

DIN EN 14154-4:2015-02 (E)

Water meters - Part 4: Additional functionalities

Contents		Page
Foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	6
4	General requirements	7
4.1	Types of additional functionality devices and requirements	7
4.2	Connection requirements	8
4.3	Environmental conditions	8
4.4	Security	9
4.4.1	General	9
4.4.2	Software, data and hardware security	9
4.4.3	Firmware upgrade of AFD	9
4.4.4	Software identification	9
4.5	Power supply	9
4.6	Data storage	10
4.7	Clock requirements	10
4.7.1	General	10
4.7.2	Clock synchronisation	10
4.7.3	Clock setting	10
4.8	Marking	10
4.8.1	Requirements	10
4.8.2	Test	11
4.9	Documentation	11
4.9.1	General	11
4.9.2	Declaration of conformity	11
4.9.3	Instruction manual	11
4.10	Display	12
4.10.1	General	12
4.10.2	Requirements	12
4.10.3	Test	12
4.11	Metrological influence	12
4.11.1	Requirement	12
4.11.2	Test	12
4.12	Input to AFD / Output from AFD	13
4.12.1	General	13
4.12.2	Requirement	13
4.12.3	Test	13
5	Additional functionalities	13
5.1	General	13
5.2	Use cases	13
5.2.1	Scheduled read	13
5.2.2	Pre-programmed reading date	14
5.2.3	On demand read	14
5.2.4	History of consumption	14
5.2.5	Background leak	14

5.2.6	Burst	15
5.2.7	Reverse flow	15
5.2.8	Zero flow	16
5.2.9	Tamper of AFD	16
5.2.10	Tamper of meter	16
5.2.11	Battery low	16
5.2.12	Presence of air	17
5.2.13	Access profiles	17
6	Environmental considerations	17
Annex B (informative) Smart Metering, overview, core functionalities and definitions		19
B.1	General	19
B.2	M2M Gateway	19
B.3	Clusters	20
B.4	Primary Use Cases	20
B.5	Secondary Use Cases	20
B.6	Primary Actors	20
B.7	Actors	20
B.8	Use Cases	20
Annex C (informative) References to EN 14154-1, EN 14154-2 and EN 14154-3 and EN ISO 4064-1, EN ISO 4064-2, EN ISO 4064-3, EN ISO 4064-4, EN ISO 4064-5		21
Bibliography		23