KROHNE

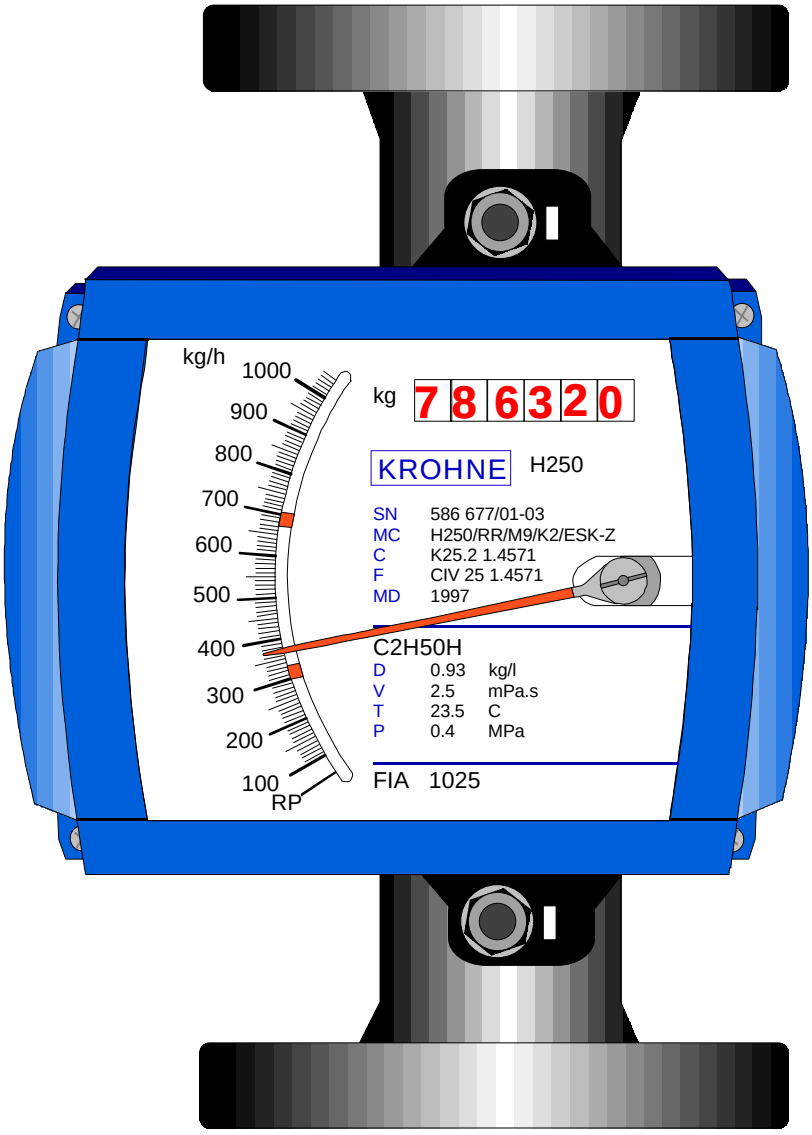
10/98

System Technology

Remote Operation Instructions

HART Communicator 275
Asset Management Solutions (AMS)

ESKII



CONTENTS

1 General Information

The ESKII is a two-wire transmitter with 4..20mA current output and HART™ capability. It can be mounted in H250 Variable Area Flowmeters with indicators M9 or M7. This document fills the gap between the „Installation and operating instructions H250“ and the online help available under AMS.

General characteristics of the ESKII HART™ interface:

- Multidrop Mode is supported.
- Burst Mode is not supported.
- The ESKII transmitter implements a fixed optimized damping value on both the digital process value transmitted via HART interface and the Analog Output.

2 HART Communicator 275 (HC275)

2.1 Installation

- Connection:
  Refer to the wiring diagrams and descriptions in the
  “Installation and Operating Instructions H250” (KROHNE) section 10.1.

- HC275 configuration:
  The HC275 has to be programmed with the ESKII HART Device Description (DD).
  Generally this must be done by the manufacturer or the distributor of the device.
  (If the ESKII DD is not programmed in the HC275 the transmitter self test can’t be executed, the Transmitter Specific Status Messages can’t be displayed and offline configuration is not possible.)

2.2 Operating

See ESKII Menu Tree HC275 (Attachment A).
The ESKII operating concept bases on the HART DD for generic devices with the following differences:

- Some parameters can only be read:
  sensor units, range values (upper/lower range value), damping value, transfer function, write protection, sensor units, final assembly number.
  (For calibration of both the ESKII output information and the mechanical indicator of the measuring instrument KROHNE offers a special program *KroVaCal*).
- Support of ESKII specific physical units
- Display format dependent on measuring range
- A ESKII Self Test can be performed and ESKII specific status messages can be displayed

- Meaning of General Status Messages:

Status Message	Meaning
Field Device Malfunction	Set if any „Critical Error“ has been reported. Refer to Transmitter Specific Status messages.
Configuration Changed	Set whenever any configuration parameter is changed.
Primary Variable Analog Output Fixed	Set when: • Device is set in Multidrop Mode (Polling Address ≠ 0) • Fixed Current Mode is entered (during Loop Test and DAC Trim)
Analog Output Saturated	During normal operation the maximum value for analog output is 20.4mA because of the „Namur Failure Signal“ (I>20.8mA). While Process Value (PV) will work up to the Sensor Limits the analog output and its digital value is saturated at 20.4mA and the flag is set.
Primary Variable Out Of Limits	Is set whenever the Process Value (PV) exceeds the Sensor Limits.

- Meaning of Transmitter Specific Status Messages:

Status Message	Meaning
Critical Error	Error: Summary of „Initialization Failed“ and „Internal Checksum Error“. If set the measurement is invalid. HART-Classes: Hardware, State, Uncorrectable, Summary.
Initialization Failed	Error: If set the measurement is invalid. HART-Classes: Hardware, State, Uncorrectable, Detail.
No Linearization Data	Warning: If set the measured value is possibly incorrect. HART-Classes: Software, State, Uncorrectable.
Internal Checksum Error	Error: If set the measurement is invalid. HART-Classes: Software, Event, Selfcorrecting/Uncorrectable, Detail.
Internal Timeout	Informational: Self correcting error. HART-Classes: Software, Event, Selfcorrecting.
ADC zero scale not calibrated	Warning: If set the measured value is possibly incorrect. HART-Classes: Hardware, State, Uncorrectable.
ADC full scale not calibrated	Warning: If set the measured value is possibly incorrect. HART-Classes: Hardware, State, Uncorrectable.
No TC correction data	Warning: If set the measured value is possibly incorrect. HART-Classes: Software, State, Uncorrectable.

3 Asset Management Solutions (AMS)

3.1 Installation

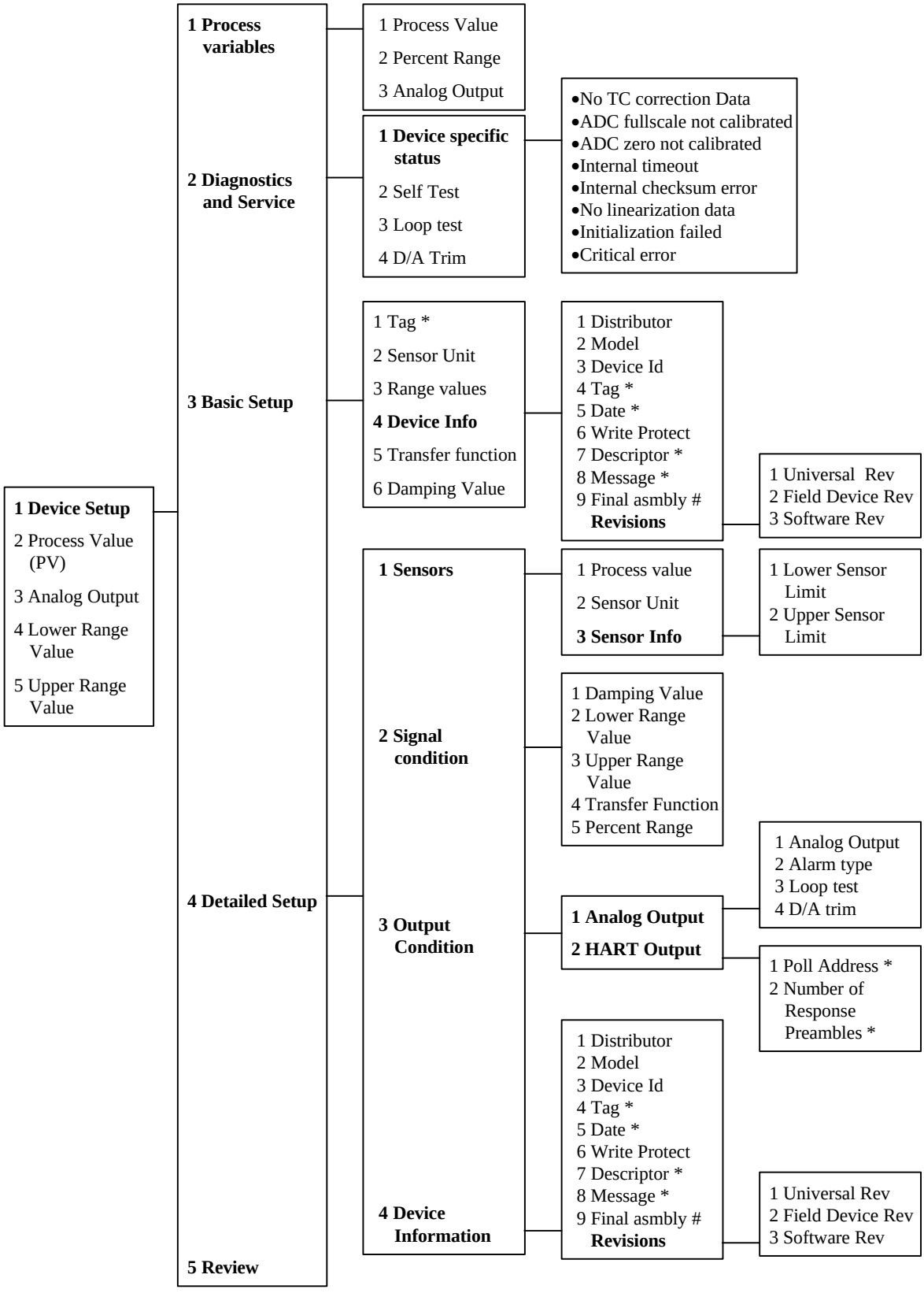
- Connection:
  Refer to the wiring diagrams and descriptions in the
  "Installation and Operating Instructions H250" (KROHNE) section 10.1.
  Also see the
  "AMS Installation Guide" (Fisher Rosemount) section 5: *"Installing Modems"* and appendix B: *"Wiring Diagrams"*.
- AMS Configuration:
  If the ESKII Device Description is not already installed on the AMS System a
  „ESKII Device Installation Kit" (on floppy disk / CD-ROM from KROHNE) is needed.
  For installing the DD with the Installation Kit refer to the
  "AMS Installation Guide" (Fisher Rosemount) section 3:
  "Installing Device Descriptions for Field Devices", *"Manually Installing Device Types"*.

3.2 Operating

See ESKII Menu Tree AMS (Attachment B).
The operating concept bases on the AMS HART DD for generic devices. For differences in detail see section *2.2 HART Communicator 275 (HC275) Operating*.

Attachment A

ESKII Menu Tree HC275



* Parameter changeable (online help is available)

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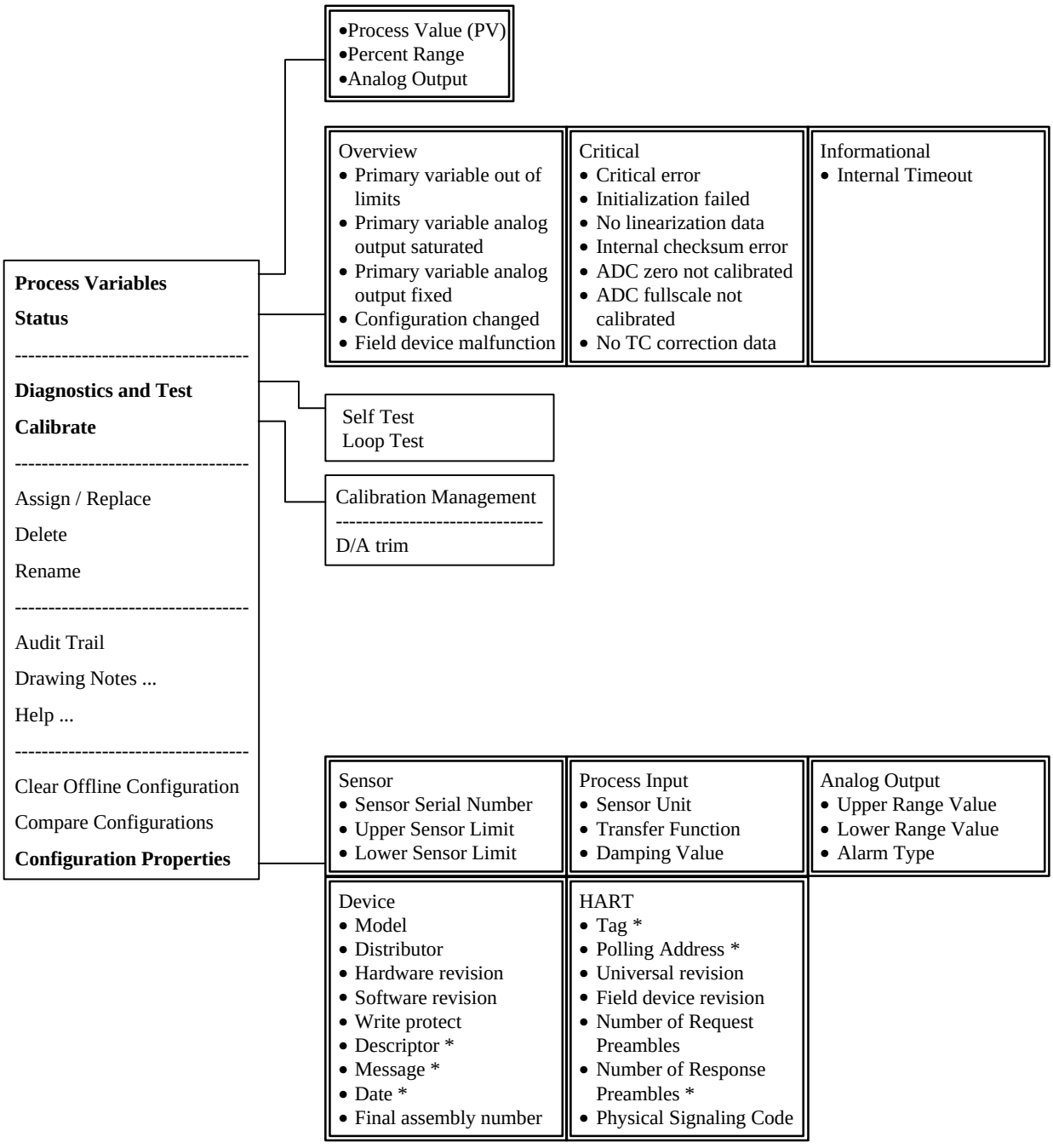
Attachment B

ESKII Menu Tree AMS



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