Manufacturer Information

For users regarding firmware and hardware updates
(in accordance with the NAMUR 53 recommendation)

1 Type of device

☒ Field device / signal processing device
☐ Monitoring / operating system

Manufacturer	:	Endress+Hauser GmbH+Co.KG, 79689 Maulburg	
Product	:	Deltabar S, Cerabar S, Deltapilot S	
Part number / Order code	:	PMD75, FMD77, FMD78 PMC71, PMP71, PMP75 FMB70	
Communication / Interface	:	Communication HART	Device Type 23, 24, 26
		V02.30.zz, HART	Dev Rev23

2 Firmware, Hardware I

Type of change:

☒ Firmware version
☐ Hardware I revision

Firmware

Old version / revision	:	Firmware V02.20.04, HART, Dev Rev22
New version / revision	:	Firmware V02.30.06, HART, Dev Rev23

How can the old Firmware version / Hardware I revision number be identified:

1. via local display
2. via DTM (FieldCare / DeviceCare)
3. via DD (FieldCommunicator)

How can the current version of the Hardware with new firmware be determined:

- Spare part number on the main electronic module

Reason for changes

Implementation of customer requirements

Additional usage of transmitters in SIL applications (using SIL sequence):

- Backflow applications
- Split range applications
- Transmitters with special range settings (e.g. 1..5 bar)

Different confirmation and locking methods in SIL applications

- With SIL Sequence => advantage: safe. Helps to avoid commissioning errors by implementation confirmation routine of safety relevant parameters
- Without SIL Sequence => fast. Manual confirmation of safety relevant parameters required.

Description of the modification with respect to the old Firmware version:

Commissioning via “Increased security during parameter entry” => SIL sequence

- No automatic change of message settings to alarm
- Visibility of alarm settings

Commissioning via “Standard device configuration"

- No manual settings of messages required
- Transmitter can but be locked with SIL sequence
- SIL Sequence can be used. Alternatively a simple lock via Hardware (DIP switch) or Software (Code) is possible

Change in Alarm-settings Cerabar / Deltabar:

Message	Description	Allowable setting for SIL	Firmware ≤ 02.20.04		Firmware ≥ 02.20.04	
			default	Setting w / SIL sequence	default	Setting w / SIL sequence
620	Current output out of range	W / A	W	A	W	W / A
115	Sensor over pressure	W / A	W	A	W	W / A
120	Sensor under pressure	W / A	W	A	W	W / A
727	Sens. pres. over range	W / A	W	A	W	W / A
715	Sensor over temp.	W / A	W	A	W	W / A
720	Sensor under temp.	W / A	W	A	W	W / A
717	Transmitter over temp	W / A	W	A	W	W / A
718	Transmitter under temp	W / A	W	A	W	W / A
726	Sens. temp. over range	A	W	A	A	A
Alarm Current	Output Fail Mode	MIN/MAX	MAX	MAX	MAX	MIN/MAX

W: warning; A = Alarm

Change in specific functional safety parameters depending on to settings of E727

- Profile A is to be taken if E726 (chip defect) and E727 are defined as Alarm
- Profile B is to be taken if E726 is defined as Alarm and E727 is defined as warning

		Profile A	Profile B
Product		A: 726 and **727** as Alarm	A: 726 as Alarm
PMD75, FMD77/78	SFF	92,8%	91,0%
	λ_{du}	69 FIT	76 FIT
	PFD_{avg}	3.02 e-4	3.32e-4
PMP71 PMP75	SFF	92,0%	90,0%
	λ_{du}	65 FIT	88 FIT
	PFD_{avg}	2.86e-4	3.85e-4
PMC71 Ex ia*	SFF	91,0%	90,0%
	λ_{du}	80 FIT	82 FIT
	PFD_{avg}	3.50e-4	3.59e-4
FMB70	SFF	93,7%	-
	λ_{du}	53 FIT	-
	PFD_{avg}	2,32e-4	-

*Further devices, see SD0190P

Non-SIL relevant modifications

- Additional settings in QUICK/BASIC Setup (e.g. units, TAG, Alarmsettings)

3 Compatibility (Firmware, Hardware I)

Is the new Firmware version compatible with the previous version, the installed device drivers, the operating tool compatible / is the new Hardware I revision compatible with the previous revision?

☐ Yes
☒ No, description:

For the usage of the new firmware an exchange of the main electronic module required. Flashing of an older FW-version to V02.30.06 is not possible. For usage of the new functionalities, a new DTM/DD is required.

New drivers are available as download

- DTM (2.30.zz / Dev Rev 23 / DD Rev 1) e.g. for FieldCare, DeviceCare
- DD (2.30.zz / Dev Rev 23 / DD Rev 1) e.g. for Hart Communicator FC475

Improvements to DD/DTM with Firmware 02.20.zz

- A text informs user, that certain messages will be set to alarm when starting SIL sequence

The version 02.20.zz can still be ordered via order structure (feature 850, option 72)

Is a Firmware / Hardware I update generally recommended?

☐ Yes, reason:

The firmware update / hardware exchange can be performed by means of:

- Replacement of the main electronic module

☒ No, reason:

- Usage of the new implemented functions

Update/replacement:

- Change of electronic insert
- Update DTM/DD

Hardware was not changed

4 Instruction manual

Is a new instruction manual required because of the changes in point 2?

☒ Yes
☐ No

Which manual corresponds to the new Firmware version:

Device	Communication option	Manual	Documentation code
PMC71, PMP71, PMP75 PMD75, FMD77, FMD78 FMB70	4..20mA /HART	BA274	Operating Manual
PMD75, FMD77, FMD78	4..20mA /HART	SD0189P	Safety Manual
PMC71, PMP71, PMP75	4..20mA /HART	SD0190P	Safety Manual
FMB70	4..20mA /HART	SD0213P	Safety Manual

The new instruction manuals can be downloaded from the Internet:
www.endress.com - area “DOWNLOADS”
- enter the device details and type of manual

5 Price

Has the price of the device changed?

☐ Yes, new list price and update costs (without installation) are attached
☒ No

Transmitters with new firmware will be delivered beginning February 2018.