA

| Objectif | Sous-menu | Option |
|---------------------------------------|-----------|---|
| Activer et désactiver l'interface web | State | Sélectionner <i>Active</i> ou <i>Inactive</i> |
| Régler le port | Port | Régler le port |
| Régler le nom de l'utilisateur | User | Régler le nom de l'utilisateur |
| Attribuer un mot de passe | Password | Régler le mot de passe |

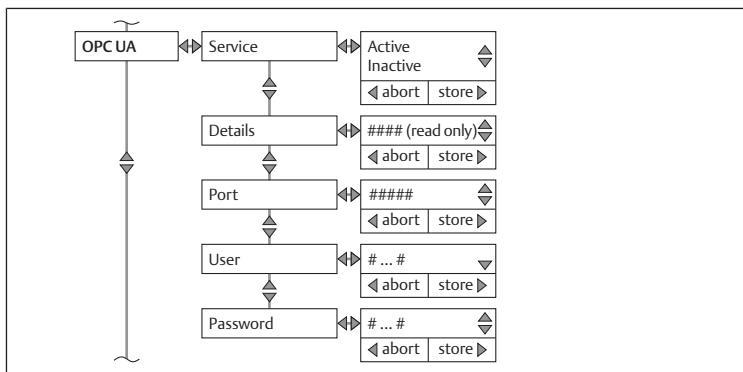


Fig. 20

MQTT

| Objectif | Sous-menu | Option |
|---|-----------|--|
| Activer et désactiver l'interface web | State | Sélectionner <i>Active</i> ou <i>Inactive</i> |
| Broker | Broker | Régler le gestionnaire |
| Régler le port | Port | Régler le port |
| Topic | Topic | Afficher les sujets |
| User | User | Attribuer nom d'utilisateur pour gestionnaire |
| Créer un mot de passe de gestionnaire | Password | Saisir mot de passe de gestionnaire |
| Envoyer l'intervalle de coupe au gestionnaire | Update | Déterminer l'intervalle de coupe |
| QoS | QoS | Sélectionner <i>QoS-0</i> , <i>QoS-1</i> ou <i>QoS-2</i> |
| Définir message MQTT au gestionnaire | Send | Sélectionner le point de menu et régler <i>Active</i> ou <i>Inactive</i> |

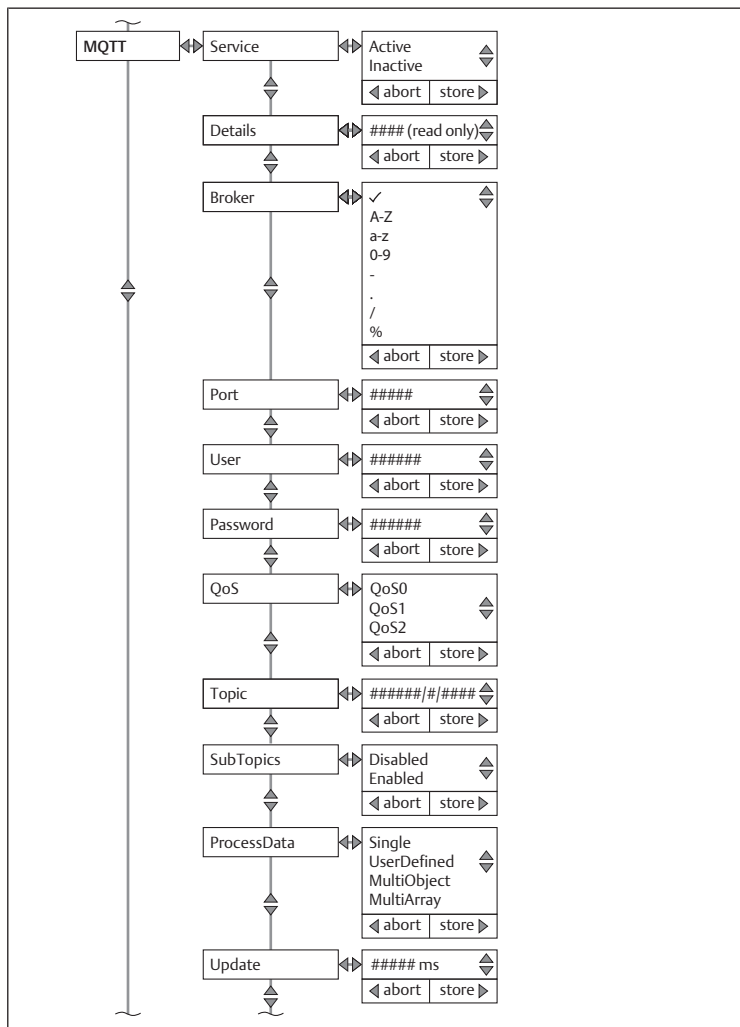


Fig. 21

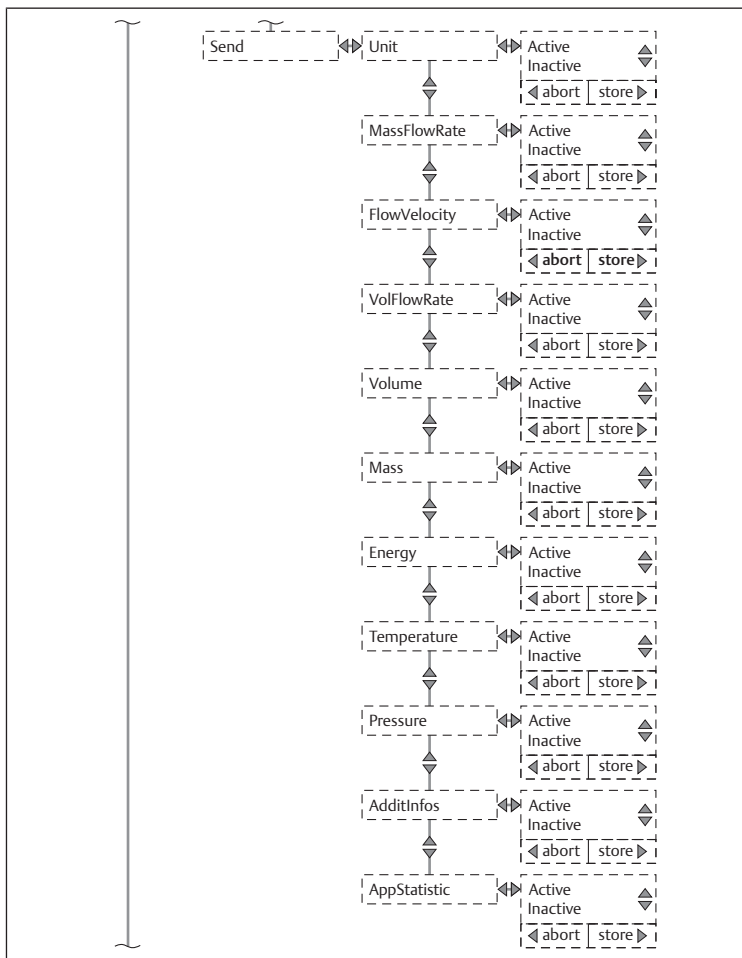


Fig. 22

Indice

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1 Sulla presente documentazione

Le presenti istruzioni contengono informazioni importanti per l'uso sicuro e corretto del prodotto.

Questa documentazione è un complemento alle istruzioni di montaggio valide. Leggere completamente le istruzioni di montaggio prima di utilizzare il prodotto.

1.1 Validità della documentazione

La presente documentazione è destinata a:

Programmatore, personale addetto alla manutenzione, gestore dell'impianto

La presente documentazione fornisce informazioni supplementari sull'uso delle seguenti varianti di prodotto della serie AF2 e 652/653:

| Serie | Variante di prodotto | Interfaccia |
|-------|-------------------------------------|-----------------------------|
| AF2 | Combinazione di filtri sensori (AS) | IO-Link Ethernet |
| | Sensore High Flow (HF) | IO-Link Ethernet |
| 652 | Variante di prodotto con filtro | IO-Link (A) Ethernet (B) |
| | Variante di prodotto con tubo | IO-Link (A) Ethernet (B) |
| 653 | Variante di prodotto con filtro | IO-Link (A) Ethernet (B) |
| | Variante di prodotto con tubo | IO-Link (A) Ethernet (B) |

1.2 Documentazione aggiuntiva

Osservare la seguente documentazione correlata:

- Documentazione dell'impianto del produttore
- Documentazione dei restanti componenti dell'impianto
- Istruzioni di montaggio (R412026496 o 549411)

1.3 Abbreviazioni utilizzate

Nella presente documentazione sono utilizzate le seguenti abbreviazioni:

| Abbreviazione | Significato |
|---------------|---|
| ABS | Acrilnitrile-butadiene-stirene |
| GF | Fibra di vetro |
| HF | High Flow |
| MBE | Valore finale del campo di misurazione |
| MQTT | Message Queuing Telemetry Transport |
| MTTF | Mean Time To Failure (durata di funzionamento media fra i guasti) |
| NPT | National Taper Pipe (tipo di filettatura gas) |
| OLED | Organic Light Emitting Diode (diodo organico a emissione di luce) |
| OPC UA | Open Platform Communications Unified Architecture |
| PA | Poliammide |
| PC | Policarbonato |
| DPI | Dispositivi di protezione individuali |
| Pt | Resistore di precisione in platino |

2 Sicurezza

2.1 Sul presente capitolo

- Leggere il capitolo Sicurezza delle presenti istruzioni di montaggio e l'intera documentazione attentamente e completamente prima di utilizzare il prodotto.
- Conservare la documentazione in modo che sia sempre accessibile a tutti gli utenti.

3 Dati e parametri

3.1 Indicazioni sulla sicurezza

- Non effettuare alcuna modifica parametro in fase di funzionamento (prevenzione delle lesioni).

3.2 Dati dei parametri

3.2.1 Impostazioni generali

L'impostazione dei parametri in questo paragrafo vale per tutte le varianti del prodotto.

Generalità

| Scopo | Menu | Opzione |
|--------------------------|--------------------------|--|
| Eseguire le impostazioni | Visualizzazione standard | Premere un qualunque tasto freccia per minimo 2 secondi per accedere al rispettivo menu ed eseguire le impostazioni. |

Display

| Scopo | Sottomenu | Opzione |
|--|-------------|--|
| Impostare le unità | Units | Scegliere tra i seguenti menu: <ul style="list-style-type: none">• <i>MassFlowRate</i>• <i>FlowVelocity</i>• <i>Volume</i>• <i>VolFlowRate</i>• <i>Mass</i>• <i>Energy</i>• <i>Temperature</i>• <i>Pressure</i> |
| Impostare la visualizzazione Screen 1.1 | Pages | <ul style="list-style-type: none">• Selezionare <i>Disp1Top</i>• Selezionare <i>Disp1Btm</i> |
| Impostare la visualizzazione Screen 1.2 | Pages | <ul style="list-style-type: none">• Selezionare <i>Disp2Top</i>• Selezionare <i>Disp2Btm</i> |
| Impostare la visualizzazione Screen 1.3 | Pages | <ul style="list-style-type: none">• Selezionare <i>Disp3Top</i>• Selezionare <i>Disp3Btm</i> |
| Impostare la visualizzazione Screen 2.1, 2.2 e 2.3 | Pages | Selezionare nel menu <i>DispHistory</i> i parametri di visualizzazione |
| Ottimizzare la leggibilità | Rotation | Impostare la visualizzazione 0° , 90° , 180° o 270° |
| Attivare lo screen saver | ScreenSaver | Impostare il tempo per l'attivazione dello screen saver |
| Spegnimento del display | AutoOff | Impostare il tempo per lo spegnimento del display |
| Regolare la luminosità | Brightness | Impostare la luminosità in percentuale |
| Assegnare un pin per la protezione da azionamento e manomissioni | Display Pin | Assegnare un pin a 4 cifre |

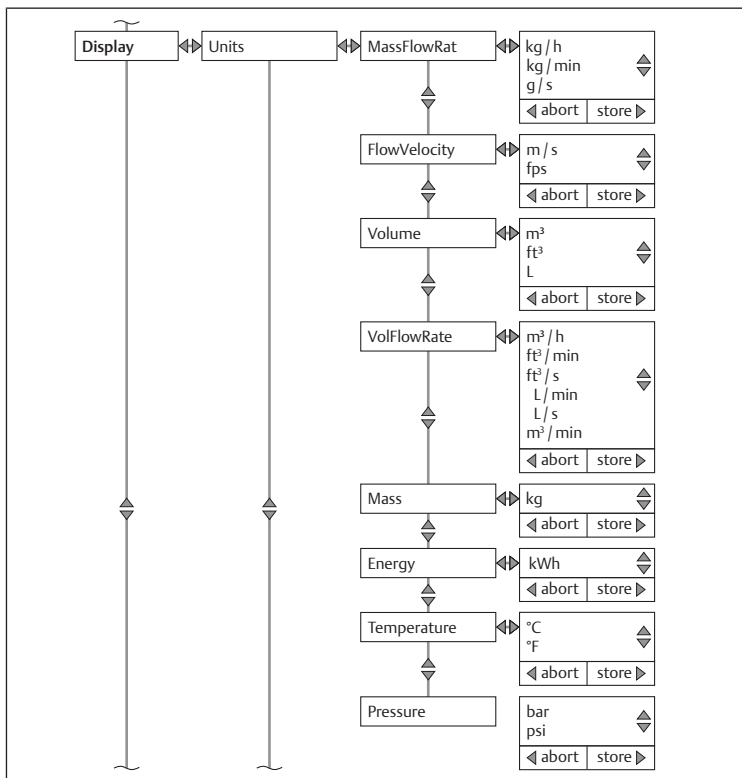


Fig. 1

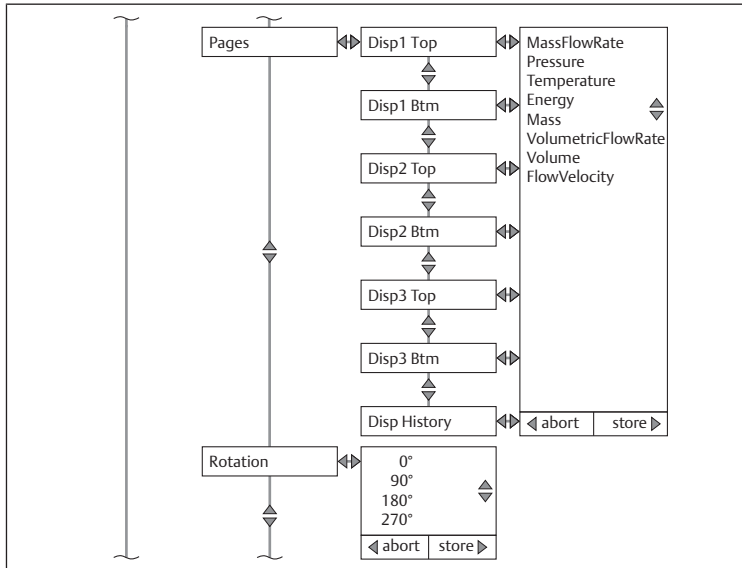


Fig. 2

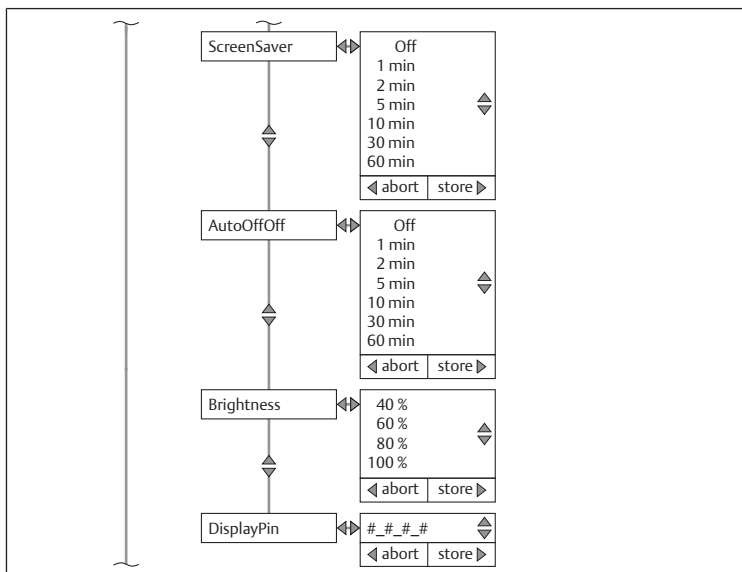


Fig. 3

Simulate

| Scopo | Sottomenu | Opzione |
|-------------------------|-------------|-------------------------|
| Simulare la portata | Flow | Simulare la portata |
| Simulare la temperatura | Temperature | Simulare la temperatura |
| Simulare la pressione | Pressure | Simulare la pressione |

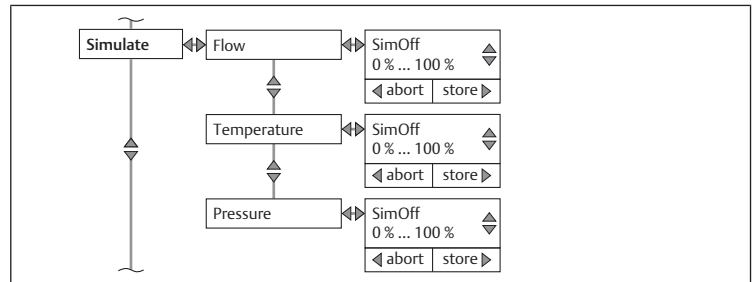


Fig. 4

Measure

| Scopo | Sottomenu | Opzione |
|--|---------------------------|---|
| Impostare il fluido di misurazione | Flow | Selezionare l'opzione <i>Medium</i> e impostare il fluido di misurazione: <ul style="list-style-type: none"> • <i>Air</i> • <i>Argon</i> • <i>CO2</i> • <i>Nitrogen</i> |
| Impostare la norma/lo standard di riferimento | Flow | Selezionare l'opzione <i>RefCond</i> e impostare la norma/lo standard di riferimento: <ul style="list-style-type: none"> • <i>ISO 2533</i> • <i>ISO 1217</i> • <i>DIN 1945-1</i> • <i>DIN 1343</i> • <i>ISO 6358</i> • <i>ISO 8778</i> • <i>UserDefined</i> (definito dall'utente) |
| Impostare la pressione di riferimento con impostazione definita dall'utente (UserDefined) | Flow | Selezionare l'opzione <i>RefCond</i> e selezionare <i>UserDefined</i> (pressione di riferimento definita dall'utente) |
| Impostare l'offset zero | Flow | Selezionare l'opzione <i>0-FlowwOff</i> e impostare l'offset zero |
| Impostare il taglio di bassa portata | Flow | Selezionare l'opzione <i>0-FlowCut</i> e impostare il taglio di bassa portata |
| Filtro del valore medio per livellare i valori di misura nella visualizzazione e nell'uscita | Flow/Pressure/Temperature | Selezionare l'opzione <i>Filter</i> e impostare il filtro dei valori di misura |
| Impostare l'offset/offset zero | Pressure/Temperature | Selezionare l'opzione <i>Offset</i> e impostare l'offset/spostamento del punto zero |
| Scegliere la qualità del segnale | SigQuality | Scegliere tra <i>SigQua1</i> , <i>SigQua2</i> , <i>SigQua3</i> e <i>SigQua4</i> . La qualità è impostata per tutte al 100%. La qualità del segnale 1 è una misura per la robustezza |

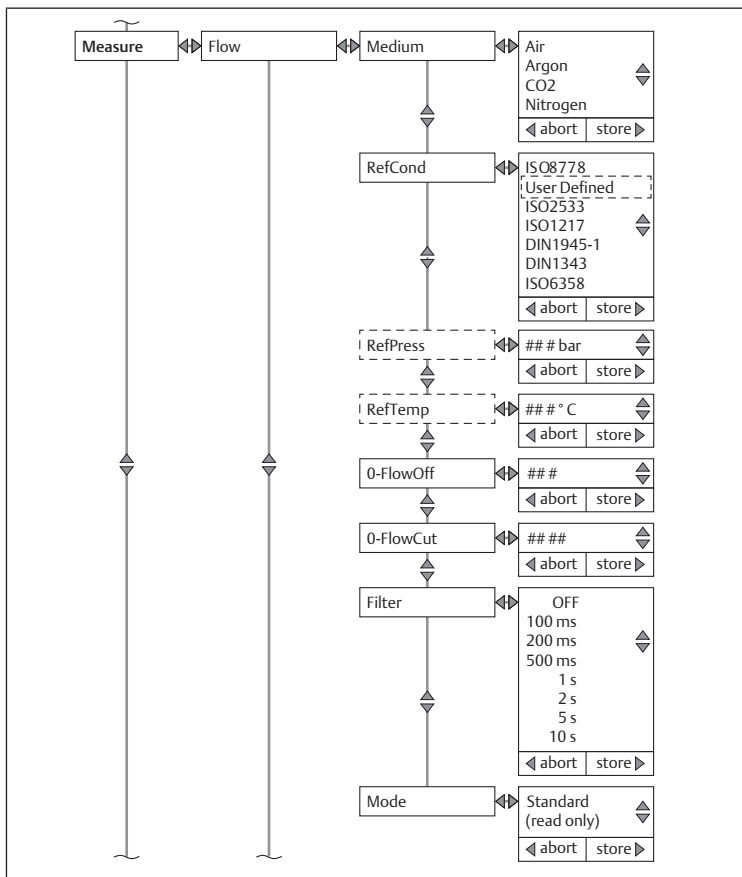


Fig. 5

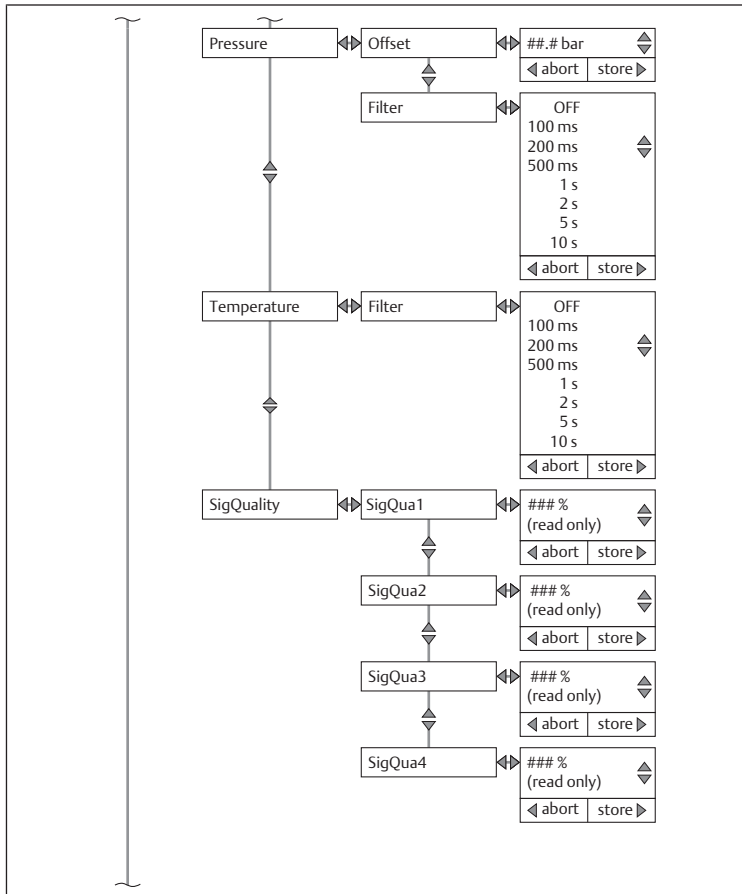


Fig. 6

History

| Scopo | Sottomenu | Opzione |
|---|-----------|---|
| Scegliere la visualizzazione/il grafico dei valori di misura degli ultimi 60 minuti | 60 min | Selezionare la visualizzazione/il grafico dei valori di misura degli ultimi 60 minuti |

| Scopo | Sottomenu | Opzione |
|--|-----------|--|
| Scegliere la visualizzazione/il grafico dei valori di misura delle ultime 24 ore | 24 hour | Selezionare la visualizzazione/il grafico dei valori di misura delle ultime 24 ore |
| Scegliere la visualizzazione/il grafico dei valori di misura degli ultimi 7 giorni | 7 days | Selezionare la visualizzazione/il grafico dei valori di misura degli ultimi 7 giorni |

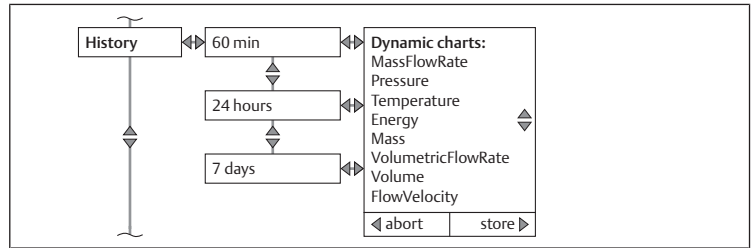


Fig. 7

Statistics

| Scopo | Sottomenu | Opzione |
|---|-----------|---|
| Valori minimi, medi e massimi dei singoli parametri dall'ultimo reset | View | Visualizzare <i>Max, mean, min values</i> dei singoli parametri dopo l'ultimo reset |
| Visualizzare il momento dell'ultimo reset (read only) | LastReset | Visualizzare il momento dell'ultimo reset |
| Azzerare i valori statistici | Reset | Azzerare i valori statistici |

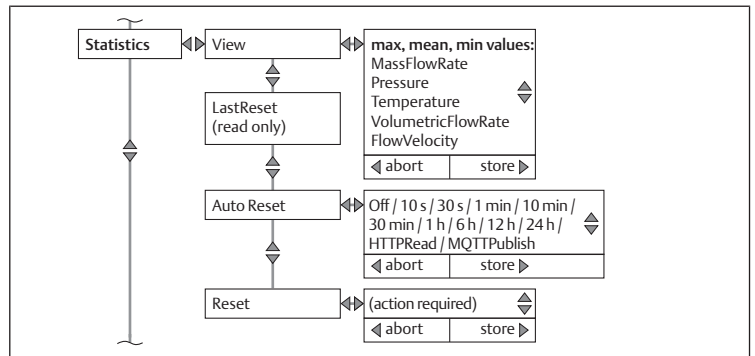


Fig. 8

Counter

| Scopo | Sottomenu | Opzione |
|---------------------------|-----------|---|
| Visualizzare il contatore | | Scegliere tra i sottomenu <i>Mass, Volume, Energy</i> e <i>LastReset</i> e visualizzare i contatori |
| Resettare i contatori | Reset | Resettare i contatori |

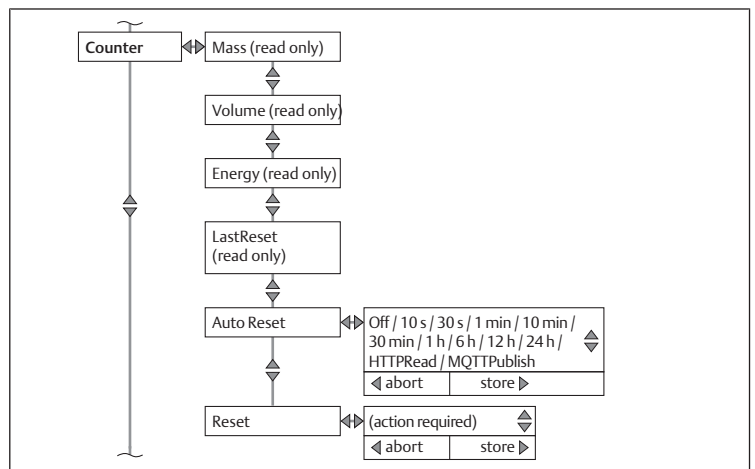


Fig. 9

Sistema

| Scopo | Sottomenu | Opzione |
|----------------------------------|-----------|---|
| Login per il servizio assistenza | Service | Predisporre il login del servizio assistenza per utenti autorizzati |

| Scopo | Sottomenu | Opzione |
|--|--------------|--|
| Ripristinare le impostazioni di fabbrica | FactReset | Resettare il sistema alle impostazioni di fabbrica |
| Serial Number (read only) | SerialNumber | Visualizzare il numero di serie |
| Impostare il tag dispositivo | DevTag | Impostare il tag dispositivo |
| Impostare il tag Application | AppTag | Impostare il tag Application |
| FWVersion (read only) | FWVersion | Visualizzare la versione firmware |
| Calibration (read only) | Calibration | Visualizzare i valori di default del firmware |
| BLVersion (read only) | BLVersion | Visualizzare la versione boot load |
| HWVersion (read only) | HWVersion | Visualizzare la versione hardware |

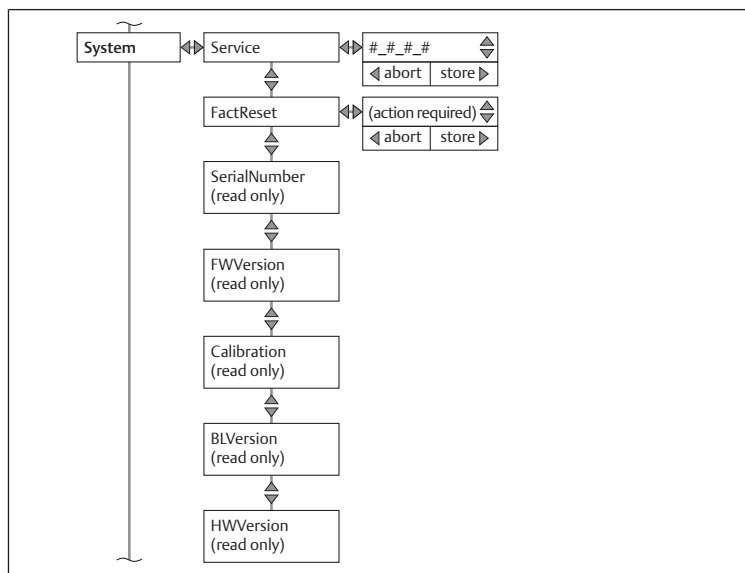


Fig. 10

Tag

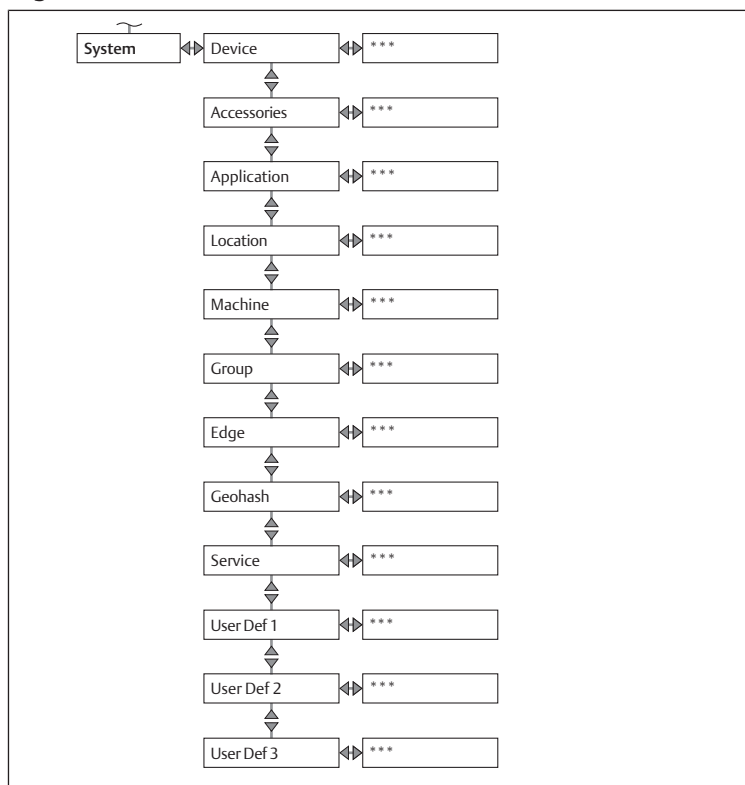


Fig. 11

3.2.2 Impostazioni per la variante IO-Link

Le impostazioni valgono per tutte le varianti del prodotto con attacco elettrico IO-Link.

IO-Link

Il display mostra il menu dei valori di misura con l'impostazione di default (kg/h, m/s).

| Scopo | Menu | Opzione |
|------------------------------------|--------------------------|---|
| Selezionare il menu | Visualizzazione standard | Premere un qualunque tasto freccia per minimo 2 secondi e scegliere tra i menu Q1 Menu , Q2 Menu e Qa Menu . |
| Impostare l'uscita di commutazione | Q1 Menu | Impostare l'uscita di commutazione |
| Impostare l'uscita di commutazione | Q2 Menu | Impostare l'uscita di commutazione |
| Impostare l'uscita analogica | Qa Menu | Impostare l'uscita analogica |

Q1 Menu

Il menu Q1 contiene le impostazioni dell'uscita di commutazione 1.

| Scopo | Sottomenu | Opzione |
|---|------------|---|
| Impostazione dell'isteresi o della funzione finestra | Mode | Definire l'impostazione della modalità per l'isteresi o la funzione finestra con i rispettivi parametri di misura |
| Impostare il punto di commutazione | SetPoint1 | Impostare il punto di commutazione |
| Impostare il punto di reinserzione/isteresi o il limite dell'intervallo inferiore | SetPoint2 | Impostare il punto di reinserzione/isteresi o il limite dell'intervallo inferiore |
| Impostare il comportamento di commutazione del contatto di apertura | Polarity | Scegliere tra NormallyClosed e NormallyOpen |
| Simulare l'uscita di commutazione | Simulate | Selezionare Active , Inactive o Normal (modalità di misurazione) |
| Impostare PNP/NPN o Push/Pull (DRV) | DriverType | Impostare PNP/NPN o Push/Pull (DRV) |

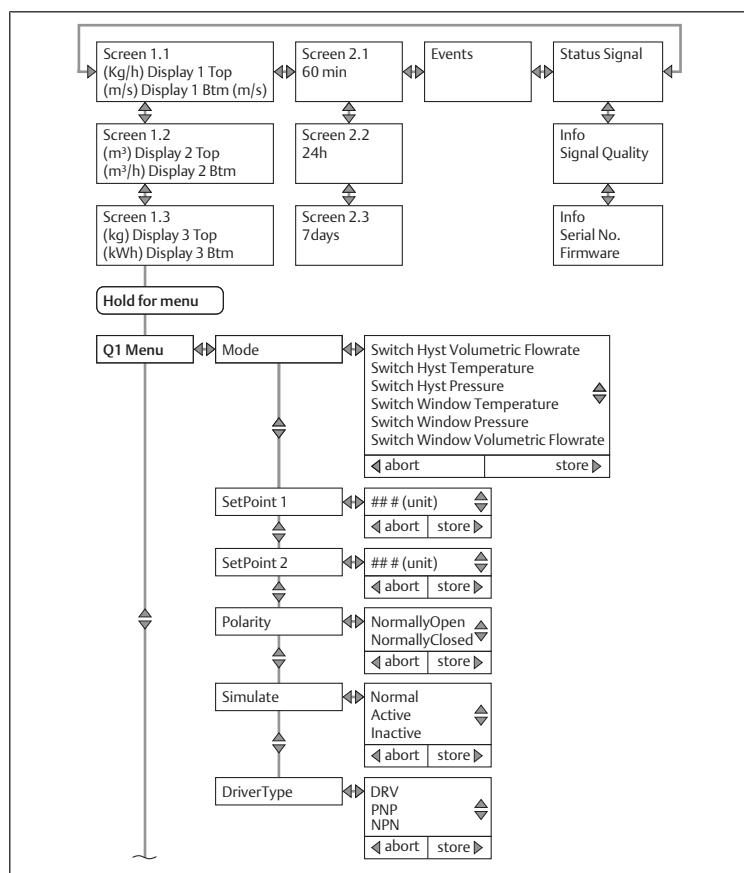


Fig. 12

Q2 Menu

Il menu Q2 contiene le impostazioni dell'uscita di commutazione 2.

| Scopo | Sottomenu | Opzione |
|--|------------|---|
| Impostare l'uscita di commutazione come uscita di frequenza, di impulso, analogica o di commutazione | Function | Impostare l'uscita di commutazione come <i>Switch</i> , <i>Frequency</i> , <i>Pulse</i> o <i>Analog</i> |
| Impostare la modalità per isteresi o funzione finestra | Mode | Impostare la modalità per isteresi o funzione finestra |
| Impostare il punto di commutazione | SetPoint1 | Impostare il punto di commutazione |
| Impostare il punto di reinserzione/isteresi o il limite dell'intervallo inferiore | SetPoint2 | Impostare il punto di reinserzione/isteresi o il limite dell'intervallo inferiore |
| Impostare il comportamento di commutazione del contatto di apertura | Polarity | Scegliere tra <i>NormallyClosed</i> e <i>NormallyOpen</i> |
| Simulare l'uscita di commutazione | Simulate | Scegliere tra <i>Active</i> , <i>Inactive</i> e <i>Normal</i> (modalità di misurazione) |
| Impostare PNP/NPN o Push/Pull | DriverType | Impostare <i>PNP/NPN</i> o <i>Push/Pull</i> |

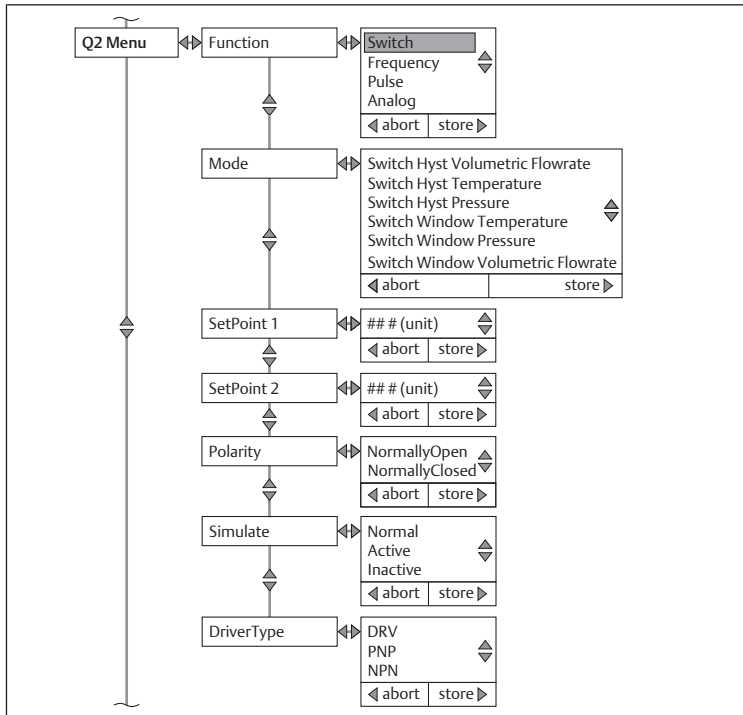


Fig. 13

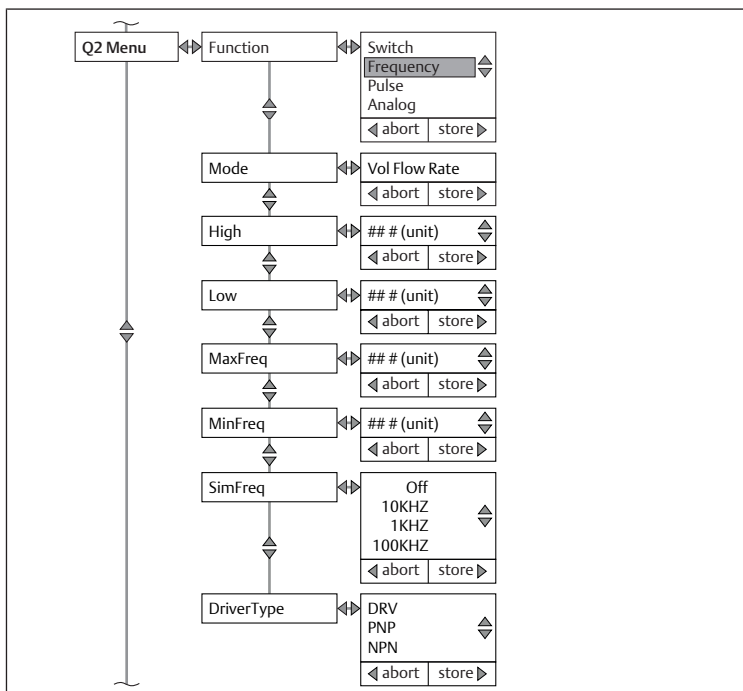


Fig. 14

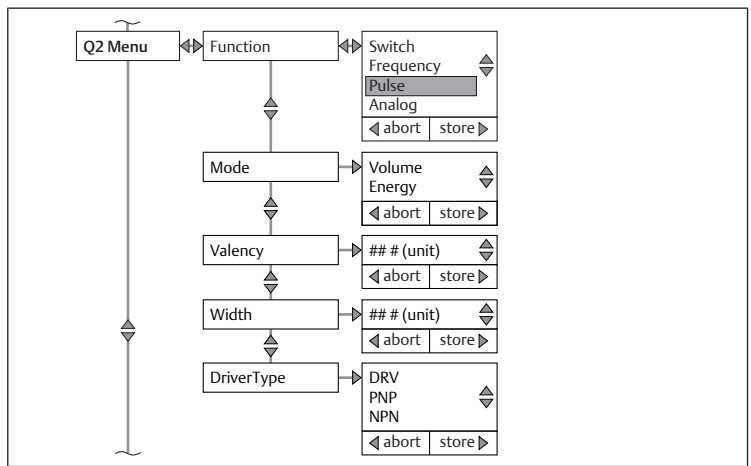


Fig. 15

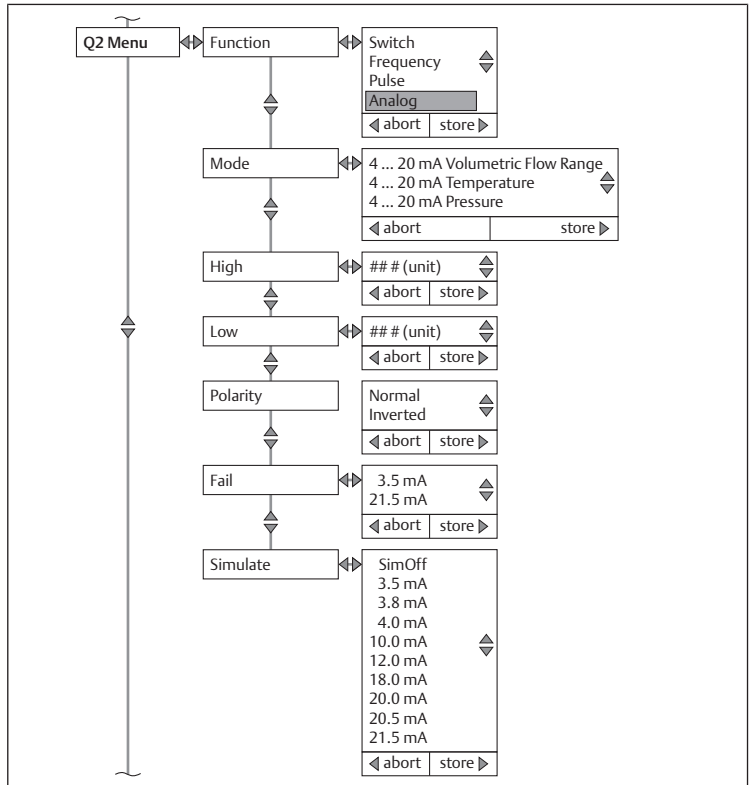


Fig. 16

Qa Menu

Il menu Qa contiene le impostazioni dell'uscita analogica.

| Scopo | Sottomenu | Opzione |
|--|-----------|---|
| Assegnare i parametri di misura all'uscita corrente | Mode | Assegnare i parametri di misura come portata, temperatura o pressione all'uscita corrente |
| Assegnare il valore finale del campo di misurazione | High | Impostare il valore finale del campo di misurazione a 20 mA |
| Assegnare l'inizio del campo di misurazione | Low | Impostare l'inizio del campo di misurazione a 4 mA |
| Impostare l'inversione dell'uscita corrente | Polarity | Impostare l'inversione dell'uscita corrente |
| Impostare il comportamento dell'uscita corrente in caso di errore nel prodotto | Fail | Impostare il comportamento dell'uscita corrente in caso di errore nel prodotto |
| Impostare un valore di corrente predefinito | Simulate | Impostare un valore di corrente predefinito |

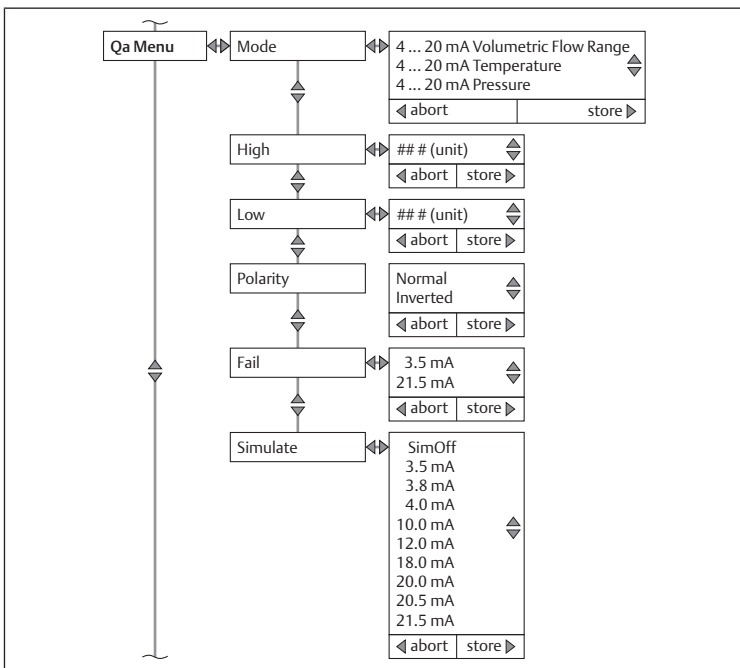


Fig. 17

3.2.3 Impostazioni per la variante Ethernet

Le impostazioni valgono per tutte le varianti del prodotto con attacco elettrico Ethernet.

Ethernet

| Scopo | Sottomenu | Opzione |
|---|------------|---|
| Assegnare un indirizzo statico o dinamico | DHCP Mode | Assegnare un indirizzo |
| Impostare l'indirizzo IP | IP Address | Impostare l'indirizzo IP |
| SubNetMask | SubNetMask | Impostare la maschera di sottorete SubNetMask |
| Gateway | Gateway | Impostare l'indirizzo gateway |
| Nome | Nome | Impostare i nomi DHCP |

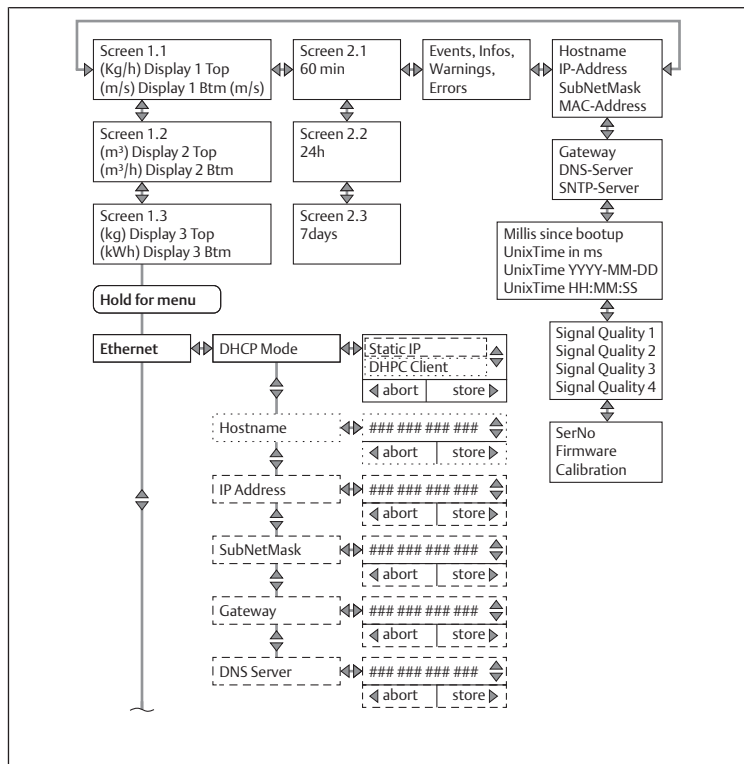
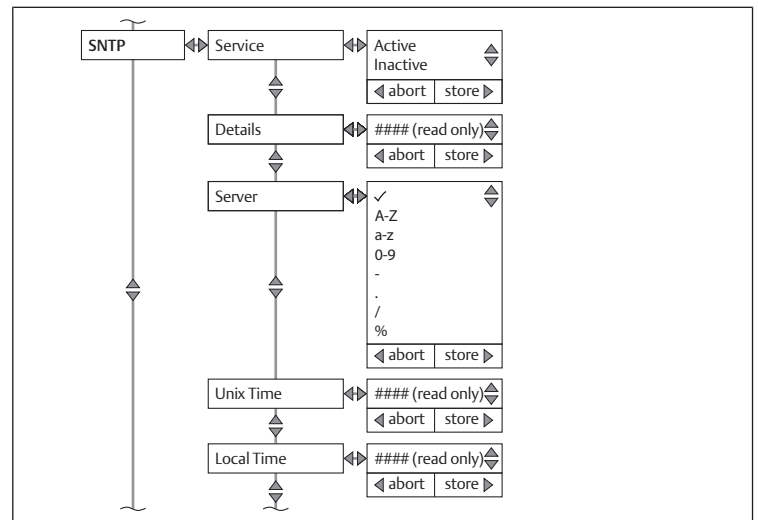


Fig. 18

SNTIP



Webserver

| Scopo | Sottomenu | Opzione |
|--|-----------|---|
| Attivare e disattivare l'interfaccia web | State | Scegliere tra <i>Active</i> e <i>Inactive</i> |
| Impostare la porta | Port | Selezionare la porta del server web. La porta standard per il servizio HTTP è la 80 |
| Resetare la password utente | ResetPW | Resetare la password utente del server web "Maintenance" allo stato di consegna. La password di default (impostazione di fabbrica) è "airflow-sensor" |

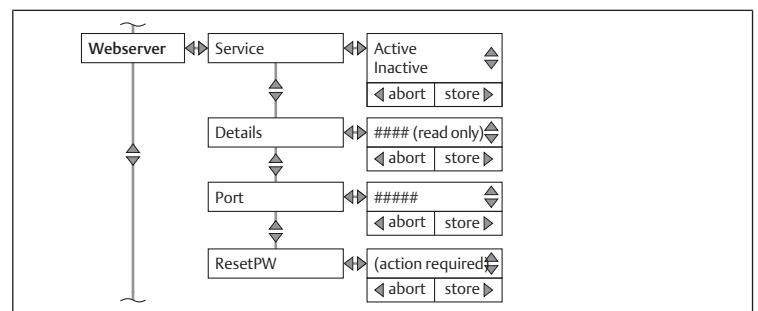


Fig. 19

OPC UA

| Scopo | Sottomenu | Opzione |
|--|-----------|---|
| Attivare e disattivare l'interfaccia web | State | Scegliere tra <i>Active</i> e <i>Inactive</i> |
| Impostare la porta | Port | Impostare la porta |
| Impostare il nome utente | User | Impostare il nome utente |
| Assegnare una password | Password | Impostare la password |

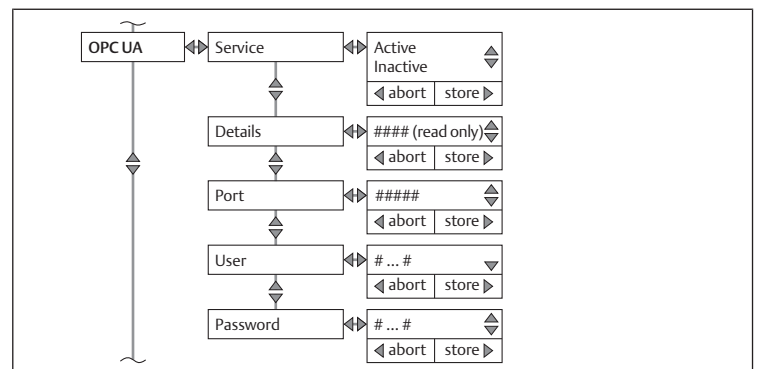


Fig. 20

MQTT

| Scopo | Sottomenu | Opzione |
|---|-----------|--|
| Attivare e disattivare l'interfaccia web | State | Scegliere tra <i>Active</i> e <i>Inactive</i> |
| Broker | Broker | Impostare il broker |
| Impostare la porta | Port | Impostare la porta |
| Topic | Topic | Visualizzare gli argomenti |
| User | User | Inserire il nome utente per il broker |
| Creare la password per il broker | Password | Inserire la password per il broker |
| Inviare l'intervallo al broker | Update | Impostare l'intervallo |
| QoS | QoS | Selezionare <i>QoS-0</i> , <i>QoS-1</i> o <i>QoS-2</i> |
| Definire il messaggio MQTT al Send broker | | Selezionare la voce del menu dal secondo sottomenu e impostare <i>Active</i> o <i>Inactive</i> |

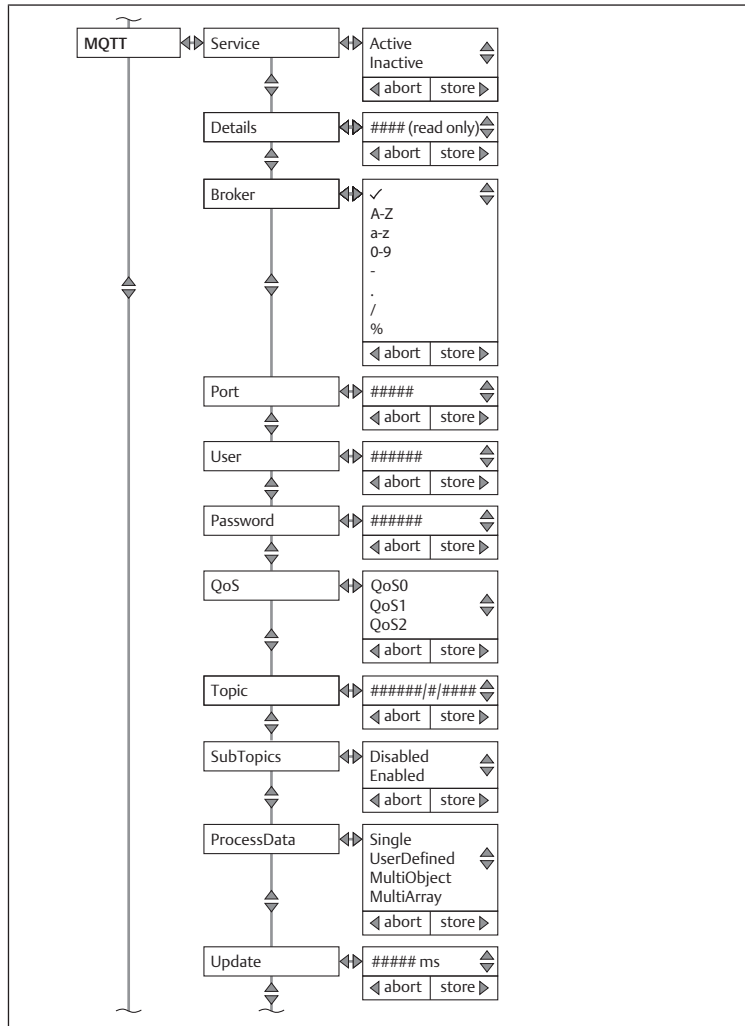


Fig. 21

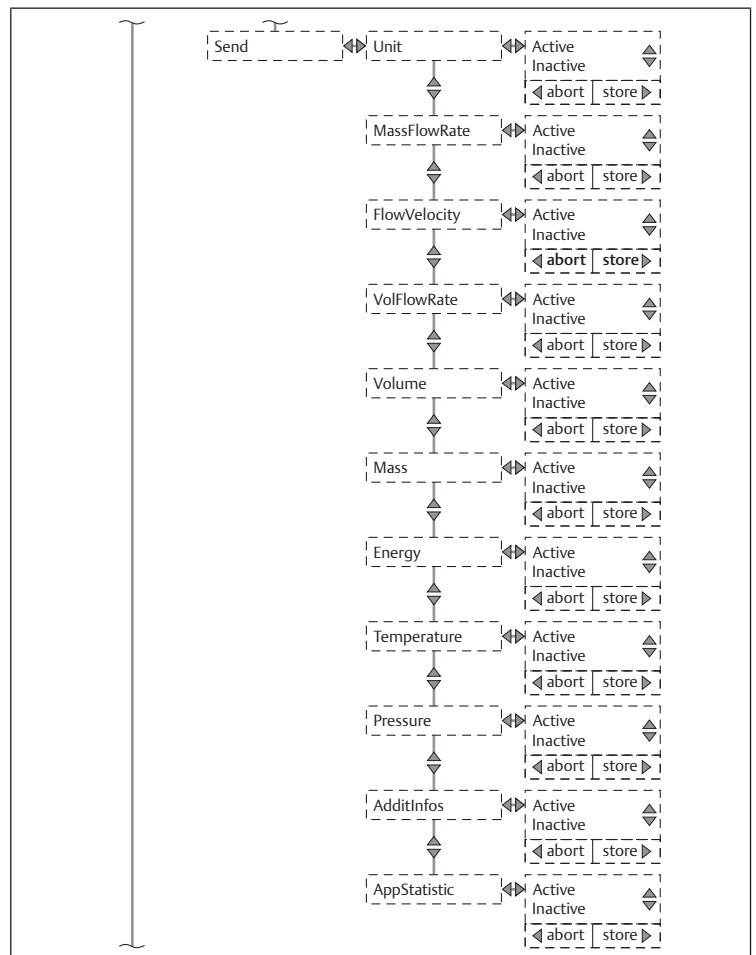


Fig. 22

Índice de contenidos

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1 Acerca de esta documentación

Estas instrucciones contienen información importante para la manipulación segura y adecuada del producto.

Esta documentación es un complemento de las instrucciones de montaje aplicables. Lea completamente las instrucciones de montaje antes de trabajar con el producto.

1.1 Validez de la documentación

Esta documentación está dirigida a:

Programadores, personal de servicio, operadores de instalaciones

Esta documentación proporciona información complementaria para la manipulación de las siguientes variantes de producto de presión de la serie AF2 y 652/653:

| Serie | Variante de producto | Interfaz |
|-------|---|-----------------------------|
| AF2 | Combinaciones de filtros de sensores (AS) | IO-Link Ethernet |
| | Sensor High Flow (HF) | IO-Link Ethernet |
| 652 | Variante de producto de filtro | IO-Link (A) Ethernet (B) |
| | Variante de producto de manguera | IO-Link (A) Ethernet (B) |
| 653 | Variante de producto de filtro | IO-Link (A) Ethernet (B) |
| | Variante de producto de manguera | IO-Link (A) Ethernet (B) |

1.2 Documentación adicional

Tenga en cuenta la siguiente documentación aplicable:

- Documentación de la instalación del fabricante
- Documentación de otros componentes de la instalación
- Instrucciones de montaje (R412026496 o 549411)

1.3 Abreviaturas utilizadas

En esta documentación se utilizan las siguientes abreviaturas:

| Abreviatura | Significado |
|-------------|--|
| ABS | Acrilonitrilo butadieno estireno |
| GF | Fibra de vidrio |
| HF | High Flow |
| MBE | Valor final del margen de medición |
| MQTT | Message Queuing Telemetry Transport |
| MTTF | Mean Time To Failure (duración media de funcionamiento hasta el fallo) |
| NPT | National Taper Pipe (tipo de rosca de tubo) |
| OLED | Organic Light Emitting Diode (diodo emisor de luz orgánico) |
| OPC UA | Open Platform Communications Unified Architecture |
| PA | Poliamida |
| PC | Policarbonato |
| EPI | Equipo de protección individual |
| Pt | Resistencia de medición de platino |

2 Seguridad

2.1 Acerca de este capítulo

- Lea el capítulo sobre seguridad de las instrucciones de montaje y toda la documentación a fondo y por completo antes de trabajar con el producto.
- Conserve la documentación para que sea accesible a todos los usuarios en todo momento.

3 Datos y parámetros

3.1 Notas sobre seguridad

- No realizar cambios en los parámetros durante el funcionamiento en curso (prevención de accidentes).

3.2 Datos de parámetros

3.2.1 Ajustes generales

El ajuste de los parámetros en esta sección se aplica a todas las variantes del producto.

Generalidades

| Objetivo | Menú | Opción |
|------------------|---------------------|---|
| Realizar ajustes | Indicación estándar | Pulsar cualquier tecla de flecha durante al menos 2 segundos y realizar los ajustes en el menú correspondiente. |

Pantalla

| Objetivo | Submenú | Opción |
|--|-------------|---|
| Ajustar las unidades | Units | Seleccionar entre los siguientes menús: <ul style="list-style-type: none">• <i>MassFlowRate</i>• <i>FlowVelocity</i>• <i>Volume</i>• <i>VolFlowRate</i>• <i>Mass</i>• <i>Energy</i>• <i>Temperature</i>• <i>Pressure</i> |
| Ajustar la indicación Screen 1.1 | Pages | <ul style="list-style-type: none">• Seleccionar <i>Disp1Top</i>• Seleccionar <i>Disp1Btm</i> |
| Ajustar la indicación Screen 1.2 | Pages | <ul style="list-style-type: none">• Seleccionar <i>Disp2Top</i>• Seleccionar <i>Disp2Btm</i> |
| Ajustar la indicación Screen 1.3 | Pages | <ul style="list-style-type: none">• Seleccionar <i>Disp3Top</i>• Seleccionar <i>Disp3Btm</i> |
| Ajustar la indicación Screen 2.1, 2.2 y 2.3 | Pages | Seleccionar el parámetro de indicación <i>DispHistory</i> en el menú |
| Optimizar la legibilidad | Rotation | Ajustar la indicación 0°, 90°, 180° o 270° |
| Activar el protector de pantalla | ScreenSaver | Ajustar el tiempo para la activación del protector de pantalla |
| Desconectar la pantalla | AutoOff | Ajustar el tiempo para la desconexión de la pantalla |
| Ajustar el brillo | Brightness | Ajustar el brillo en porcentaje |
| Asignar un pin para la protección de uso o la protección contra manipulaciones | Display Pin | Asignar el pin de 4 dígitos |

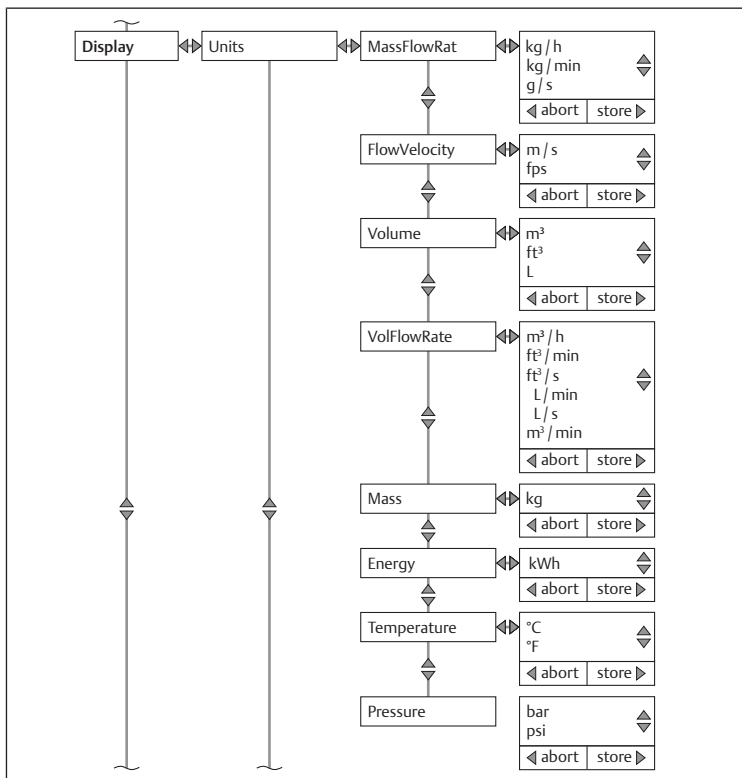


Fig. 1

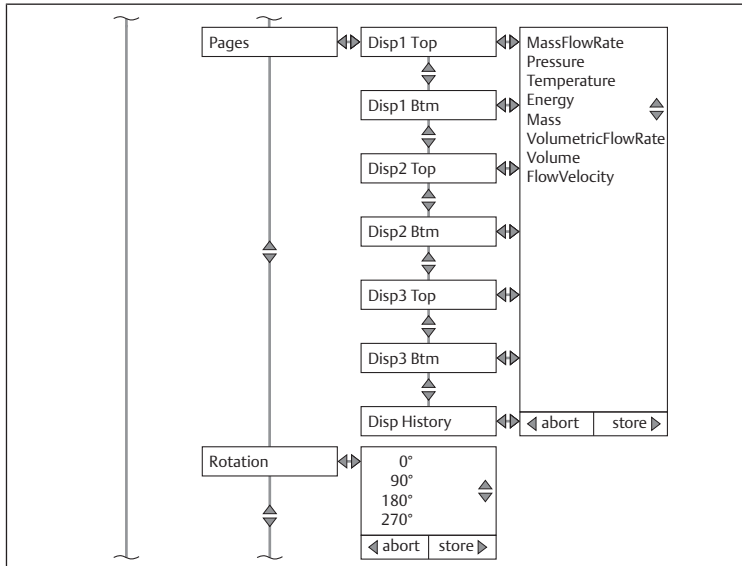


Fig. 2

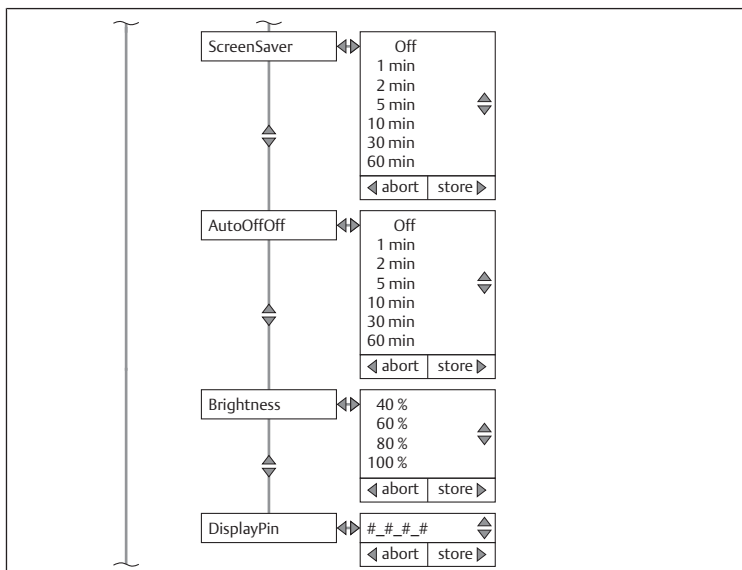


Fig. 3

Simular

| Objetivo | Submenú | Opción |
|------------------------|-------------|------------------------|
| Simular el caudal | Flow | Simular el caudal |
| Simular la temperatura | Temperature | Simular la temperatura |
| Simular la presión | Pressure | Simular la presión |

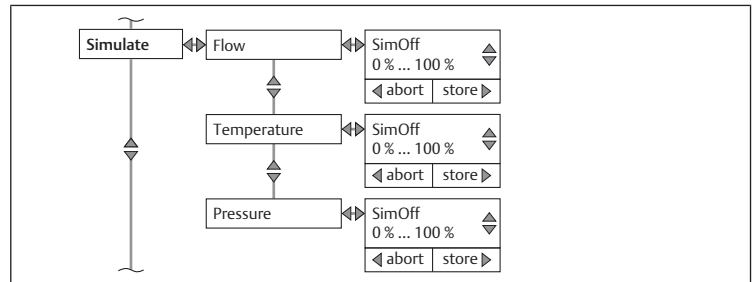


Fig. 4

Measure

| Objetivo | Submenú | Opción |
|------------------------------|---------|---|
| Ajustar el medio de medición | Flow | Seleccionar la opción <i>Medium</i> y ajustar el medio de medición: <ul style="list-style-type: none"> Air Argon CO2 Nitrogen |

| | | |
|---|------|---|
| Ajustar la norma/estándar de referencia | Flow | Seleccionar la opción <i>RefCond</i> y ajustar la norma/estándar de referencia: <ul style="list-style-type: none"> ISO 2533 ISO 1217 DIN 1945-1 DIN 1343 ISO 6358 ISO 8778 UserDefined (específico de usuario) |
|---|------|---|

| | | |
|---|------|--|
| Establecer la presión de referencia con el ajuste específico de la aplicación (UserDefined) | Flow | Seleccionar la opción <i>RefCond</i> y UserDefined (presión de referencia específica de usuario) |
|---|------|--|

| | | |
|---|------|---|
| Ajustar el desplazamiento de punto cero | Flow | Seleccionar la opción <i>0-Flow-Off</i> y ajustar el desplazamiento de punto cero |
|---|------|---|

| | | |
|---|------|---|
| Ajustar la supresión de la cantidad de arrastre | Flow | Seleccionar la opción <i>0-Flow-Cut</i> y ajustar la supresión de la cantidad de arrastre |
|---|------|---|

| | | |
|--|---------------------------|---|
| Filtro de media para el alisamiento del valor medido en la pantalla y en la salida | Flow/Pressure/Temperature | Seleccionar la opción <i>Filter</i> y ajustar el filtro de valor medido |
|--|---------------------------|---|

| | | |
|---|----------------------|---|
| Ajustar offset/desplazamiento de punto cero | Pressure/Temperature | Seleccionar la opción <i>Offset</i> y ajustar offset/desplazamiento de punto cero |
|---|----------------------|---|

| | | |
|------------------------------------|------------|---|
| Seleccionar la calidad de la señal | SigQuality | Elegir entre <i>SigQua1</i> , <i>SigQua2</i> , <i>SigQua3</i> y <i>SigQua4</i> . La calidad se ajusta al 100% en cada caso. La calidad de la señal 1 es una medida de solidez |
|------------------------------------|------------|---|

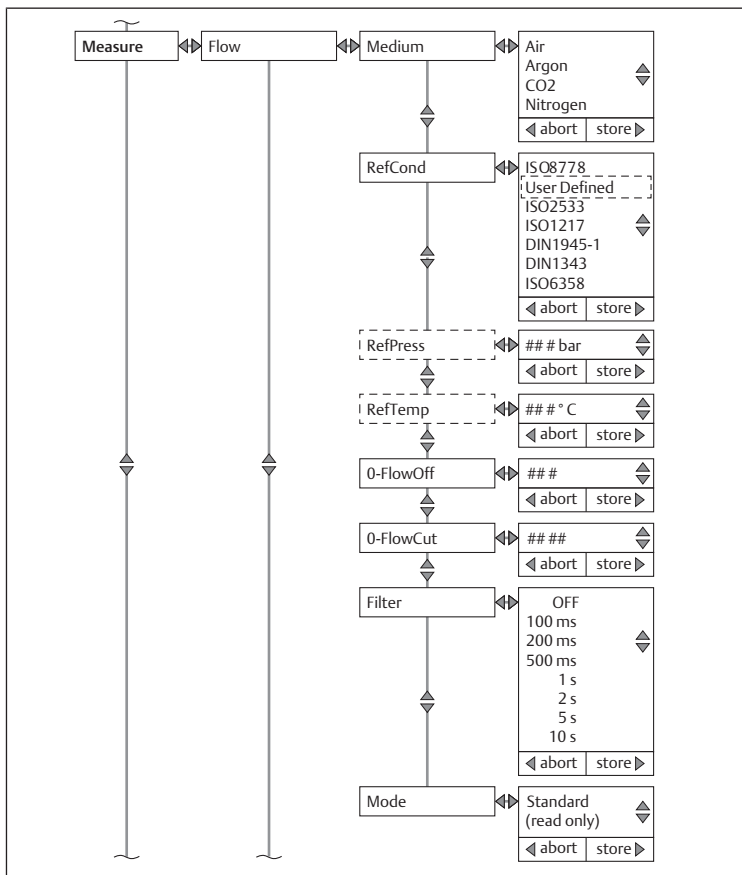


Fig. 5

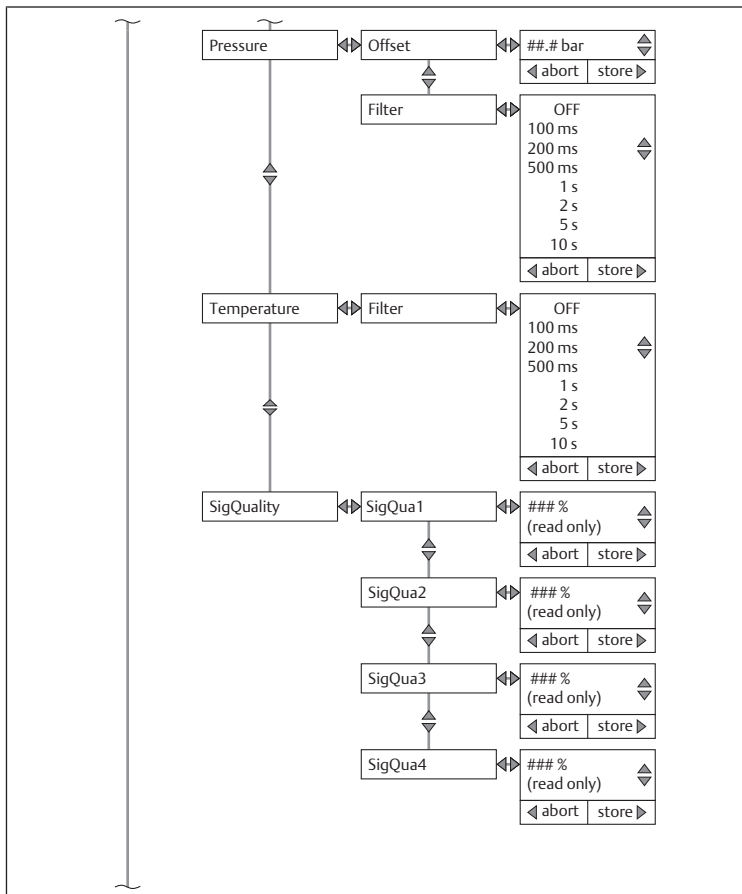


Fig. 6

History

| Objetivo | Submenú | Opción |
|--|----------|--|
| Seleccionar la indicación/gráfico de los valores medidos de las últimas 60 minutos | 60 min | Seleccionar la indicación/gráfico de los valores medidos de las últimas 60 minutos |
| Seleccionar la indicación/gráfico de los valores medidos de las últimas 24 horas | 24 hours | Seleccionar la indicación/gráfico de los valores medidos de las últimas 24 horas |
| Seleccionar la indicación/gráfico de los valores medidos de los últimos 7 días | 7 days | Seleccionar la indicación/gráfico de los valores medidos de los últimos 7 días |

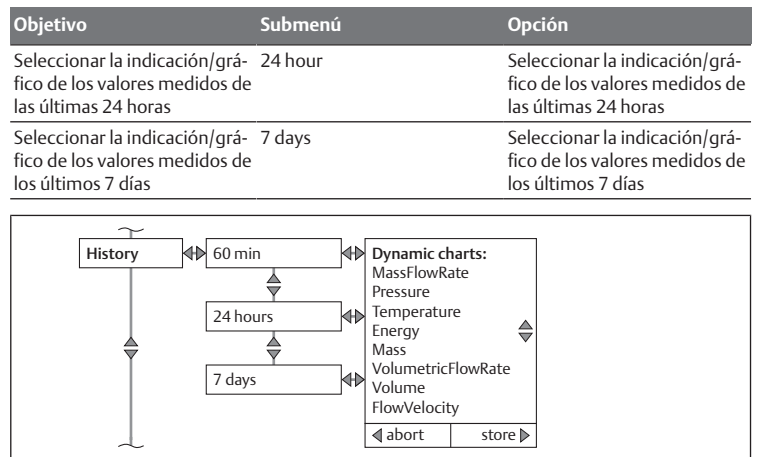


Fig. 7

Statistics

| Objetivo | Submenú | Opción |
|--|-----------|--|
| Valores mínimos, valores medios y valores máximos de los parámetros individuales después del último reinicio | View | Visualizar <i>Max, mean, min values</i> de los parámetros individuales después del último reinicio |
| Visualizar la hora del último reinicio (solo lectura) | LastReset | Visualizar la hora del último reinicio |
| Restaurar los valores de estadística a 0 | Reset | Restaurar los valores de estadística a 0 |

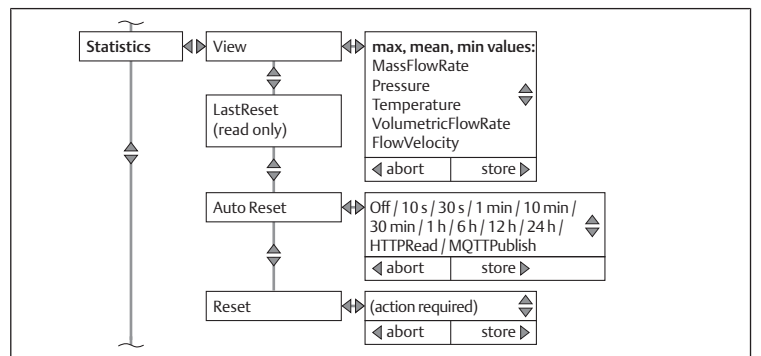


Fig. 8

Counter

| Objetivo | Submenú | Opción |
|------------------------|---------|---|
| Visualizar el contador | | Elegir entre los submenús <i>Mass, Volume, Energy</i> y <i>LastReset</i> y visualizar el contador |
| Reiniciar el contador | Reset | Reiniciar el contador |

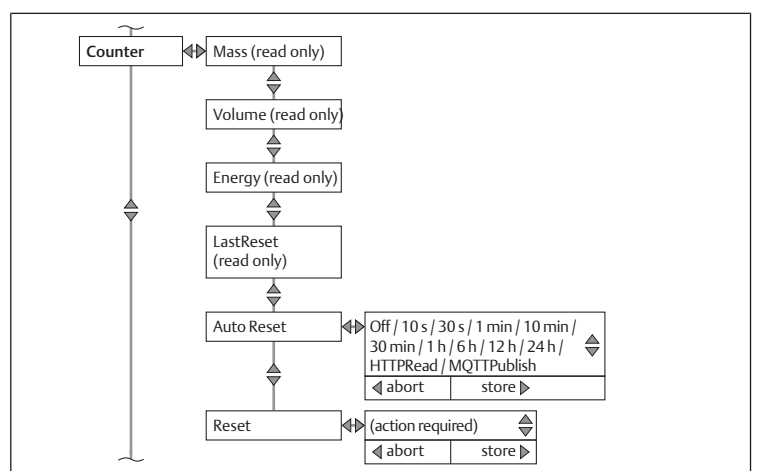


Fig. 9

System

| Objetivo | Submenú | Opción |
|--|--------------|--|
| Service-Login | Service | Realizar el inicio de sesión del servicio (Service-Login) para el usuario autorizado |
| Restaurar a los ajustes de fábrica | FactReset | Restaurar el sistema a los ajustes de fábrica |
| Serial Number (read only) | SerialNumber | Visualizar el número de serie |
| Ajustar la etiqueta del aparato (Device-Tag) | DevTag | Ajustar la etiqueta del aparato (Device-Tag) |
| Ajustar la etiqueta de Applica-tion | AppTag | Ajustar la etiqueta de Application |
| FWVersion (read only) | FWVersion | Visualizar la versión del firmware |
| Calibration (read only) | Calibration | Visualizar los valores predeterminados del firmware |
| BLVersion (read only) | BLVersion | Visualizar Bootloadversion |
| HWVersion (read only) | HWVersion | Visualizar Hardwareversion |

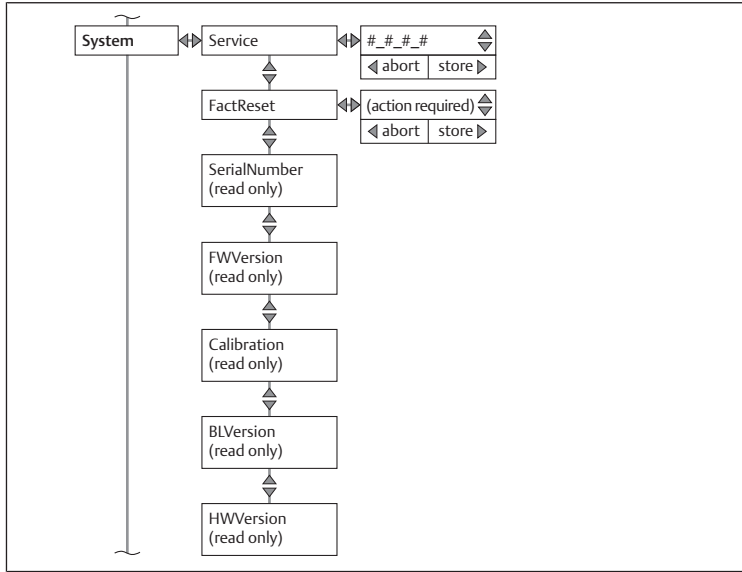


Fig. 10

Tags

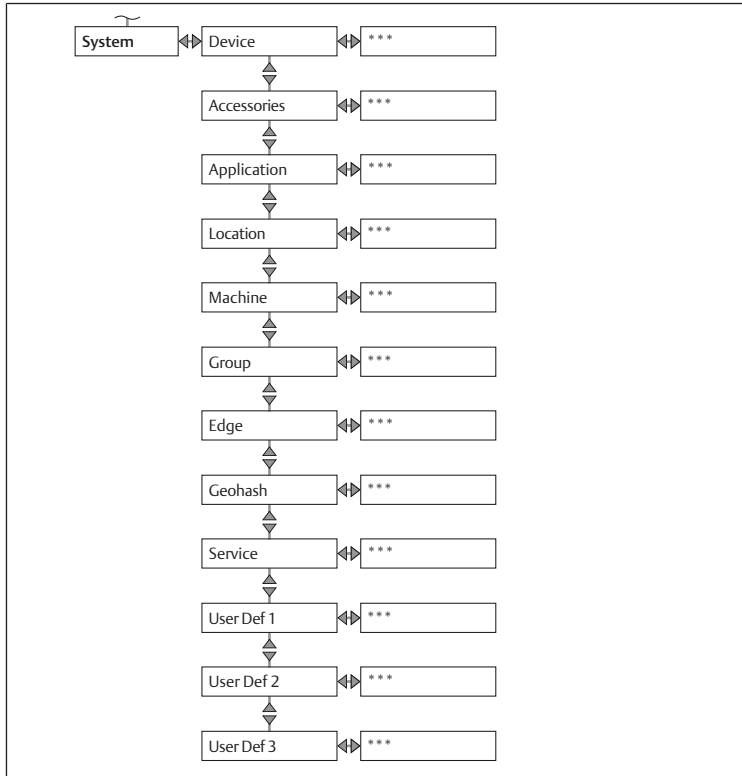


Fig. 11

3.2.2 Ajustes de la variante IO-Link

Los ajustes se aplican a todas las variantes del producto con la conexión eléctrica IO-Link.

IO-Link

La pantalla muestra el menú de valores medidos con la configuración por defecto (kg/h, m/s).

| Objetivo | Menú | Opción |
|----------------------------------|---------------------|--|
| Seleccionar el menú | Indicación estándar | Pulsar cualquier tecla de flecha durante al menos 2 segundos y elegir entre Q1 Menu , Q2 Menu y Qa Menu . |
| Ajustar la salida de conmutación | Q1 Menu | Ajustar la salida de conmutación |
| Ajustar la salida de conmutación | Q2 Menu | Ajustar la salida de conmutación |
| Ajustar la salida analógica | Qa Menu | Ajustar la salida analógica |

Q1 Menu

El menú Q1 contiene los ajustes de la salida de conmutación 1.

| Objetivo | Submenú | Opción |
|---|------------|---|
| Ajustar la histéresis o la función de ventana | Mode | Realizar el ajuste del modo para la histéresis o la función de ventana con los parámetros de medición asociados |
| Ajustar el punto de conmutación | SetPoint1 | Ajustar el punto de conmutación |
| Ajustar el punto de retroceso/ la histéresis o el límite inferior de la ventana | SetPoint2 | Ajustar el punto de retroceso/ la histéresis o el límite inferior de la ventana |
| Ajustar el comportamiento de conmutación del contacto de reposo | Polarity | Elegir entre NormallyClosed y NormallyOpen |
| Simular la salida de conmutación | Simulate | Seleccionar Active , Inactive o Normal (medición) |
| Ajustar PNP/NPN o Push/Pull (DRV) | DriverType | Ajustar PNP/NPN o Push/Pull (DRV) |

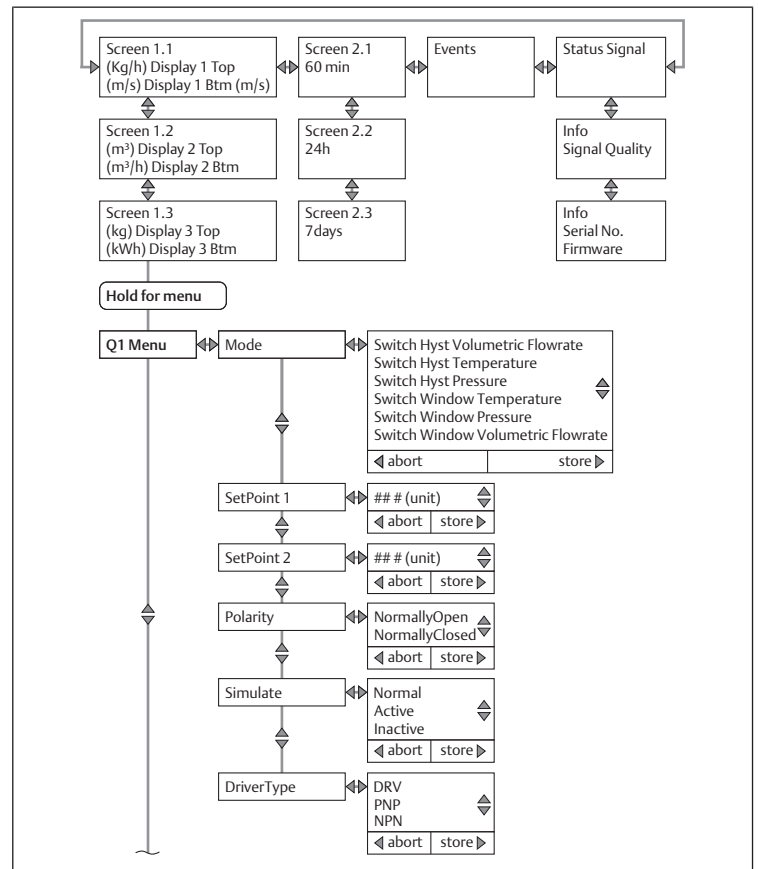


Fig. 12

Q2 Menu

El menú Q2 contiene los ajustes de la salida de conmutación 2.

| Objetivo | Submenú | Opción |
|--|------------|---|
| Ajustar la salida de conmutación como salida de conmutación, frecuencia, impulso o analógico | Function | Ajustar la salida de conmutación como <i>Switch</i> , <i>Frequency</i> , <i>Pulse</i> o <i>Analog</i> |
| Ajustar el modo para la histéresis o la función de ventana | Mode | Ajustar el modo para la histéresis o la función de ventana |
| Ajustar el punto de conmutación | SetPoint1 | Ajustar el punto de conmutación |
| Ajustar el punto de retroceso/ la histéresis o el límite inferior de la ventana | SetPoint2 | Ajustar el punto de retroceso/ la histéresis o el límite inferior de la ventana |
| Ajustar el comportamiento de conmutación del contacto de reposo | Polarity | Elegir entre <i>NormallyClosed</i> y <i>NormallyOpen</i> |
| Simular la salida de conmutación | Simulate | Elegir entre <i>Active</i> , <i>Inactive</i> y <i>Normal</i> (medición) |
| Ajustar PNP/NPN o Push/Pull | DriverType | Ajustar <i>PNP/NPN</i> o <i>Push/Pull</i> |

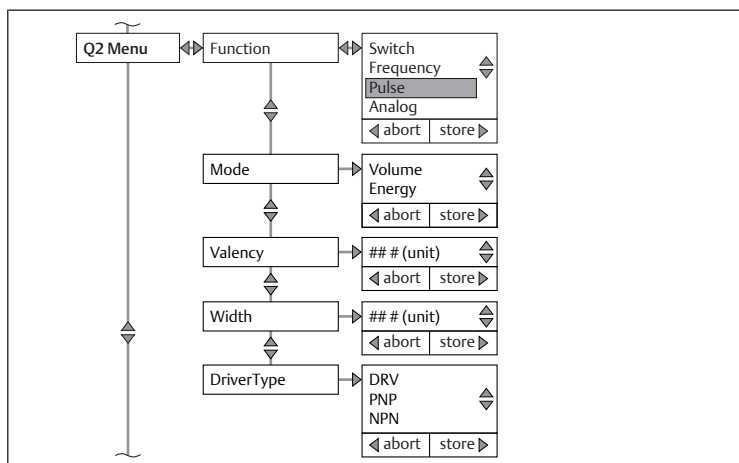


Fig. 15

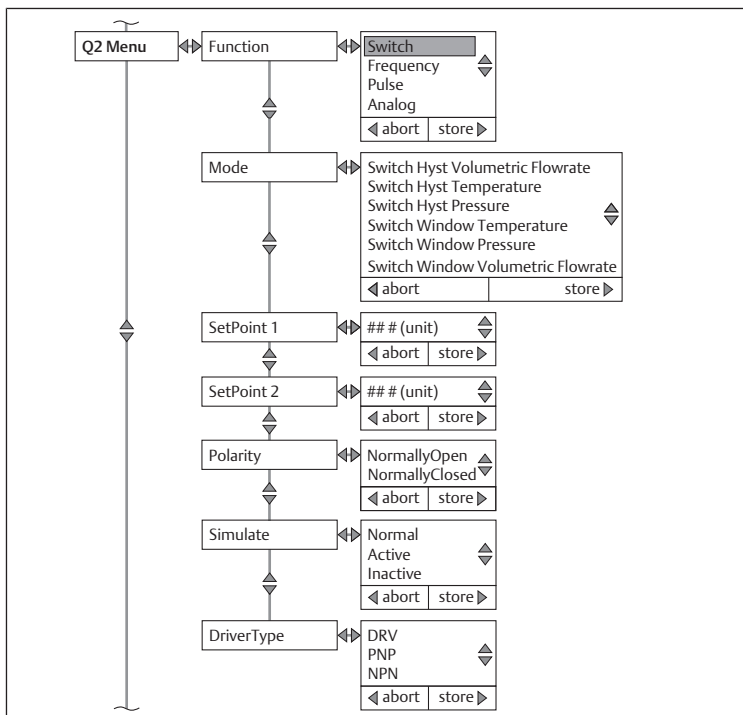


Fig. 13

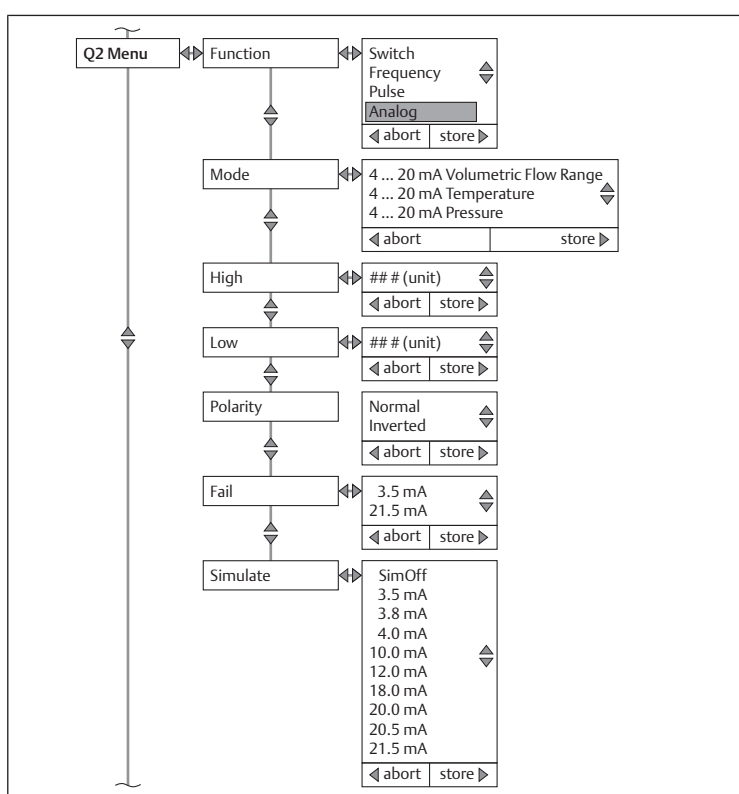


Fig. 16

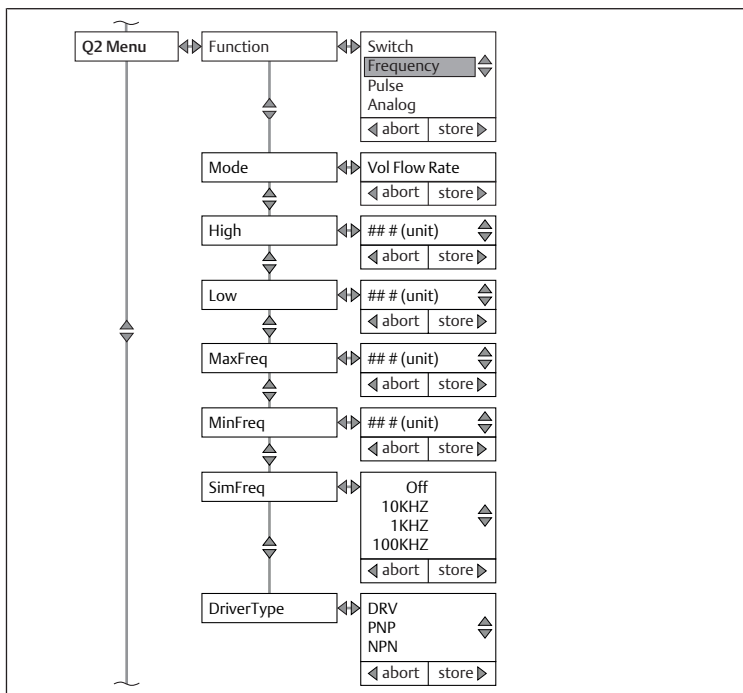


Fig. 14

Qa Menu

El menú Qa contiene los ajustes de la salida analógica.

| Objetivo | Submenú | Opción |
|---|----------|--|
| Asignar parámetros de medición a la salida de corriente | Mode | Asignar parámetros de medición como caudal, temperatura o presión a la salida de corriente |
| Asignar el valor final del margen de medición | High | Fijar el valor final del margen de medición a 20 mA |
| Asignar el inicio del margen de medición | Low | Fijar el inicio del margen de medición a 4 mA |
| Ajustar la inversión de la salida de corriente | Polarity | Ajustar la inversión de la salida de corriente |
| Ajustar el comportamiento de la salida de corriente en caso de fallo en el producto | Fail | Ajustar el comportamiento de la salida de corriente en caso de fallo en el producto |
| Ajustar el valor de corriente predefinido | Simulate | Ajustar el valor de corriente predefinido |

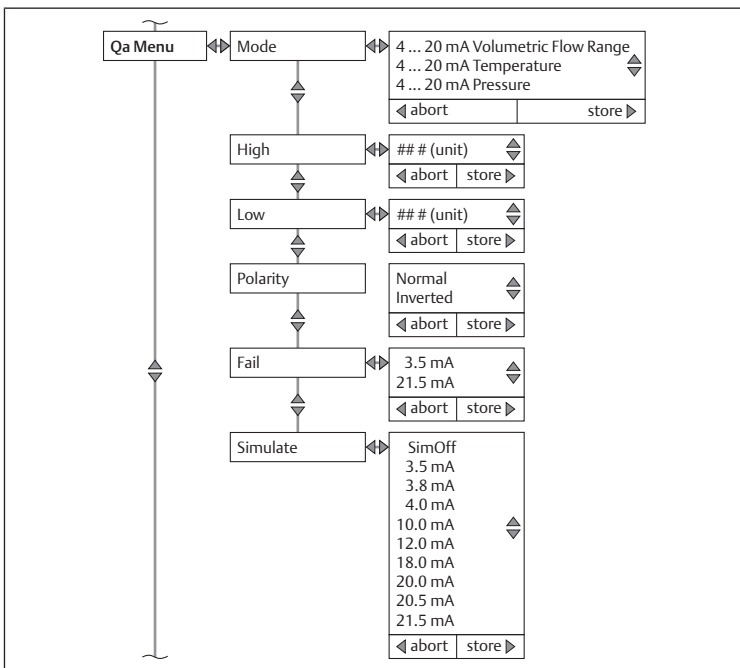


Fig. 17

3.2.3 Ajustes de la variante Ethernet

Los ajustes se aplican a todas las variantes del producto con la conexión eléctrica Ethernet.

Ethernet

| Objetivo | Submenú | Opción |
|---|------------|---------------------------------|
| Asignar una dirección estática o dinámica | DHCP Mode | Asignar una dirección |
| Ajustar la dirección IP | IP Address | Ajustar la dirección IP |
| SubNetMask | SubNetMask | Ajustar SubNetMask |
| Gateway | Gateway | Ajustar la dirección de Gateway |
| Nombre | Nombre | Ajustar el nombre DHCP |

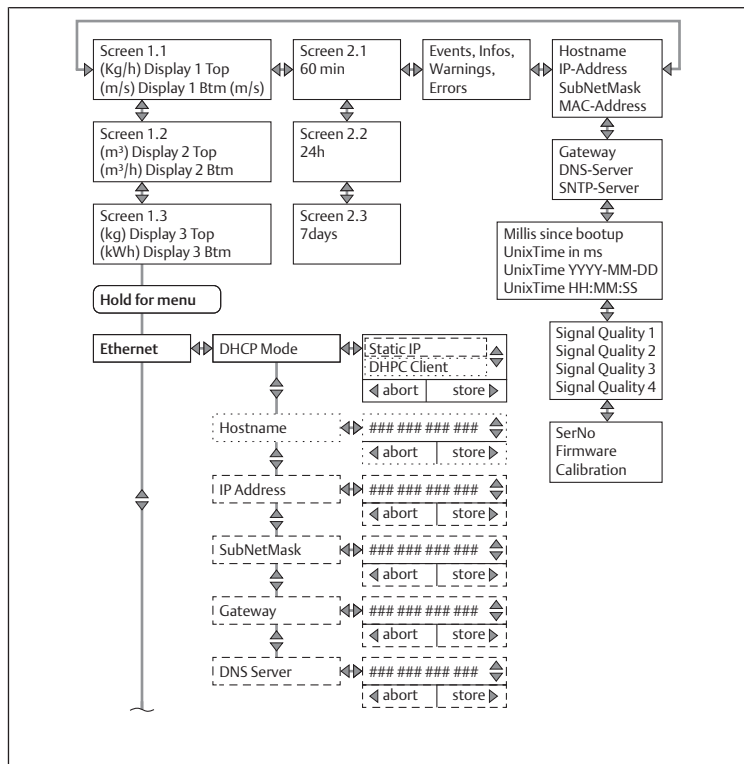
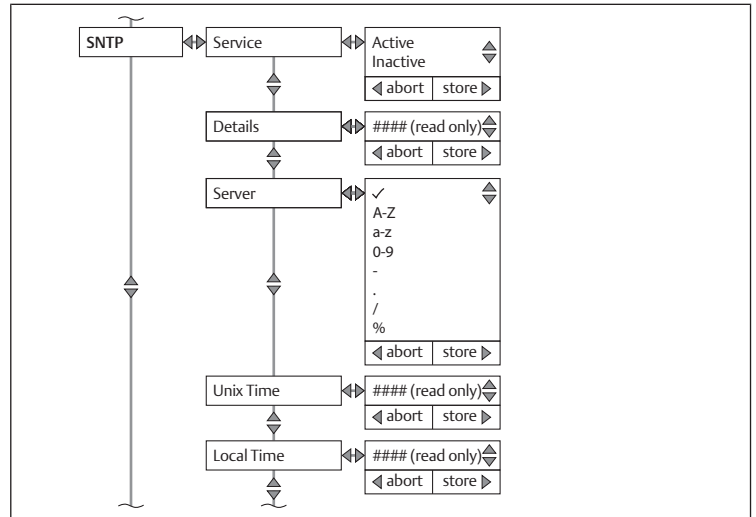


Fig. 18

SNTP



Webserver

| Objetivo | Submenú | Opción |
|--|---------|---|
| Conectar y desconectar la interfaz web | State | Elegir entre <i>Active</i> e <i>Inactive</i> |
| Ajustar el puerto | Port | Seleccionar el puerto del servidor web (Webserver). El puerto por defecto para el servicio HTTP es el puerto 80 |
| Restablecer la contraseña del usuario | ResetPW | Restablecer la contraseña del servidor web para el usuario "Maintenance" al estado de entrega. La contraseña por defecto (ajuste de fábrica) es "airflowsensor" |

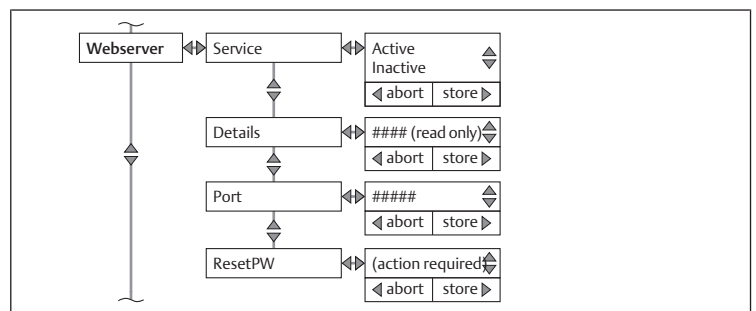


Fig. 19

OPCUA

| Objetivo | Submenú | Opción |
|--|----------|--|
| Conectar y desconectar la interfaz web | State | Elegir entre <i>Active</i> e <i>Inactive</i> |
| Ajustar el puerto | Port | Ajustar el puerto |
| Ajustar el nombre de usuario | User | Ajustar el nombre de usuario |
| Asignar una contraseña | Password | Ajustar la contraseña |

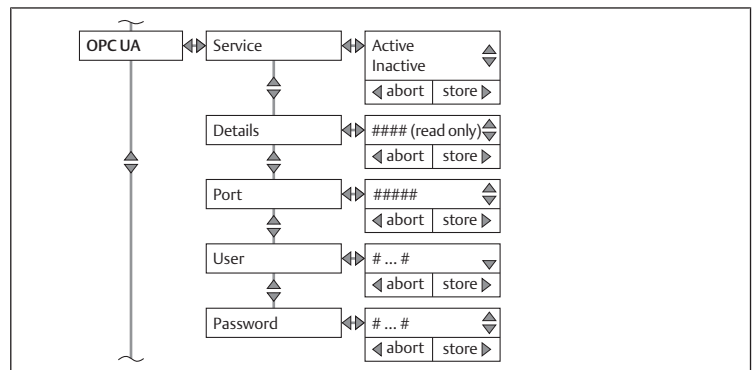


Fig. 20

MQTT

| Objetivo | Submenú | Opción |
|---|----------|--|
| Conectar y desconectar la interfaz web | State | Elegir entre <i>Active</i> e <i>Inactive</i> |
| Broker | Broker | Ajustar el broker |
| Ajustar el puerto | Port | Ajustar el puerto |
| Topic | Topic | Visualizar los Topics |
| User | User | Introducir el nombre de usuario para Broker |
| Crear la contraseña del Broker | Password | Introducir la contraseña del Broker |
| Enviar el intervalo de corte al Broker | Update | Fijar el intervalo de corte |
| QoS | QoS | Seleccionar <i>QoS-0</i> , <i>QoS-1</i> o <i>QoS-2</i> |
| Definir el mensaje MQTT en el Send Broker | | Seleccionar la la opción de menú y ajustar <i>Active</i> o <i>Inactive</i> |

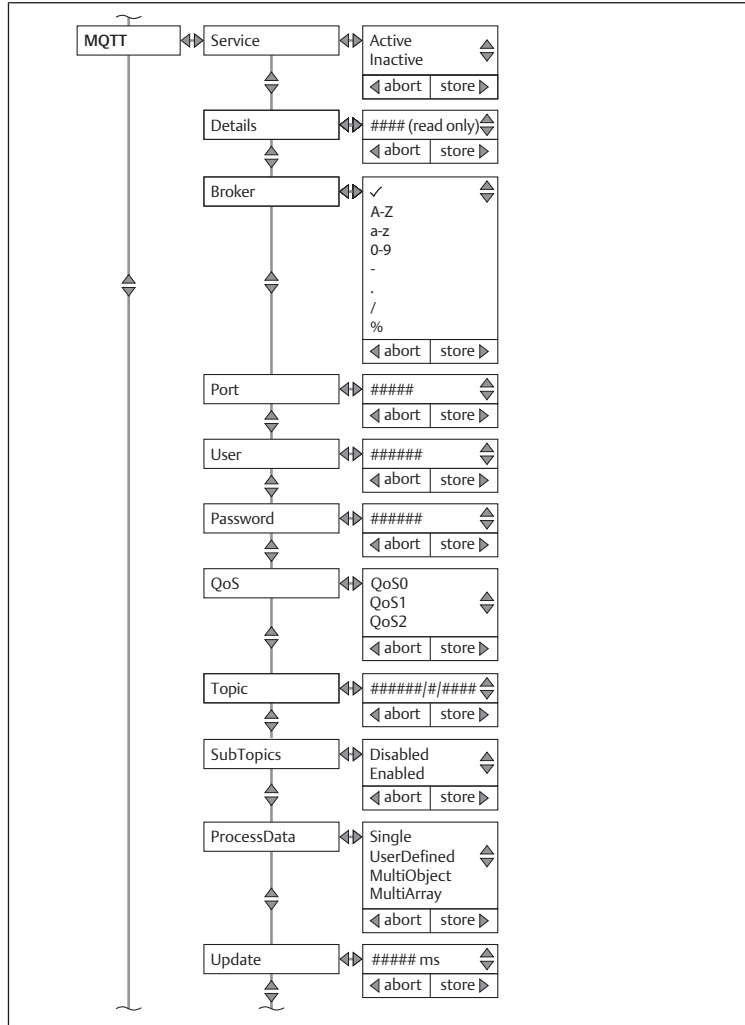


Fig. 21

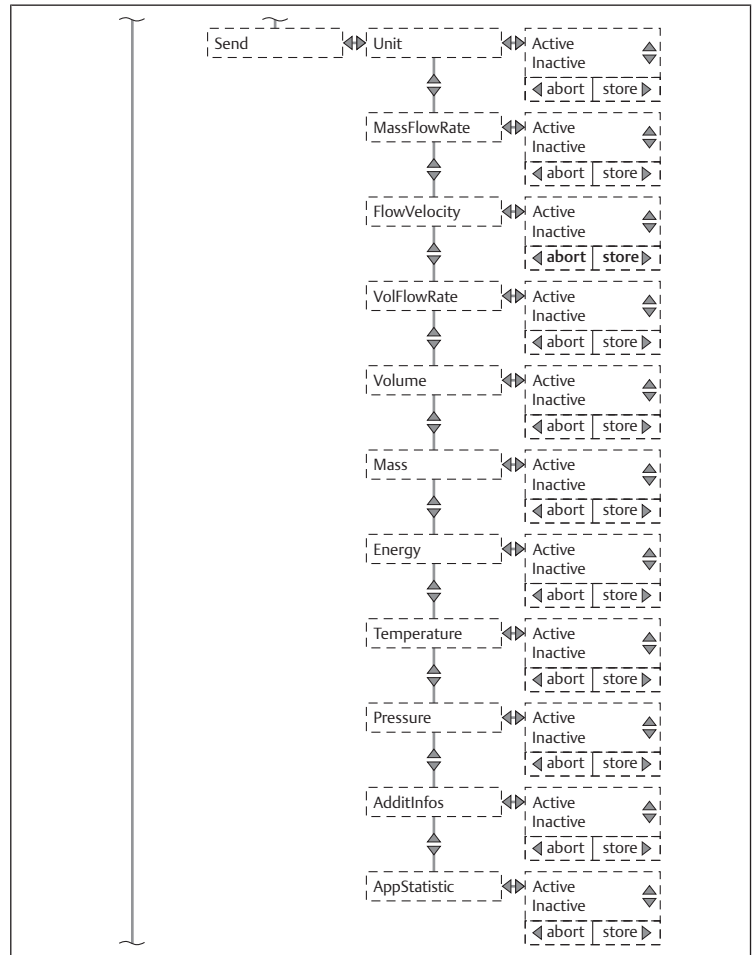


Fig. 22

Innehållsförteckning

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1 Om denna dokumentation

Dessa anvisningar innehåller viktig information för säkert och korrekt hantering av produkten.

Den här dokumentationen är ett tillägg till de gällande monteringsanvisningarna. Läs monteringsanvisningarna fullständigt innan du arbetar med produkten.

1.1 Dokumentationens giltighet

Denna dokumentation riktar sig till:

Programmerare, servicepersonal, anläggningsansvariga

Den här dokumentationen innehåller kompletterande information om följande produktvarianter i serien AF2 och 652/653:

| Serie | Produktvariant | Gränssnitt |
|-------|------------------------------|-----------------------------|
| AF2 | Sensorfilterkombination (AS) | IO-Link Ethernet |
| | Sensor High Flow (HF) | IO-Link Ethernet |
| 652 | Filterproduktvariant | IO-Link (A) Ethernet (B) |
| | Rörproduktvariant | IO-Link (A) Ethernet (B) |
| 653 | Filterproduktvariant | IO-Link (A) Ethernet (B) |
| | Rörproduktvariant | IO-Link (A) Ethernet (B) |

1.2 Ytterligare dokumentation

Beakta följande kompletterande dokumentation:

- Tillverkarens anläggningsdokumentation
- Dokumentation av övriga anläggningskomponenter
- Monteringsanvisning (R412026496 eller 549411)

1.3 Förkortningar som används

I denna dokumentation används följande förkortningar:

| Förkortning | Innebörd |
|-------------|---|
| ABS | Akrylnitril-butadien-styrol |
| GF | Glasfiber |
| HF | High Flow |
| MBE | Slutvärde för mätområde |
| MQTT | Message Queuing Telemetry Transport |
| MTTF | Mean Time To Failure (medelarbetsstid till fel) |
| NPT | National Taper Pipe (typ av rörgänga) |
| OLED | Organic Light Emitting Diode (organisk lysdiod) |
| OPC UA | Open Platform Communications Unified Architecture |
| PA | Polyamid |
| PC | Polykarbonat |
| PSA | Personlig skyddsutrustning |
| Pt | Platina-mätmotstånd |

2 Säkerhet

2.1 Om detta kapitel

- Läs kapitlet Säkerhet i monteringsanvisningen och hela dokumentationen noggrant innan du arbetar med produkten.
- Förvara dokumentation på en plats där den är tillgänglig för alla användare.

3 Data och parametrar

3.1 Säkerhetsinformation

- Utför inga parameterändringar under pågående drift (skadeförebyggande).

3.2 Parameterdata

3.2.1 Allmänna inställningar

Parameterinställningarna i detta avsnitt gäller för alla varianter av produkten.

Allmänt

| Mål | Meny | Alternativ |
|--------------------|--------------------|---|
| Göra inställningar | Standardindikering | Håll valfri pilknapp intryckt i minst 2 sekunder och gör inställningarna i respektive meny. |

Display

| Mål | Undermeny | Alternativ |
|--|-------------|---|
| Ställa in enheter | Units | Välja mellan dessa menyer: <ul style="list-style-type: none"> MassFlowRate FlowVelocity Volume VolFlowRate Mass Energy Temperature Pressure |
| Ställa in indikering skärm 1.1 | Pages | <ul style="list-style-type: none"> Välja Disp1Top Välja Disp1Btm |
| Ställa in indikering skärm 1.2 | Pages | <ul style="list-style-type: none"> Välja Disp2Top Välja Disp2Btm |
| Ställa in indikering skärm 1.3 | Pages | <ul style="list-style-type: none"> Välja Disp3Top Välja Disp3Btm |
| Ställa in indikering skärm 2.1, 2.2 och 2.3 | Pages | Välja indikeringsparametrar i menyn DispHistory |
| Optimera läsbarhet | Rotation | Ställa in indikering 0°, 90°, 180° eller 270° |
| Aktivera skärmsläckare | ScreenSaver | Ställa in tid för aktivering av skärmsläckaren |
| Stänga av display | AutoOff | Ställa in tid för avstängning av displayen |
| Ställa in ljusstyrka | Brightness | Ställa in ljusstyrka i procent |
| Tilldela pinkod för manöver-resp. manipulationsskydd | Display Pin | Tilldela en 4-siffrig pinkod |

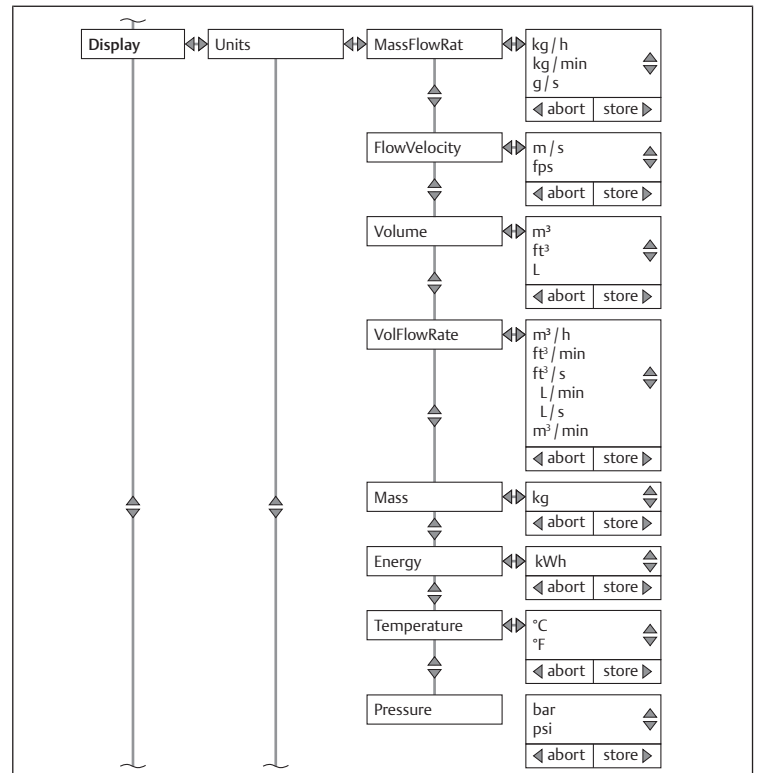


Bild 1

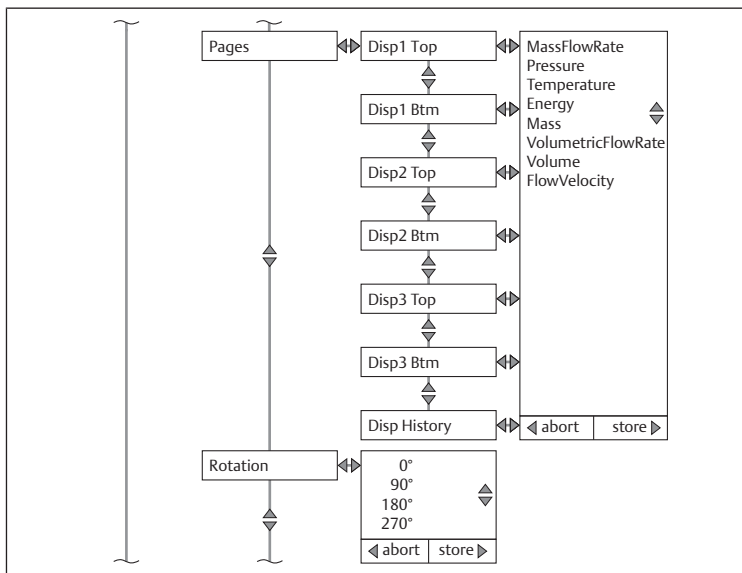


Bild 2

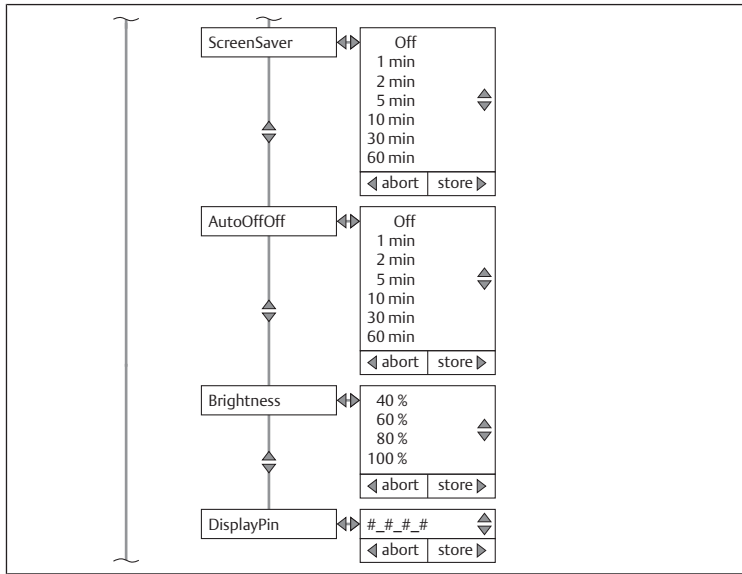


Bild 3

Simulate

| Mål | Undermeny | Alternativ |
|---------------------|-------------|---------------------|
| Simulera flöde | Flow | Simulera flöde |
| Simulera temperatur | Temperature | Simulera temperatur |
| Simulera tryck | Pressure | Simulera tryck |

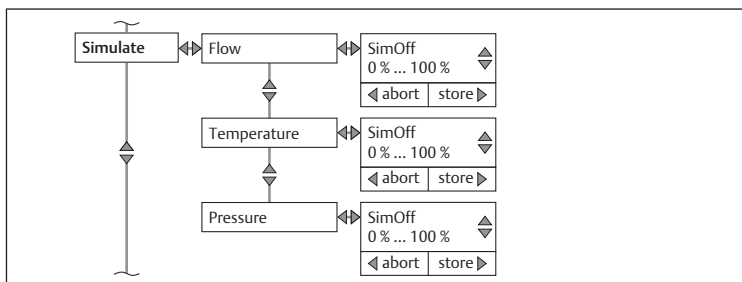


Bild 4

Measure

| Mål | Undermeny | Alternativ |
|---------------------|-----------|---|
| Ställa in mätmedium | Flow | Välja alternativet Medium och ställa in mätmediet: <ul style="list-style-type: none"> Air Argon CO2 Nitrogen |

| Mål | Undermeny | Alternativ |
|--|---------------------------|---|
| Ställa in referensnorm/ referensstandard | Flow | Välja alternativet RefCond och ställa in referensnorm/ referensstandard: <ul style="list-style-type: none"> ISO 2533 ISO 1217 DIN 1945-1 DIN 1343 ISO 6358 ISO 8778 UserDefined (användarspecifikt) |
| Ställa in referenstryck med användarspecifik inställning (UserDefined) | Flow | Välja alternativet RefCond och välja UserDefined (användarspecifikt referenstryck) |
| Ställa in nollpunktsförskjutning | Flow | Välja alternativet 0-FlowOff och ställa in nollpunktsförskjutningen |
| Ställa in undertryckning av smyg mängd | Flow | Välja alternativet 0-FlowCut och ställa in undertryckning av smyg mängd |
| Medelvärdesfilter för utjämning av mätvärde i indikering och utgång | Flow/Pressure/Temperature | Välja alternativet Filter och ställa in mätvärdesfiltret |
| Ställa in offset/ nollpunktsförskjutning | Pressure/Temperature | Välja Offset och ställa in offset/nollpunktsförskjutning |
| Välja signalkvalitet | SigQuality | Välj mellan SigQua1 , SigQua2 , SigQua3 och SigQua4 . Kvaliteten är alltid inställd på 100 %. Signalkvalitet 1 är ett mått på robusthet |

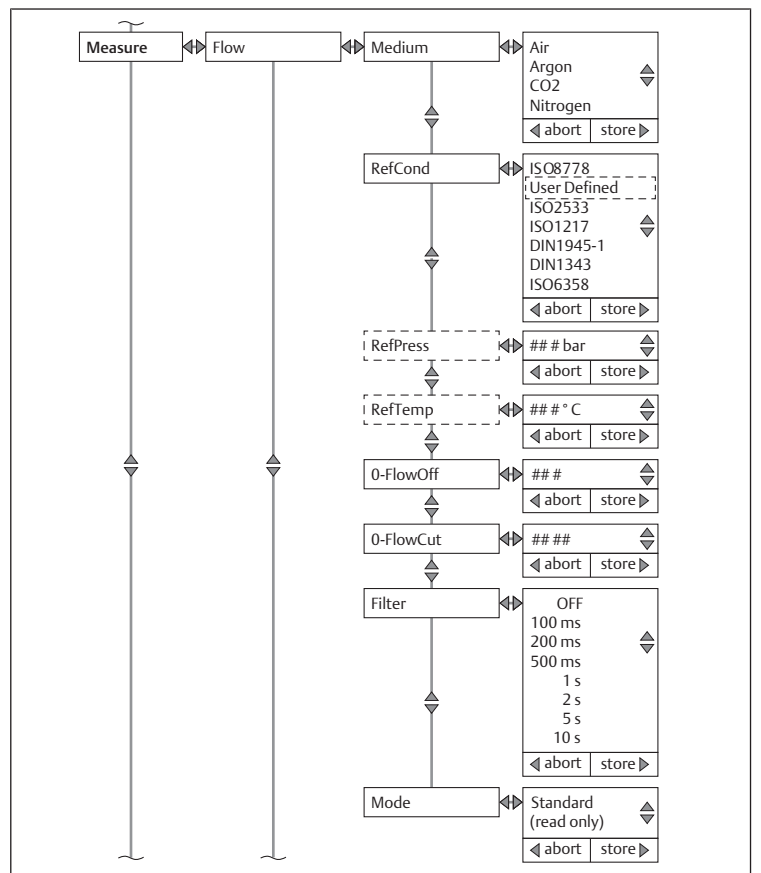


Bild 5

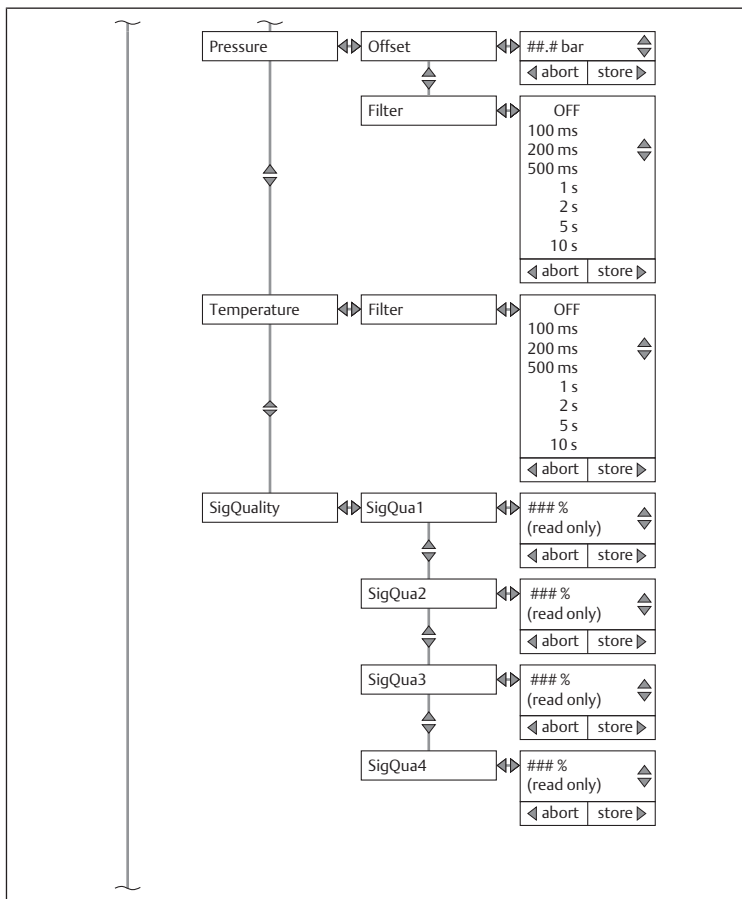


Bild 6

History

| Mål | Undermeny | Alternativ |
|---|-----------|--|
| Välja indikering/kurva för mätvärdena de senaste 60 minuterna | 60 min | Välja indikeringen/kurvan för mätvärdena de senaste 60 minuterna |
| Välja indikering/kurva för mätvärdena de senaste 24 timmarna | 24 hour | Välja indikeringen/kurvan för mätvärdena de senaste 24 timmarna |
| Välja indikering/kurva för mätvärdena de senaste 7 dagarna | 7 days | Välja indikeringen/kurvan för mätvärdena de senaste 7 dagarna |

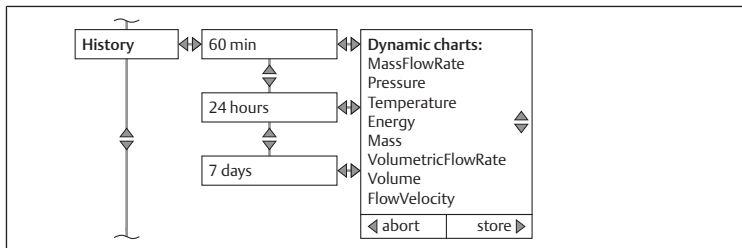


Bild 7

Statistics

| Mål | Undermeny | Alternativ |
|---|-----------|---|
| Minimivärden, medelvärden och maxvärden för enskilda parametrar efter senaste återställningen | View | Visa <i>Max, mean, min values</i> för enskilda parametrar efter senaste återställningen |
| Visa tidpunkt för senast återställningen (read only) | LastReset | Visa tidpunkten för senast återställningen |
| Återställa statistikvärden till 0 | Reset | Återställa statistikvärden till 0 |

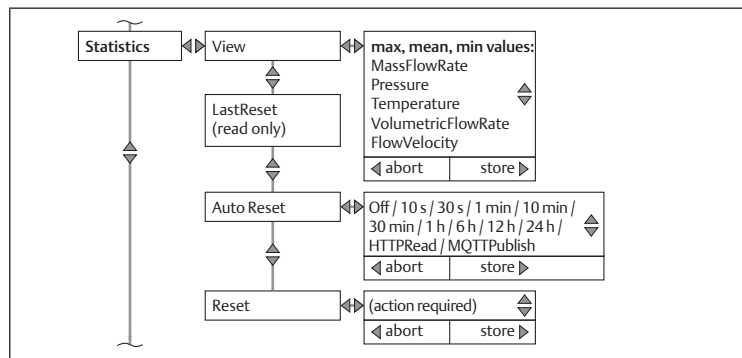


Bild 8

Counter

| Mål | Undermeny | Alternativ |
|--------------------|-----------|--|
| Visa räknare | | Välja mellan undermenyerna <i>Mass, Volume, Energy</i> och <i>LastReset</i> och visa räknare |
| Återställa räknare | Reset | Återställa räknare |

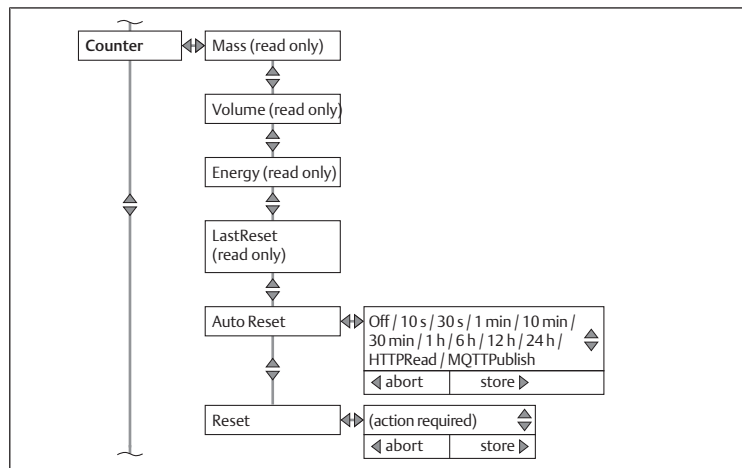


Bild 9

System

| Mål | Undermeny | Alternativ |
|------------------------------------|--------------|--|
| Service-inloggning | Service | Service-inloggning för auktoriserade användare |
| Återställa till fabriksinställning | FactReset | Återställa systemet till fabriksinställning |
| Serial Number (read only) | SerialNumber | Visa materialnummer |
| Ställa in enhetstag | DevTag | Ställa in enhetstag |
| Ställa in Application-tag | AppTag | Ställa in Application-tag |
| FWVersion (read only) | FWVersion | Visa firmwareversion |
| Calibration (read only) | Calibration | Visa firmware-defaults |
| BLVersion (read only) | BLVersion | Visa bootloadversion |
| HWVersion (read only) | HWVersion | Visa hårdvaruversion |

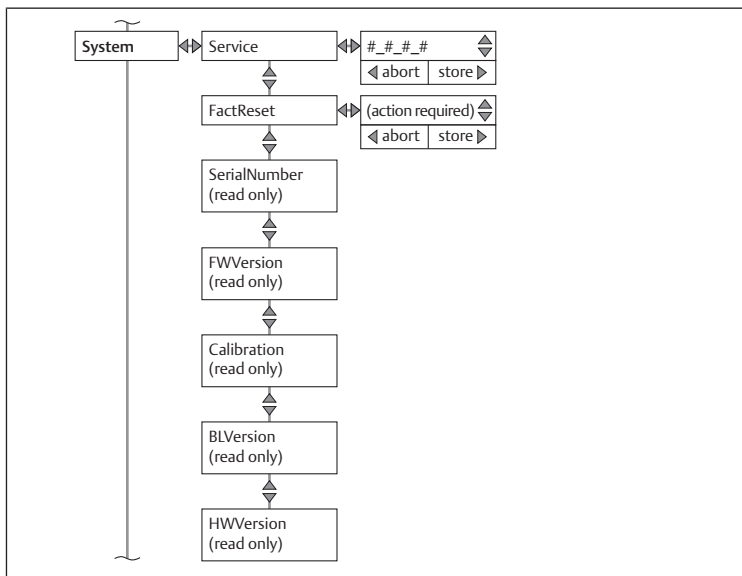


Bild 10

Tags

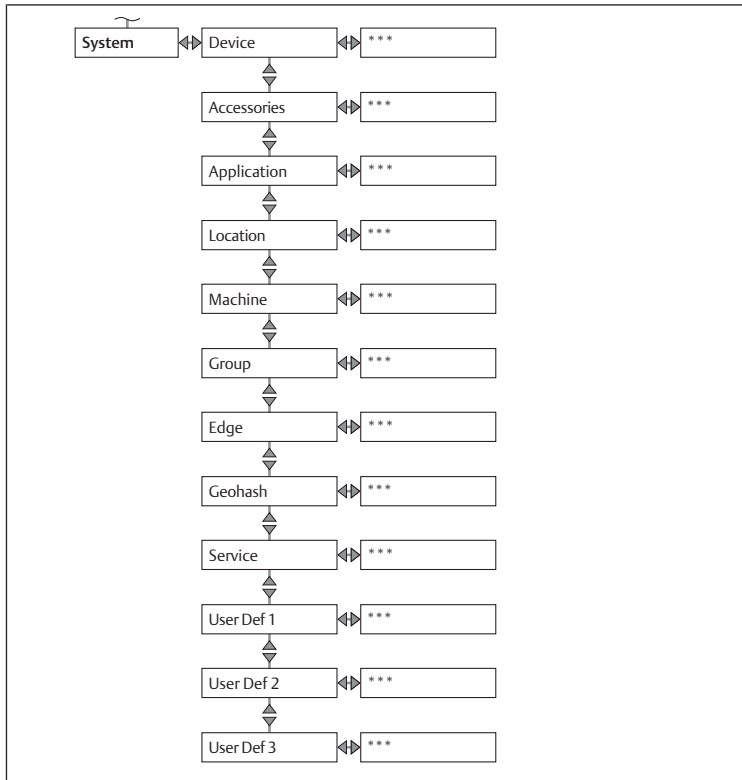


Bild 11

3.2.2 Inställningar för varianten IO-Link

Inställningarna gäller för alla varianter av produkten med den elektriska anslutningen IO-Link.

IO-Link

Displayen visar mätvärdesmenyn med standardinställningen (kg/h, m/s).

| Mål | Meny | Alternativ |
|---------------------------|--------------------|---|
| Välja meny | Standardindikering | Håll valfri pilknapp intryckt i minst 2 sekunder och välj mellan <i>Q1 Menu</i> , <i>Q2 Menu</i> och <i>Qa Menu</i> . |
| Ställa in kopplingsutgång | Q1 Menu | Ställa in kopplingsutgång |
| Ställa in kopplingsutgång | Q2 Menu | Ställa in kopplingsutgång |
| Ställa in analog utgång | Qa Menu | Ställa in analog utgång |

Q1 Menu

Q1-menyn innehåller inställningarna för kopplingsutgång 1.

| Mål | Undermeny | Alternativ |
|---|------------|---|
| Ställa in hysteres eller fönsterfunktion | Mode | Ställa in läge för hysteres eller fönsterfunktion med tillhörande mätparametrar |
| Ställa in inkopplingsläge | SetPoint1 | Ställa in inkopplingsläge |
| Ställa in återställningsläge/ hysteres resp. undre fönstergräns | SetPoint2 | Ställa in återställningsläge/ hysteres resp. undre fönstergräns |
| Ställa in kopplingsbeteende för öppnande kontakt | Polarity | Välja mellan <i>NormallyClosed</i> och <i>NormallyOpen</i> |
| Simulera kopplingsutgång | Simulate | Välj mellan <i>Active</i> , <i>Inactive</i> eller <i>Normal</i> (mätområde) |
| Ställa in PNP/NPN eller Push/ Pull (DRV) | DriverType | Ställa in <i>PNP/NPN</i> eller <i>Push/ Pull (DRV)</i> |

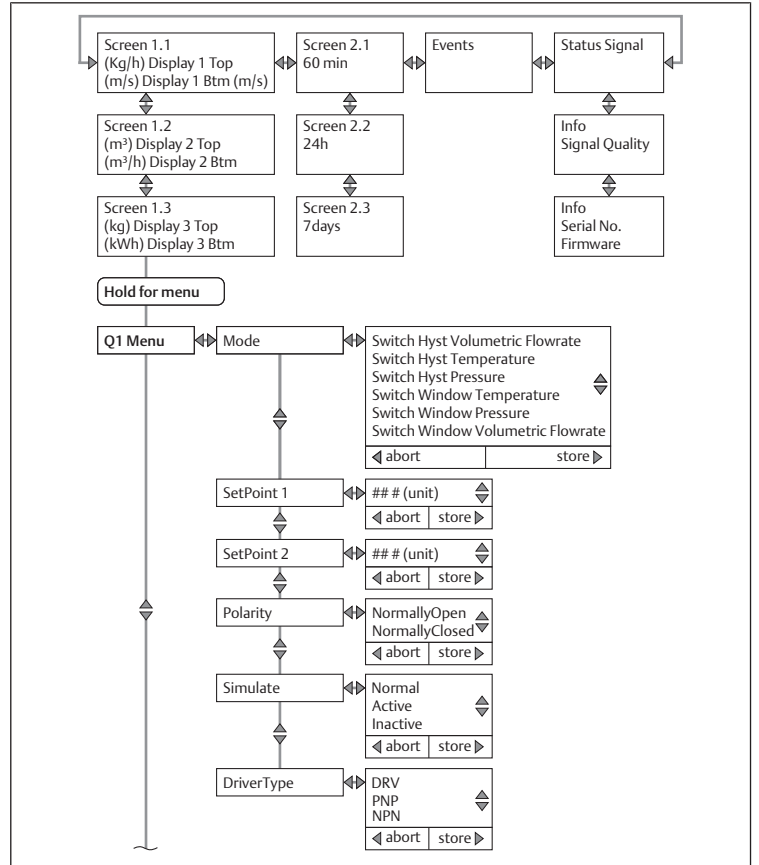


Bild 12

Q2 Menu

Q2-menyn innehåller inställningarna för kopplingsutgång 2.

| Mål | Undermeny | Alternativ |
|--|------------|---|
| Ställa in kopplingsutgång som kopplingsutgång, frekvens, puls eller analog | Function | Ställa in kopplingsutgången som <i>Switch</i> , <i>Frequency</i> , <i>Pulse</i> eller <i>Analog</i> |
| Ställa in läge för hysteres eller fönsterfunktion | Mode | Ställa in läge för hysteres eller fönsterfunktion |
| Ställa in inkopplingsläge | SetPoint1 | Ställa in inkopplingsläge |
| Ställa in återställningsläge/ hysteres resp. undre fönstergräns | SetPoint2 | Ställa in återställningsläge/ hysteres resp. undre fönstergräns |
| Ställa in kopplingsbeteende för öppnande kontakt | Polarity | Välja mellan <i>NormallyClosed</i> och <i>NormallyOpen</i> |
| Simulera kopplingsutgång | Simulate | Välja mellan <i>Active</i> , <i>Inactive</i> och <i>Normal</i> (mätområde) |
| Ställa in PNP/NPN eller Push/ Pull | DriverType | Ställa in <i>PNP/NPN</i> eller <i>Push/ Pull</i> |

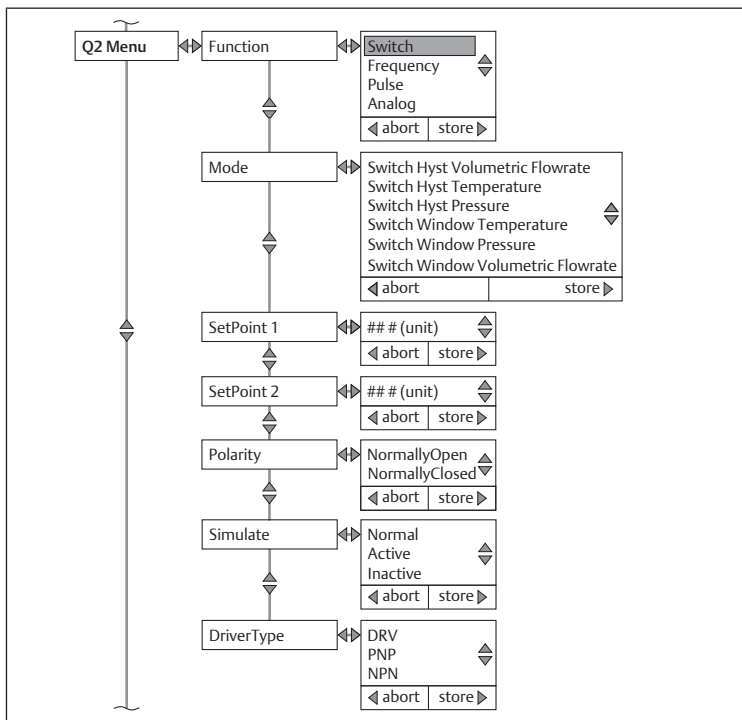


Bild 13

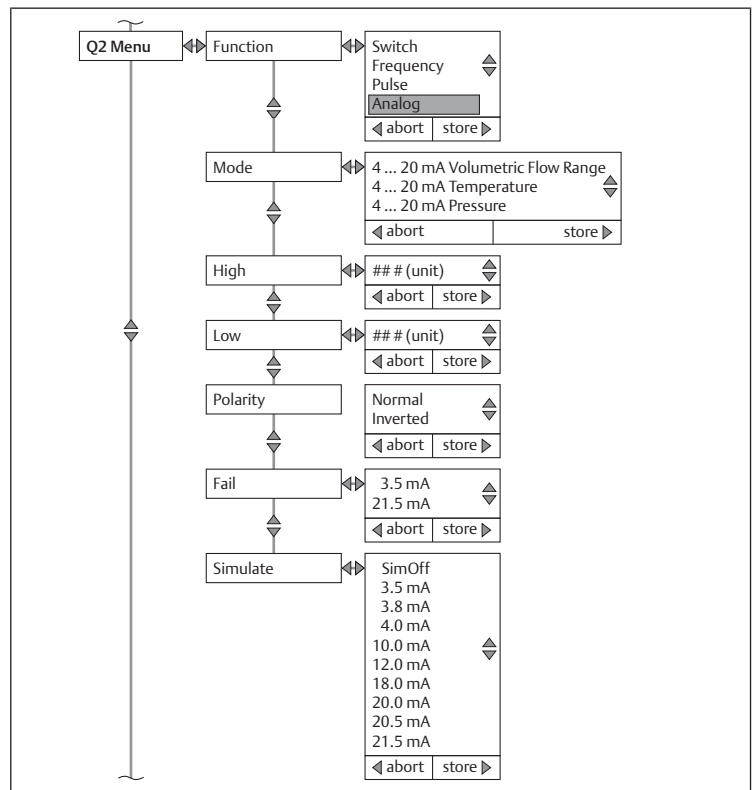


Bild 16

Qa Menu

Qa-menyn innehåller inställningarna för den analoga utgången.

| Mål | Undermeny | Alternativ |
|---|-----------|--|
| Tilldela mätparametrar ström utgång | Mode | Tilldela mätparametrar som flöde, temperatur eller tryck till ström utgången |
| Tilldela slutvärde för mätområde | High | Ställa in slutvärdet för mätområdet på 20 mA |
| Tilldela mätområdets början | Low | Ställa in mätområdets början på 4 mA |
| Ställa in invertering av ström utgång | Polarity | Ställa in invertering av ström utgång |
| Ställa in spänningsutgångens reaktion vid ett fel i produkten | Fail | Ställa in spänningsutgångens reaktion vid ett fel i produkten |
| Ställa in fördefinierat ström värde | Simulate | Ställa in fördefinierat ström värde |

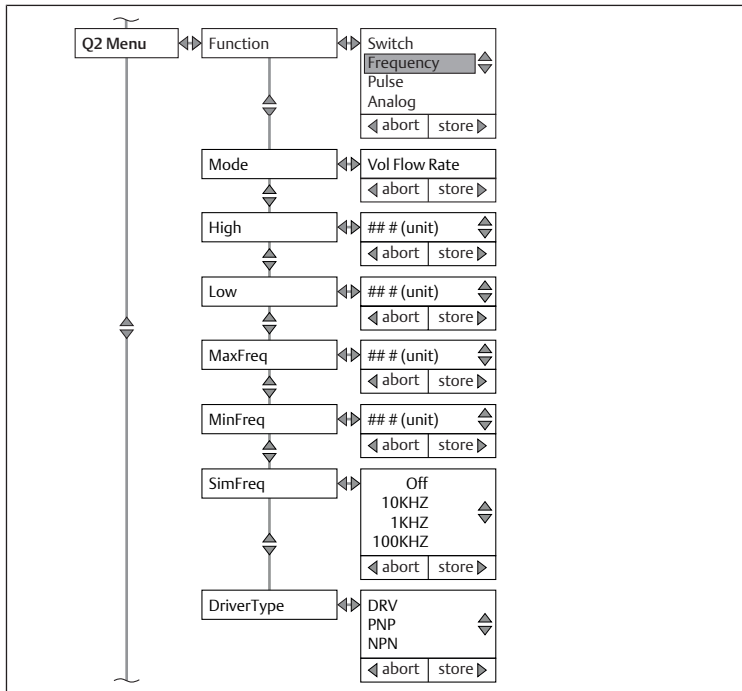


Bild 14

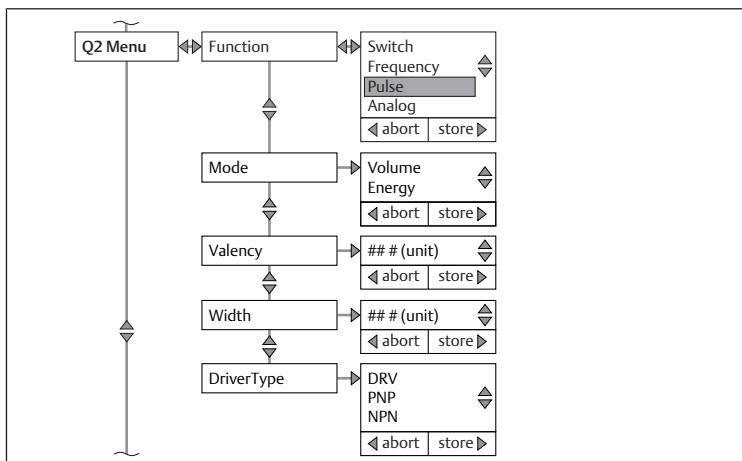


Bild 15

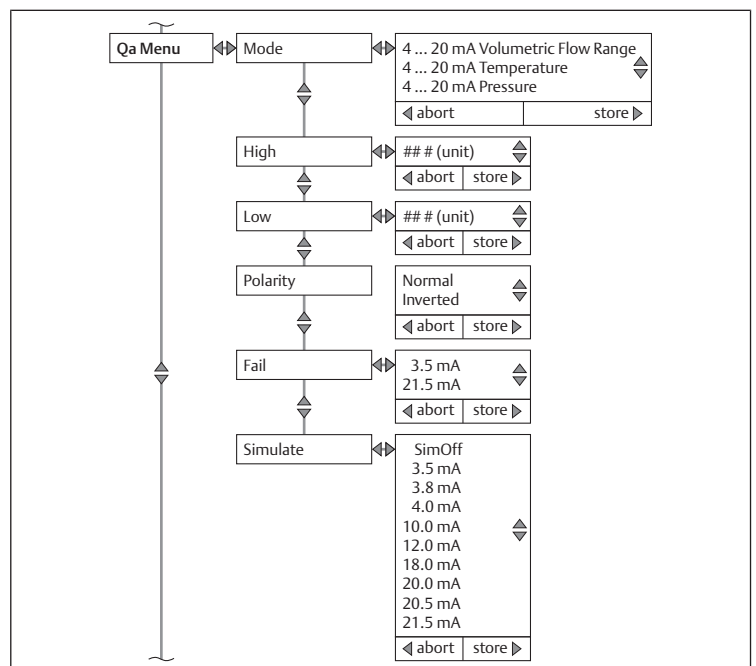


Bild 17

3.2.3 Inställningar för varianten Ethernet

Inställningarna gäller för alla varianter av produkten med den elektriska Ethernet-anslutningen.

Ethernet

| Mål | Undermeny | Alternativ |
|--|------------|-------------------------|
| Tilldela statisk eller dynamisk adress | DHCP Mode | Tilldela adress |
| Ställa in IP-adress | IP Address | Ställa in IP-adress |
| Subnätmask | SubNetMask | Ställa in subnätmask |
| Gateway | Gateway | Ställa in gatewayadress |
| Name | Name | Ställ in DHCP-namnet |

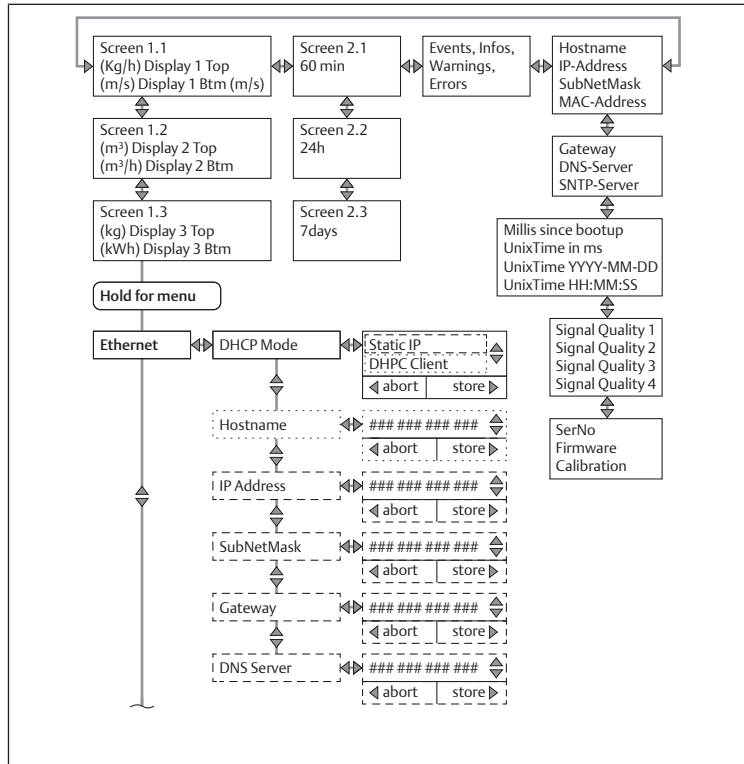
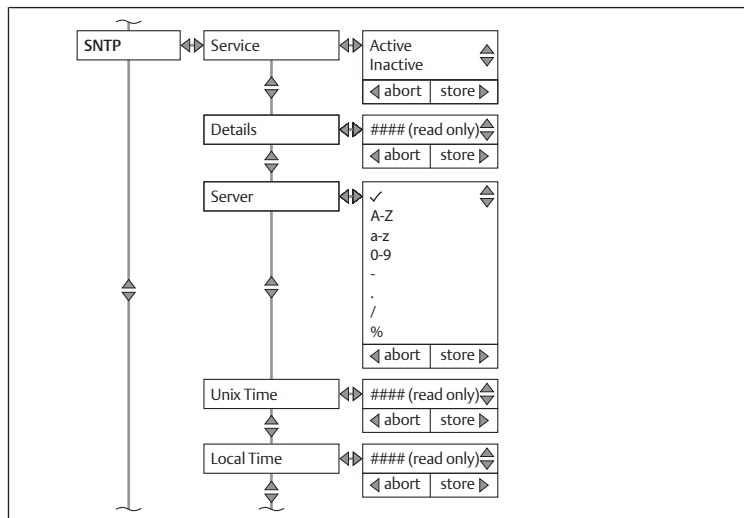


Bild 18

SNTP



Webbserver

| Mål | Undermeny | Alternativ |
|--|-----------|---|
| Koppla in och stänga av webbgränssnitt | State | Välja mellan Active och Inactive |
| Ställa in port | Port | Välj webbserver-porten. Standardporten för HTTP-tjänsten är port 80 |

| Mål | Undermeny | Alternativ |
|--------------------------------------|-----------|---|
| Återställa lösenord på användarsidan | ResetPW | Återställ webbserverlösenordet för användaren "Maintenance" till leveransstatusen. Standardlösenordet (fabriksinställning) är "airflowsensor" |

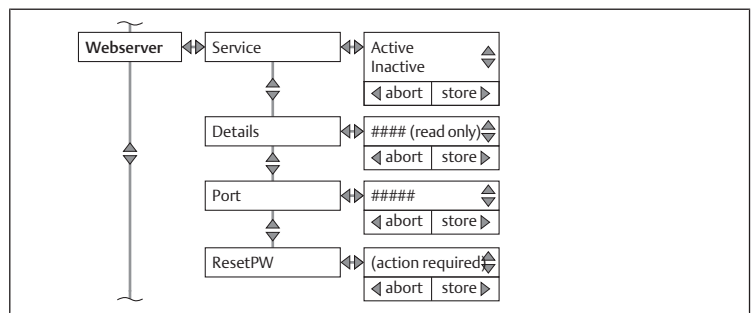


Bild 19

OPC UA

| Mål | Undermeny | Alternativ |
|--|-----------|--|
| Koppla in och stänga av webbgränssnitt | State | Välja mellan Active och Inactive |
| Ställa in port | Port | Ställa in port |
| Ställa in användarnamn | User | Ställa in användarnamnen |
| Tilldela lösenord | Password | Ställa in lösenordet |

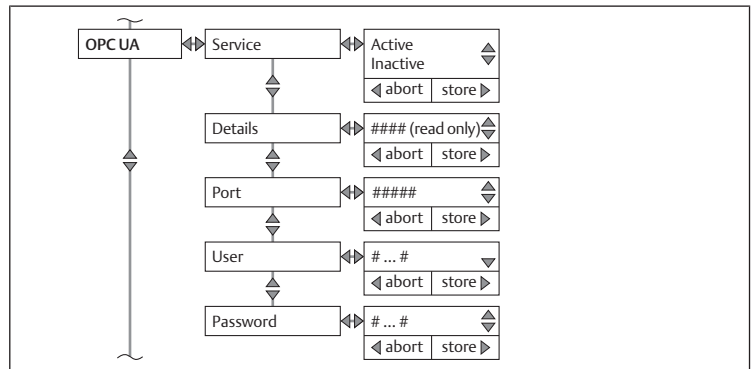


Bild 20

MQTT

| Mål | Undermeny | Alternativ |
|--|-----------|---|
| Koppla in och stänga av webbgränssnitt | State | Välja mellan Active och Inactive |
| Koordinator | Broker | Ställ in koordinator |
| Ställa in port | Port | Ställa in port |
| Ämne | Topic | Visa ämnen |
| Användare | User | Ange användarnamn för koordinator |
| Ställa in koordinator-lösenord | Password | Ange lösenord för koordinator |
| Sända justeringsintervall till koordinator | Update | Registrera justeringsintervall |
| QoS | QoS | Välja QoS-0 , QoS-1 eller QoS-2 |
| Definiera MQTT-meddelande till koordinator | Send | Välja meny punkten i andra undermenyn och ställa in Active eller Inactive |

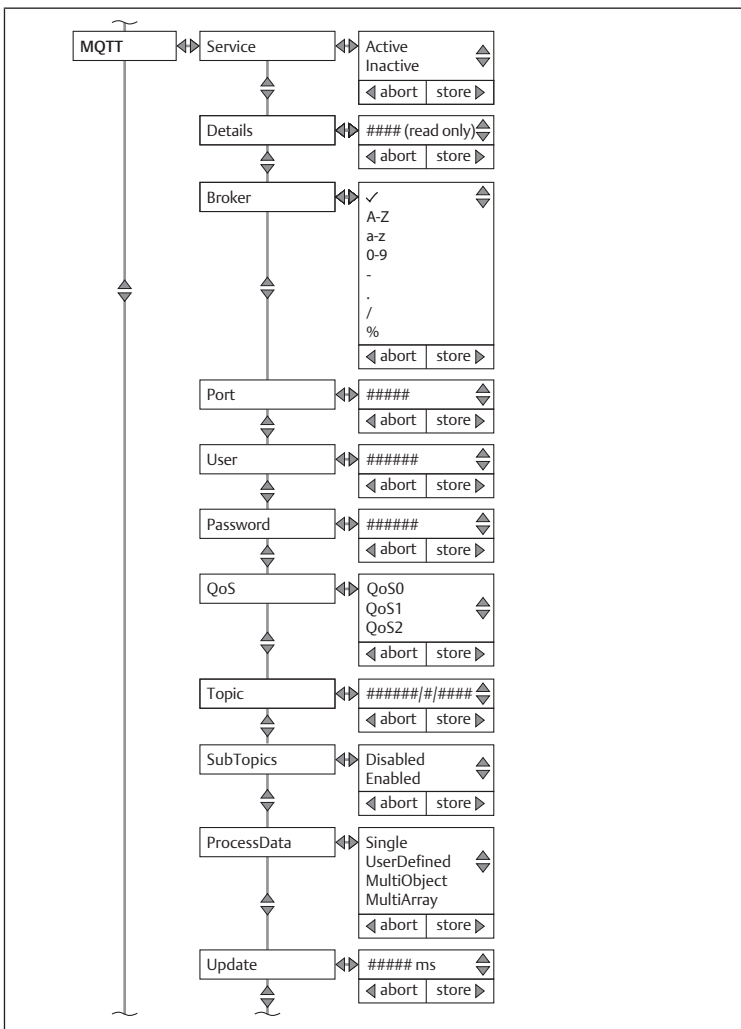


Bild 21

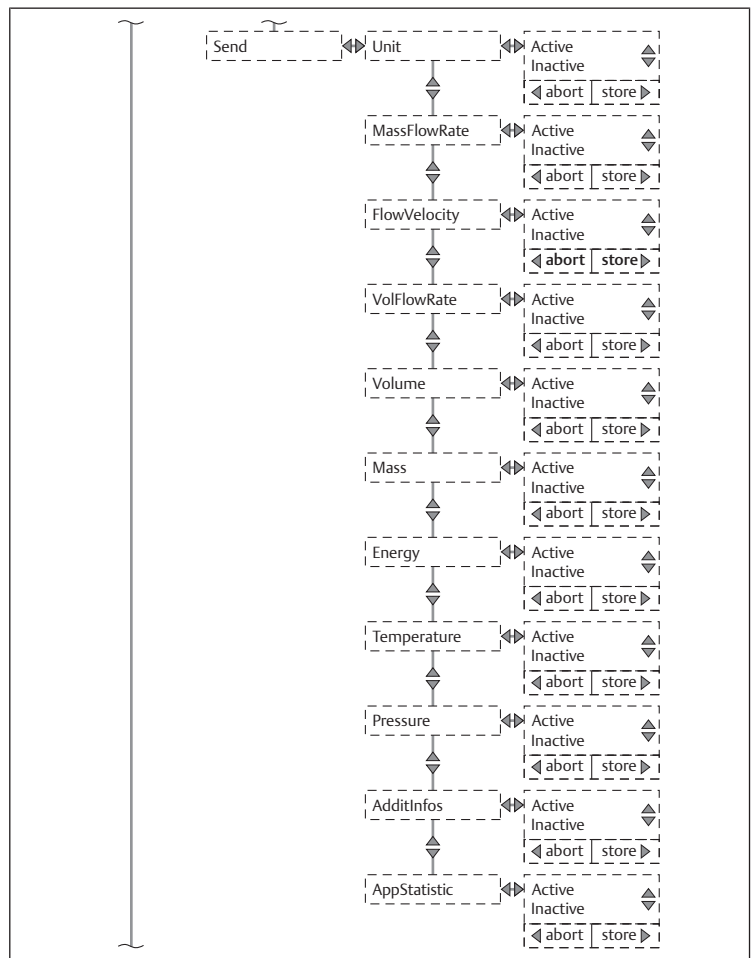


Bild 22



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An example configuration is depicted on the title page. The delivered product may thus vary from that in the illustration.

Translation of the original operating instructions. The original operating instructions were created in the German language.

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