Remote Operation Instructions

HART Communicator 275
Asset Management Solutions (AMS)
Process Device Manager (PDM)
Device Type Manager(DTM)

M10

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1 General Information

The M10 is a two-wire transmitter with 4...20mA current output and HART® capability.

General Characteristics of the M10 HART® interface:
- Multidrop Mode is supported
- Burst Mode is not supported

Electrical connection: Page 12 of the “Installation and Operating Instructions. M10 Variable Area Flowmeter”, Apr. 2001.

2 IDs and Revision numbers

The HART Device Descriptions described in this document have the following IDs and revision numbers:

Manufacturer ID:	69 (0x45)
Device Type:	234 (0xEA)
HART module :	
Device Revision:	2
DD Revision:	1
HART Universal Revision:	5
HC 275 OS Revision:	≥ 4.9
AMS Version:	≥ 5.0
PDM Version:	≥ 5.1+SP2
PACTware	2.1

3 Implementation Peculiarities

Transmitter
- All parameters and dynamic data are involved in HART transactions, i.e. can be handled from remote hosts. For details refer to the “Transmitter-Specific Command Specification”.

4 HART Communicator 275 (HC275)

4.1 Installation

The HC275 has to be programmed with the M10 HART Device Description. Otherwise the HC275 user will work with the instrument as a generic one thus loosing opportunity for entire instrument control.

4.2 Operating

Refer to the M10 Menu Tree HC275 (Attachment A).
The M10 operation via HC275 is made quite close to the manual instrument control via keypad.
The online help of each parameter contains its function number as a reference to the device’s local display and the “Installation and Operating Instructions”.
While storing data in HC275 from connected instrument, the difference between “standard configuration” of HC275 and its “full configuration” consists in some read-only parameters (sensor limits, device modules’ IDs, etc.) that are either transferred to AMS (“full configuration”) or are shown on AMS tabs as empty fields (“standard configuration”). Clear the latter corresponds to situation when HC275 ⇒ AMS configurations’ transfer is undertaken.

5 Asset Management Solutions (AMS)

5.1 Installation

If the M10 Device Description is not already installed on the AMS System a so called *Installation Kit M10 HART AMS* is needed (available on floppy disk from KROHNE or as download from KROHNE Internet page).
For installing the DD with the Installation Kit refer to the *"AMS User's Guide"* section 3:*"Managing HART Devices"* / *"Adding new Device Types to AMS"* / *"Install Device Types Manually"*.

5.2 Operating

Refer to the M10 Menu Tree AMS (Attachment B).
Due to AMS requirements and conventions the M10 operation differs a little from operation with HC275 and via local keypad.
The online help of each parameter contains its function number as a reference to the device's local display and the "Installation and Operating Instructions".
Due to implementation peculiarities (refer to section 3, DDL) after the "Configuration Properties..." view is open, its 'Process Input' tab has empty fields for format specifiers (also local DDL variables). That is normal: AMS does not initialize the local variables, their default values are used after downloading.

6 Process Device Management (PDM)

6.1 Installation

If the M10 Device Description is not already installed on the PDM System a so called *Device Install* is needed (available on floppy disk from KROHNE or as download from KROHNE Internet page).
Before installing the DD with the Installation Kit, please read the "readme.txt", which is also contained in the Device Install.

6.2 Operating

Refer to the M10 Menu Tree PDM (Attachment C-E).
Due to PDM requirements and conventions the M10 operation differs a little from operation with HC275 and via local keypad.
The online help of each parameter contains its function number as a reference to the device's local display and the "Installation and Operating Instructions".

7 PACTware

7.1 Installation

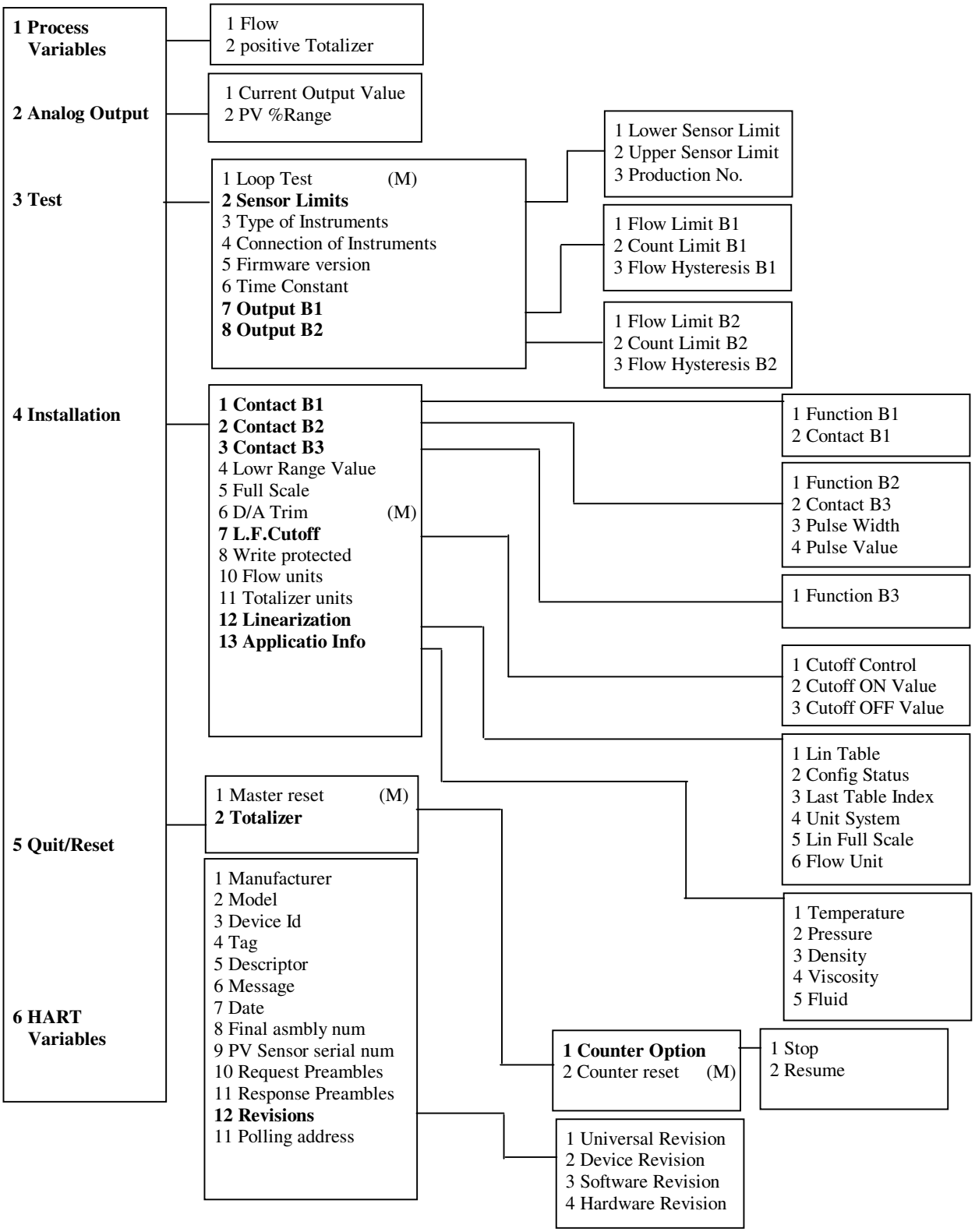
If the M10 DTM is not already installed on the PACTware System a so called *Setup* is needed (available on CD-rom from KROHNE or as download from KROHNE Internet page).
Before installing the DTM with the Installation Kit, please read the “readme.txt”, which is also contained in the Device Install.

7.2 Operating

Refer to the M10 Menu Tree PDM (Attachment C-E).
Due to DTM requirements and conventions the M10 operation differs a little from operation with HC275 and via local keypad.
The online help of each parameter contains its function number as a reference to the device’s local display and the “Installation and Operating Instructions”.

Attachment A

M10 Menu Tree HC275

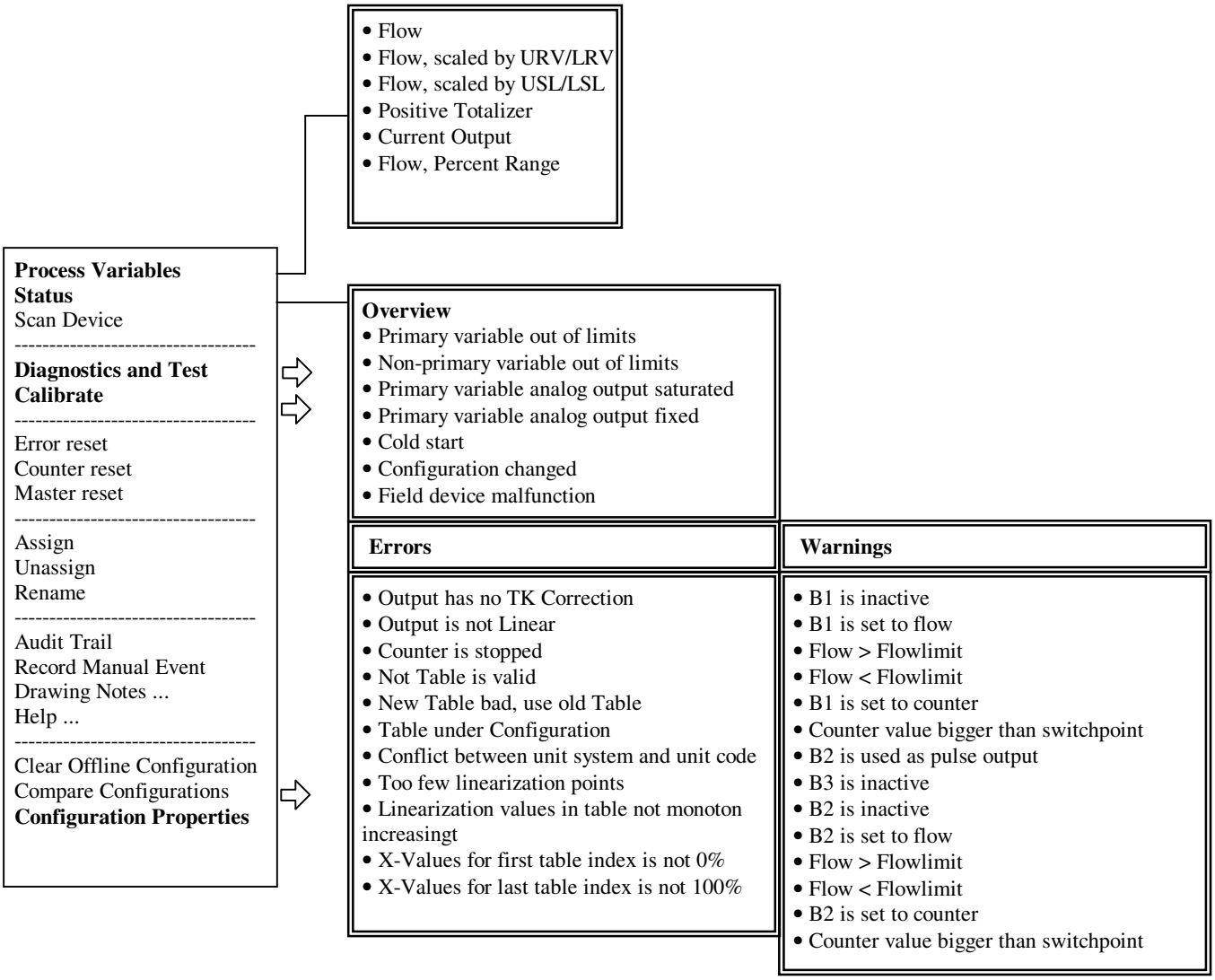


Designations:
^{loc} – Local HC275 variable, that is not read/written to instrument;
(M) – Method is invoked to retrieve/change data.

KROHNE M10 45ea0201

Attachment B

M10 Menu Tree AMS



Designations:

⇨ – refer to the next page.

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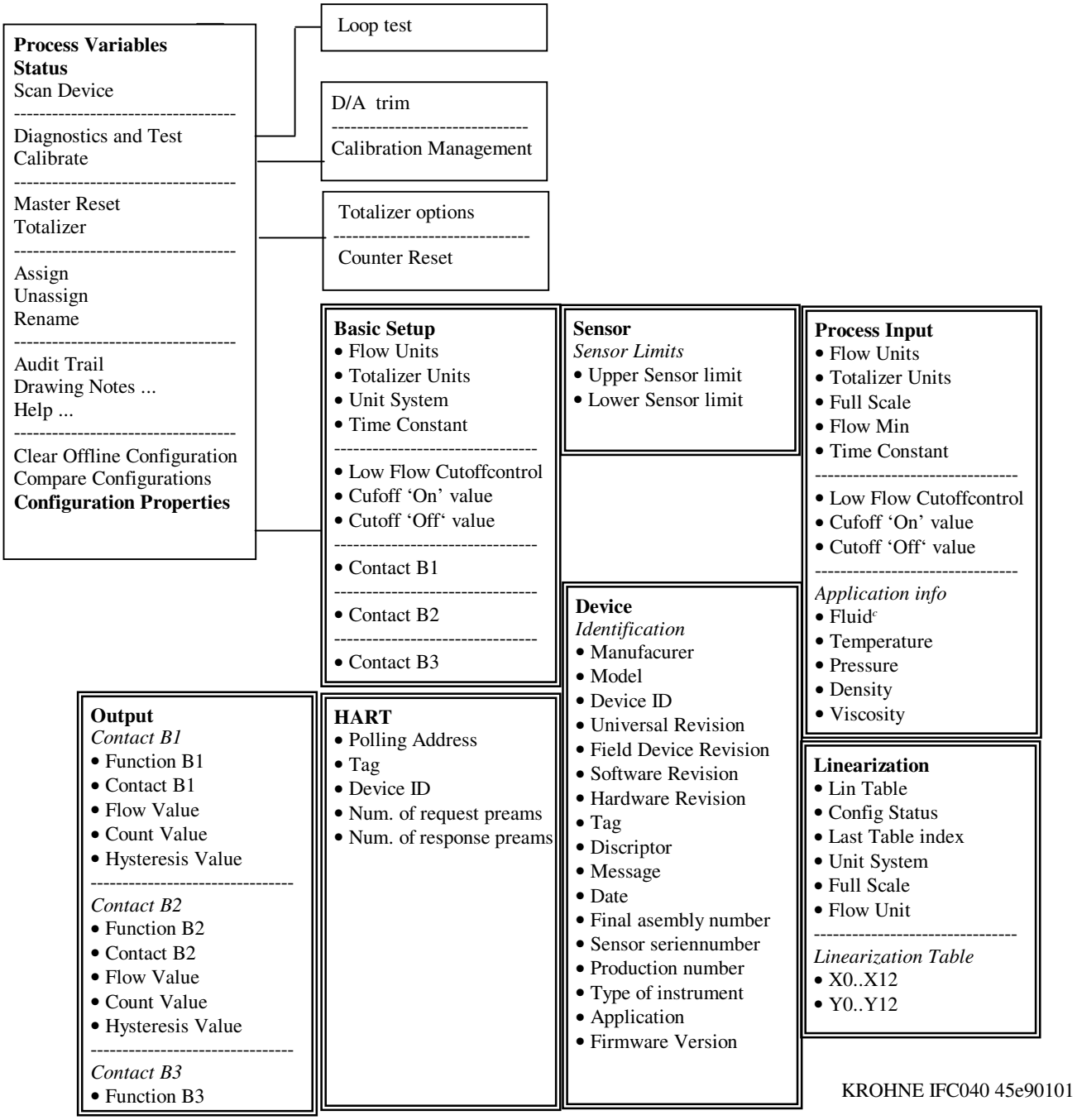
Attachment B

M10 Menu Tree AMS

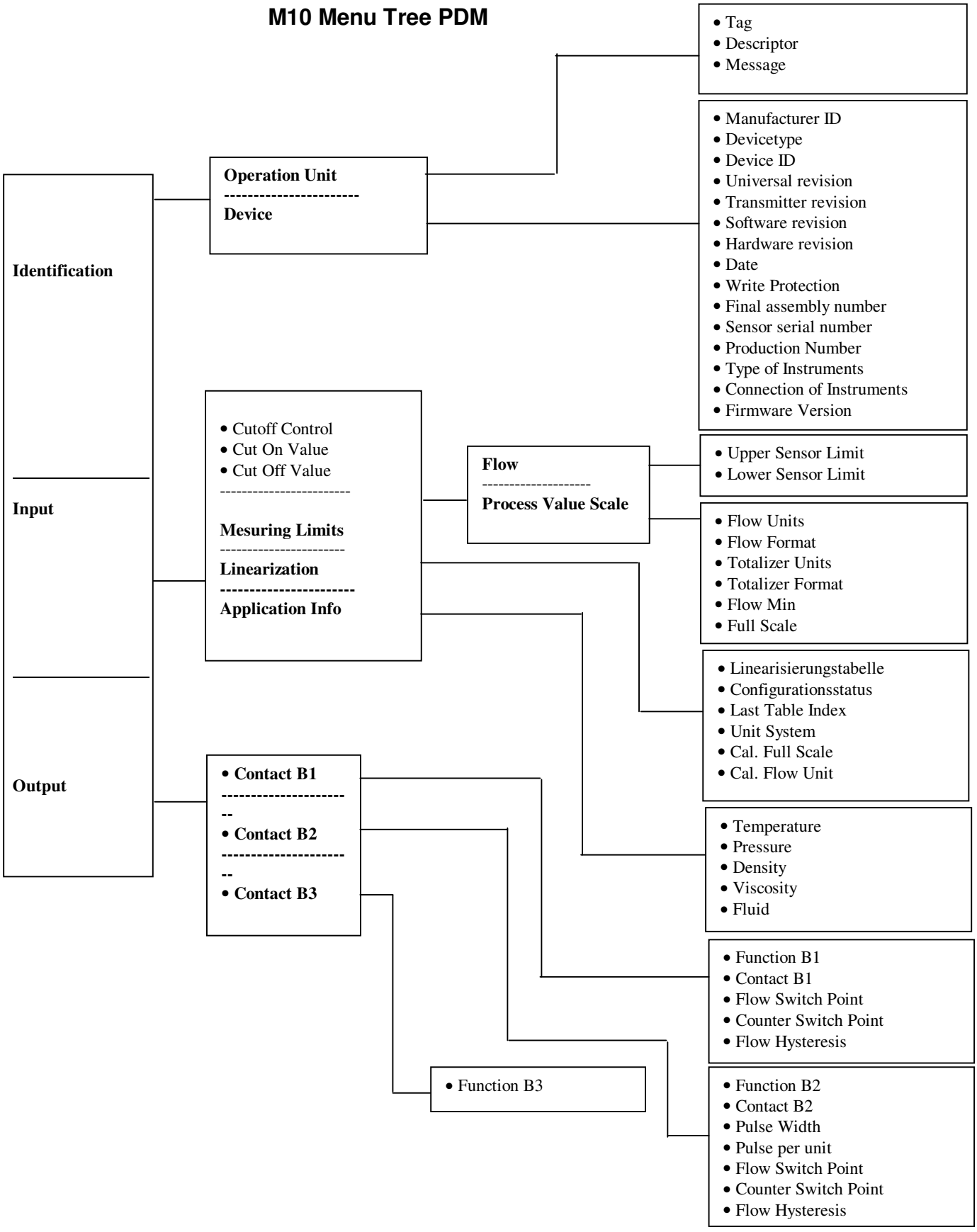
Designations:
[Rd] – Read-only variable;
[Loc] – Local AMS variable, affects only AMS faceplates and configuration tabs and is not read/written from/to instrument.



KROHNE IFC040 45e90101

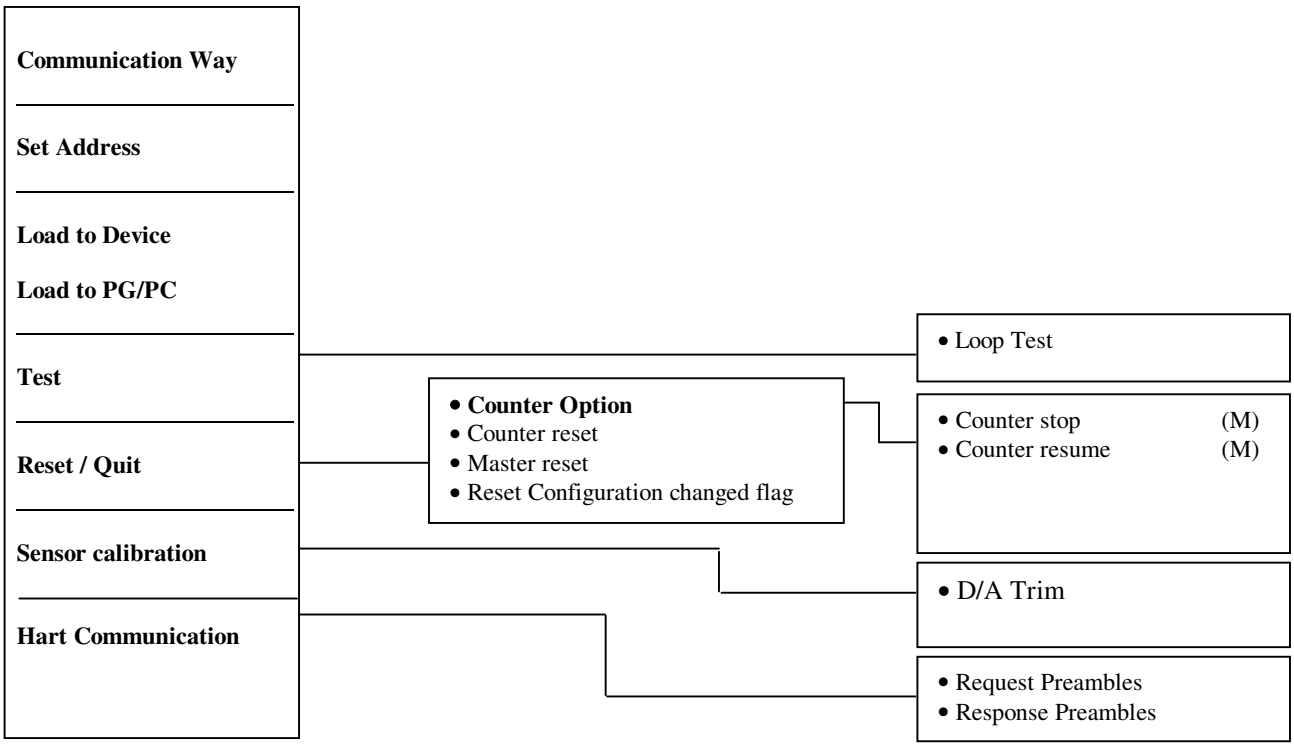
Attachment C

M10 Menu Tree PDM



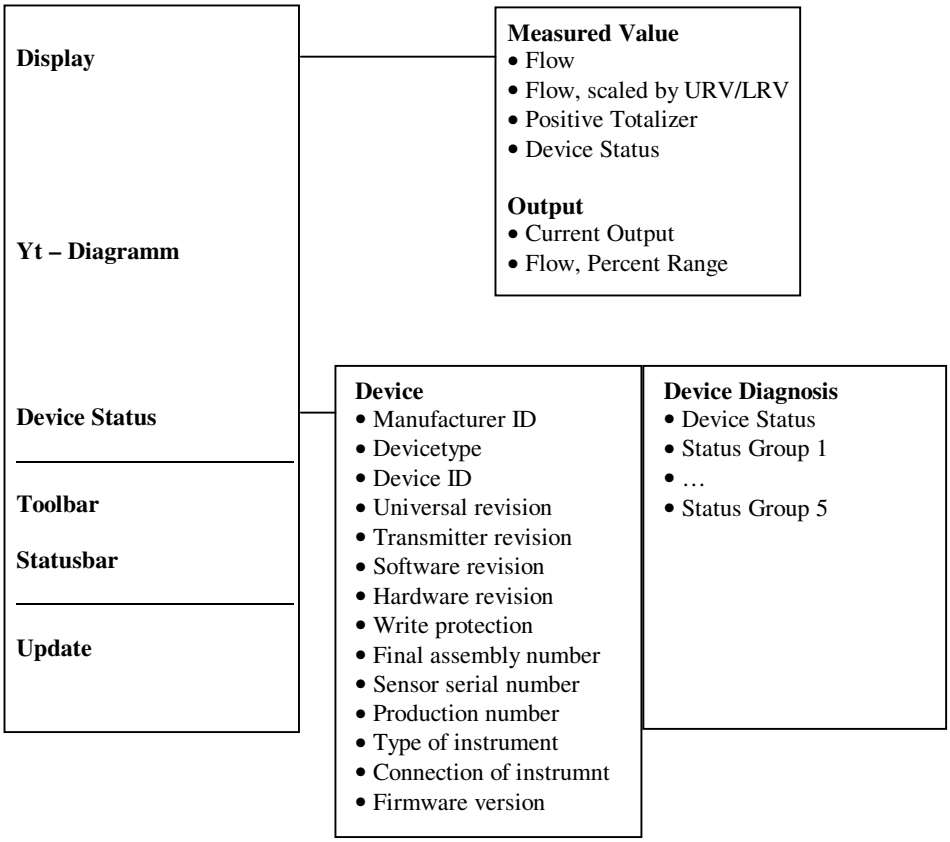
Attachment D

IFC040 Menu Device



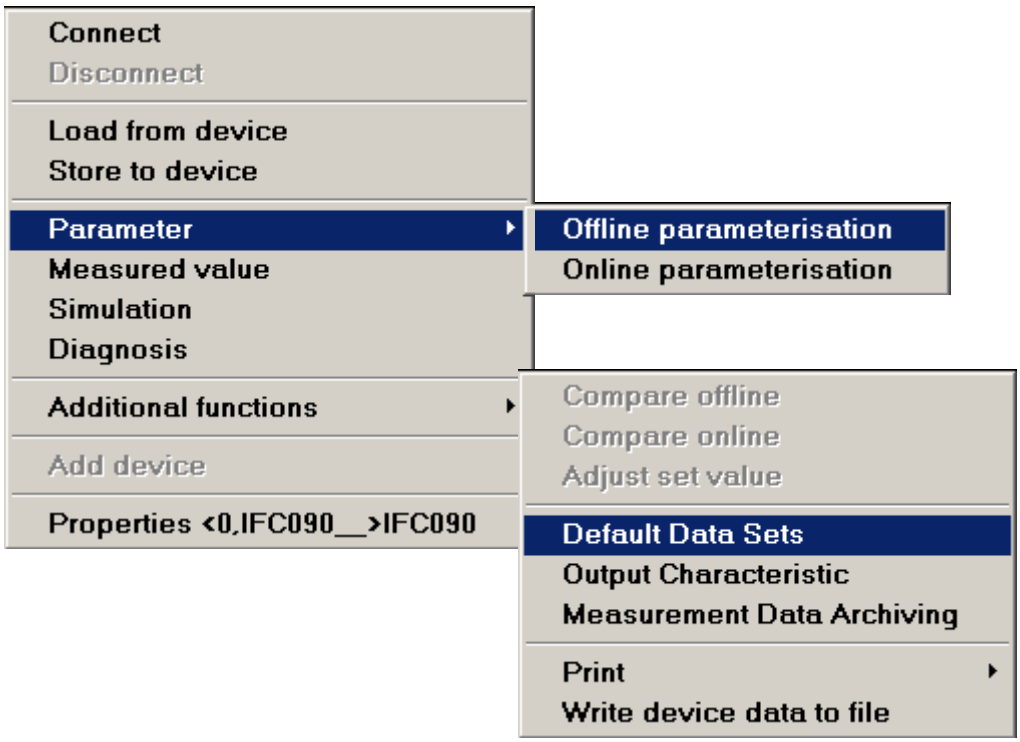
Attachment E

M10 Menu View



Attachment F

M10 Menu Tree PactWare



Identification

Operation Unit
- Polling Address
- TAG
- Descriptor
- Message

Device
- Manufacturer
- Date
- Model
- Device ID
- Universal Rev.
- Field Device Rev.
- Software Rev.
- Hardware Rev.
- Request preamble
- Response preamble
- Type of Instrument
- Application
- Production number
- Firmware version
- Final Assembly Number
- Upper sensor limit
- Lower sensor limit
- Sensor Serial Number

Process Input

Damping
- Damping value

Process value scale
- Full Scale
- PV_LRV

Low Flow Cutoff
- L.F.Cutoff
- Cutoff ON
- Cutoff OFF

Units
- Flow units
- Totalizer units

Application information
- Fluid
- Temperature
- Pressure
- Density
- Viscosity

In- / Outputs General

Output B1
- *Function B1*
- *Contact B1*
- *Flow swich point*
- *Flow Hysteresis*
- *Counter swich point*

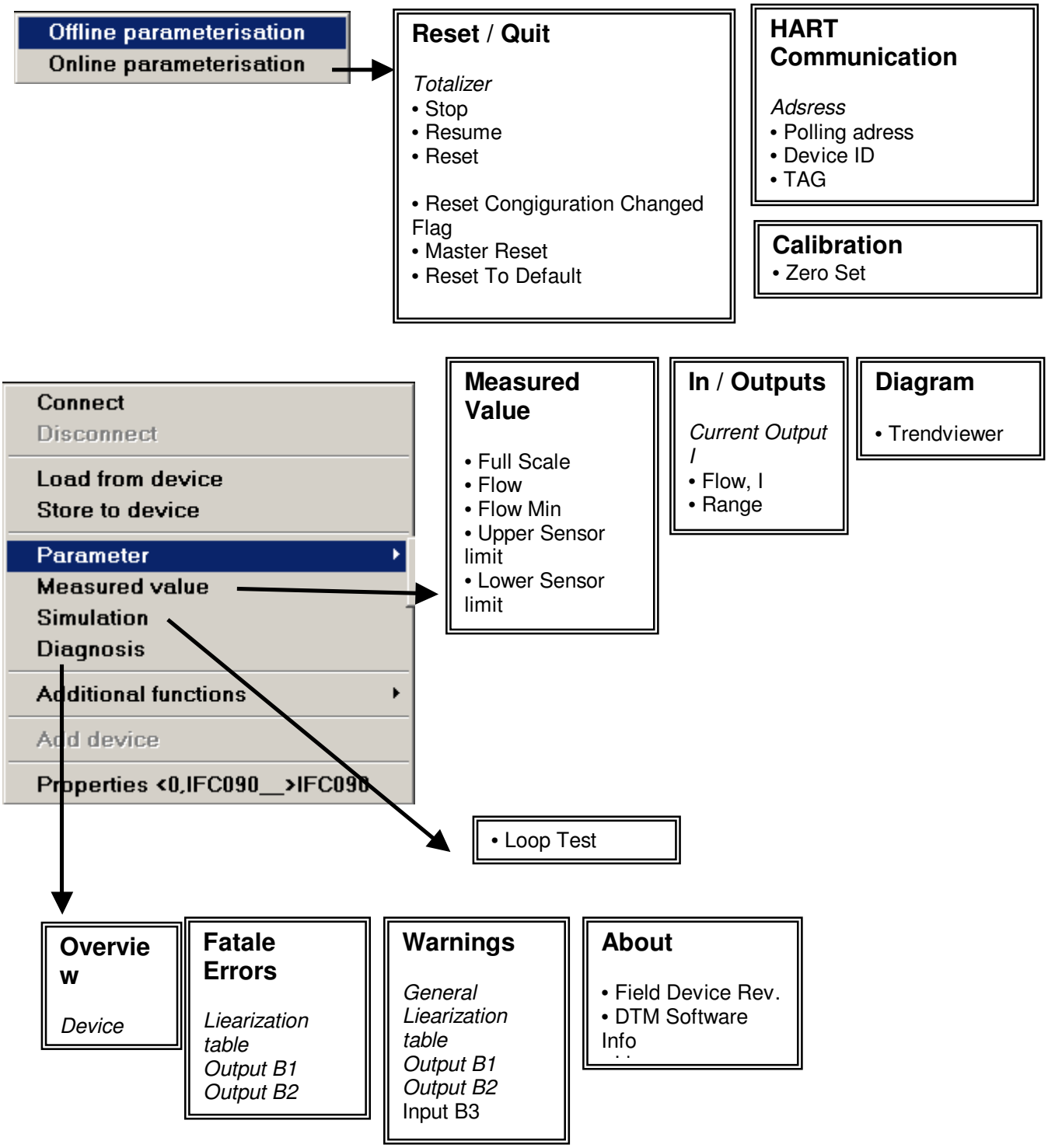
Output B2
- *Function B2*
- *Contact B2*
- *Flow swich point*
- *Flow Hysteresis*
- *Counter swich point*
- *Pulse width*
- *Pilse per unit*

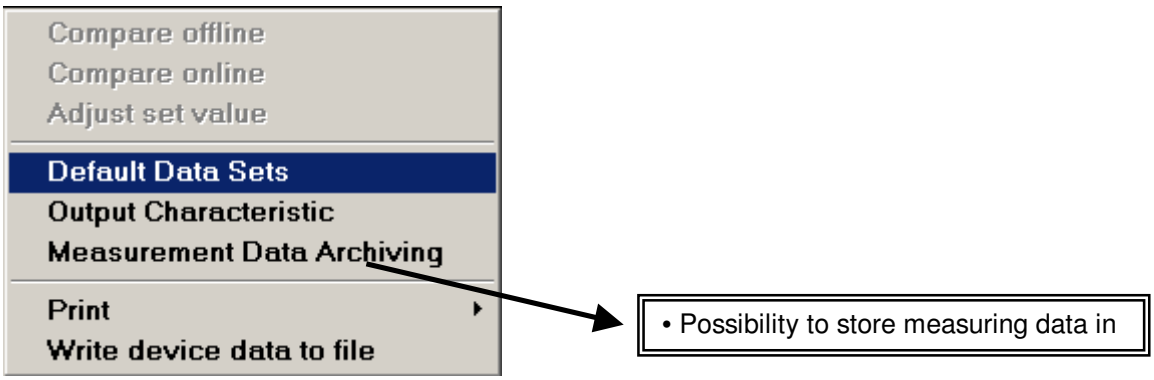
Input B3
- *Function B3*

Linearization

Settings
- Linearization table
- Table configuration status
- Unit System
- Last valid table index
- Full Scale

Table
- Index 0..12


Offline parameterisation
Online parameterisation
Reset / Quit
Totalizer
• Stop
• Resume
• Reset
• Reset Congiguration Changed Flag
• Master Reset
• Reset To Default
HART Communication
Adsress
• Polling adress
• Device ID
• TAG
Calibration
• Zero Set
Connect
Disconnect
Load from device
Store to device
Parameter
Measured value
Simulation
Diagnosis
Additional functions
Add device
Properties <0,IFC090__>IFC090
Measured Value
• Full Scale
• Flow
• Flow Min
• Upper Sensor limit
• Lower Sensor limit
In / Outputs
Current Output I
• Flow, I
• Range
Diagram
• Trendviewer
• Loop Test
Overvie w
Device
Fatale Errors
Liearization table
Output B1
Output B2
Warnings
General
Liearization table
Output B1
Output B2
Input B3
About
• Field Device Rev.
• DTM Software Info


Compare offline
Compare online
Adjust set value
Default Data Sets
Output Characteristic
Measurement Data Archiving
Print
Write device data to file
• Possibility to store measuring data in