

Prüflaboratorium Bonn
Hein-Moeller-Str. 7-11
D-53115 Bonn



Test Report

No2024-0147802

Order No 2402070

Customer DOM Sicherheitstechnik GmbH & Co. KG, Wesseling Str. 10-16,
D-50321 Brühl, Germany

Manufacturer DOM Sicherheitstechnik GmbH & Co. KG, Wesseling Str. 10-16,
D-50321 Brühl, Germany

Specimen ENiQ / Tapkey / ELS AccessManager V2

Type reference AccessManager V2, AccessManager Terminal V2,
AccessManager ITT V2, RF NetManager V2

Date of delivery 2024-10-15

Test Specification IEC 60529:1989 + A1:1999 + A2:2013

Tests conducted Verification of degree of protection:

IP4X (test probe, 1mm)
IP5X, cat.2 (dust chamber)
IPX4 (spray nozzle)

Test results IP4X passed
IP5X, cat.2 passed
IPX4 passed

Number of pages (total) 14 (1 cover sheet 13 documentation sheets - enclosures)

Date of issue 2024-10-28

Signature

Hartkamp

Leiter Prüfbereich/ Abteilung

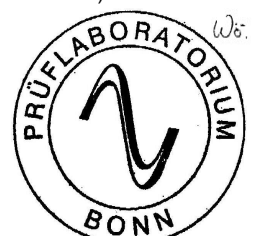


Deutsche
Akkreditierungsstelle
D-PL-19125-01-00

The above-mentioned test results refer to the tested specimen only. Uncertainties of measurement resulting from the measuring methods and the test equipment used have been determined and can be provided on request. The measurement uncertainty is not considered when providing statements of conformity according to IEC Guide 115:2007, clause 4.4.2, procedure 1. No part of the present test report shall be copied or duplicated without prior written consent of the Institute for International Product Safety GmbH (I²PS).

This test report is signed electronically. For verification of signature see www.i2ps.de/en.

I²PS is a conformity assessment body accredited by the DAkkS Deutsche Akkreditierungsstelle GmbH according to DIN EN ISO/IEC 17025 in the fields of Industrial low-voltage switchgear and controlgear, Safety of electrical equipment, Assemblies, Electromagnetic Compatibility (EMC) as well as Environmental tests.



	Schutzart 1. Kennziffer 1st characteristic numeral IEC 60529:1989 + A1:1999 + A2:2013	VA-Nr. / Order-No. 2402070 ID- 123-2400226 Abt./Name / Dept./name IPL-M/Peters Datum/Date 2024-10-25
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Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./
Drawing/prod.:

Ausführung/Beschreibung /
Design/description:

Berührungs- und Fremdkörperschutz /

test for protection against access to hazardous and solid foreign objects

Gerät Nr. / device no.	1				
Pos. Nr. / pos. no.	1				
Schutzgrad IP / degree of protection	IP4X				
Prüfmittel / test equipment	Test probe				
Feste Fremdkörper / solid foreign object	1 mm				
Fremdkörper eingetreten / solid foreign object penetrated?	no				
Prüfdatum / date of test	2024-10-22				
Prüfung bestanden / test passed	yes				

Staubprüfung / dust test in the dust chamber

Schutzgrad / degree of protection	IP5X				
Bauart / category	2				
Prüflage / mounting position	Wall mounting				
Eingestellter Luftinhalt / volume of air (setted)	---				
Abgesaugter Luftinhalt / volume of air (sucked)	---				
Staubeintritt / dust penetration	yes *(1				
Staub hat Einfluß auf das Betriebsmittel / dust could interfere the correct operation	no				
Prüfdauer / duration of test	8 h				
Prüfdatum / date of test	2024-10-22				
Prüfung bestanden / test passed	yes				

Umgebungsprüfbedingungen / ambient test conditions

Lufttemperatur / °C air temperature	25,1	Luftfeuchte / % humidity	35,5	Luftdruck / hPa barometric pressure	1022	Prüfort / testplace	11EG04
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Bemerkung / remarks:

*(1) Minimal dust particles inside visible, but have no harmful effect. (see pictures)
During the evaluation of the IP5X test was Mr. Peltzer (company DOM) present .

Ergebnis / result:

IP4X passed

IP5X, cat.2 passed

	Bilder / pictures IEC 60529:1989 + A1:1999 + A2:2013		VA-Nr. / Order-No.	2402070
			ID-	123-2400223.1
			Abt./Name / Dept./name:	IPL-M/Peters
			Datum/Date	2024-10-25

Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./ Drawing./prod.:

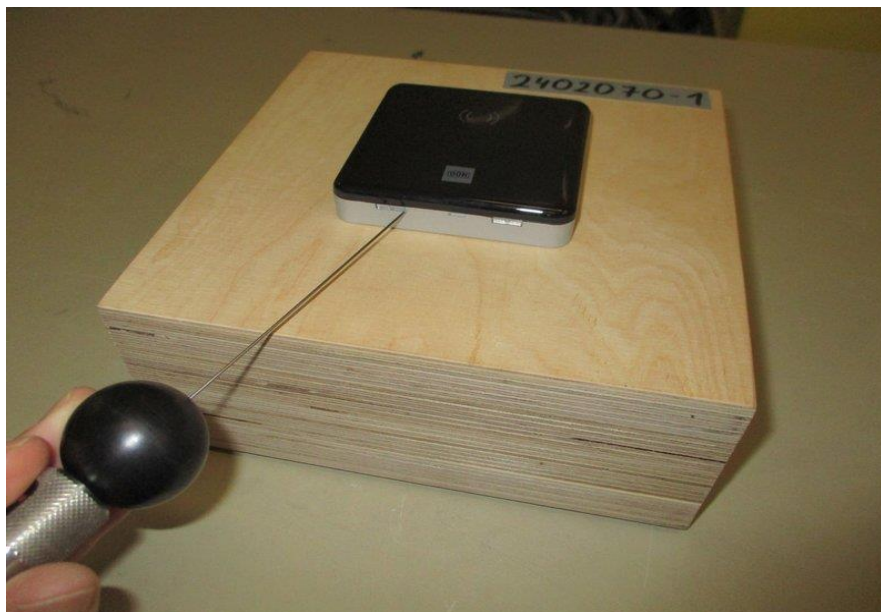
Ausführung/Beschreibung / Design/description:



Device during the IP4X test

Test probe (1mm) doesn't penetrate into the enclosure

IMG_38853 (800x600).JPG



Device during the IP4X test

Test probe (1mm) doesn't penetrate into the enclosure

IMG_38864 (800x600).JPG

	Bilder / pictures IEC 60529:1989 + A1:1999 + A2:2013	VA-Nr. / Order-No. 2402070 ID- 123-2400223.2 Abt./Name / Dept./name: IPL-M/Peters Datum/Date 2024-10-25
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Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./ Drawing./prod.:

Ausführung/Beschreibung / Design/description:



Device before the IP5X test
(in the dust chamber)

Device mounted in a wood frame

IMG_38995 (800x600).JPG



Device after the IP5X test
(in the dust chamber)

IMG_39026 (800x600).JPG

	Bilder / pictures IEC 60529:1989 + A1:1999 + A2:2013	VA-Nr. / Order-No.2402070 ID-123-2400223.3 Abt./Name / Dept./name:IPL-M/Peters Datum/Date2024-10-25
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Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./
Drawing./prod.:

Ausführung/Beschreibung /
Design/description:



Device after the IP5X test
(before open)

IMG_39118 (800x600).JPG



Device after the IP5X test
(open)

No dust inside visible

IMG_39139 (800x600).JPG

	Bilder / pictures IEC 60529:1989 + A1:1999 + A2:2013	VA-Nr. / Order-No.2402070 ID-123-2400223.4 Abt./Name / Dept./name:IPL-M/Peters Datum/Date2024-10-25
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Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./ Drawing./prod.:

Ausführung/Beschreibung / Design/description:



Device after the IP5X test
(open)

No dust inside visible

IMG_391410 (800x600).JPG



Device after the IP5X test
(open)

Light dust deposits on the
internal housing edge visible

No dust on the terminals visible

IMG_391511 (800x600).JPG

	Schutzart 2. Kennziffer 2nd characteristic numeral IEC 60529:1989 + A1:1999 + A2:2013	VA-Nr. / Order-No. 2402070 ID- 123-2400228 Abt./Name / Dept./name: IPL-M/Peters Datum/Date 2024-10-25
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Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./ Drawing/prod.:

Ausführung/Beschreibung /

Design/description:

Prüfung für Schutz gegen Wasser / test for protection against water

Gerät Nr. / device no.	1				
Pos. Nr. / pos. no.	1				
Schutzgrad / degree of protection	IPX4				
Prüfmittel / test equipment	Spray nozzle				
Prüflage / mounting position	Wall mounting				
Wasservolumenstrom / water flow rate	10 l/min.				
Prüfdauer / duration of test	5 min.				
Wassereintritt / water penetration	yes *(1				
Ist der ordnungsgemäße Betrieb oder die Sicherheit des Betriebsmittels beeinträchtigt? / Is the entered water sufficient to interfere with the correct operation of the equipment or impair safety?	no				
Hat es sich an Isolierteilen abgelagert, wo es zu Kriechströmen führen kann? / Has the water deposited on insulation parts where it could lead to tracking along the creepage distances?	no				
Hat es spannungsführende Teile oder Wicklungen, die nicht zum Betrieb in nassem Zustand ausgelegt sind, erreicht? Can the water reach live parts or windings not designed to operate when wet?	no				
Hat es sich in der Nähe des Leitungsende angesammelt oder kann es ggf. in die Leitung eindringen? / Has the water accumulated near the cable end or entered the cable if any?	no				
Prüfdatum / date of test	2024-10-23				
Prüfung bestanden / test passed	yes				

Umgebungsprüfbedingungen / ambient test conditions

Lufttemperatur / °C air temperature	27,0	Luftfeuchte / % humidity	32,6	Luftdruck / hPa barometric pressure	1027	Prüfort / testplace	11EG02
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Bemerkung / remarks:

*(1 Some water drops penetrated into the enclosure, but no touch any electrical components and had no harmful effect.(see pictures)

A function test before and after the IPX4 test was passed

During the IPX4 test and the evaluation was Mr. Peltzer (company DOM) present .

Ergebnis / result:

IPX4 passed

	Bilder / pictures		VA-Nr. / Order-No.	2402070
	IEC 60529:1989 + A1:1999 + A2:2013		ID-	123-2400225.1
			Abt./Name / Dept./name:	IPL-M/Peters
			Datum/Date	2024-10-25

Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./ Drawing./prod.:

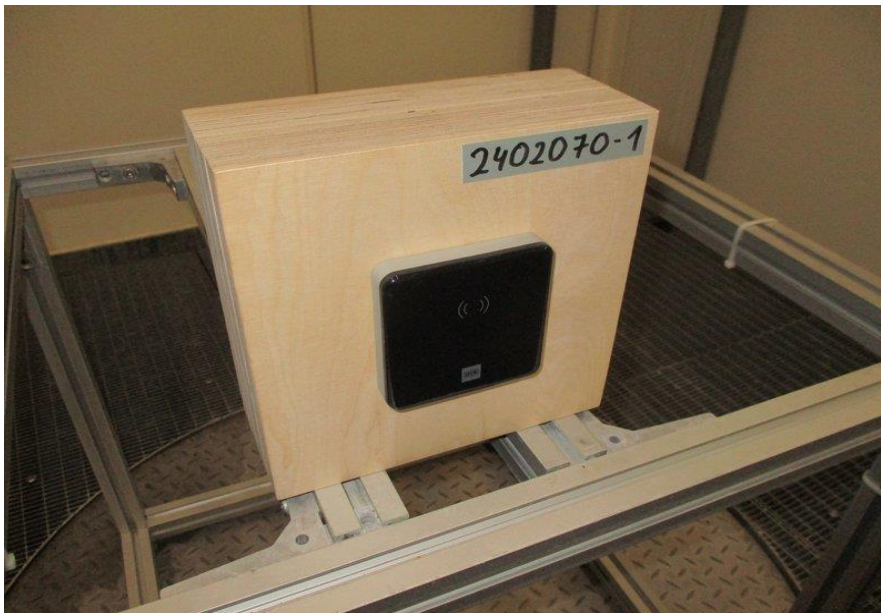
Ausführung/Beschreibung / Design/description:



Device before the IPX4 test

Function test passed

IMG_39382 (800x600).JPG



Device before the IPX4 test

Device mounted in a wood frame

IMG_39393 (800x600).JPG

	Bilder / pictures IEC 60529:1989 + A1:1999 + A2:2013	VA-Nr. / Order-No.2402070 ID-123-2400225.2 Abt./Name / Dept./name:IPL-M/Peters Datum/Date2024-10-25
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Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./ Drawing./prod.:

Ausführung/Beschreibung / Design/description:



Device during the IPX4 test

IMG_39404 (800x600).JPG



Device during the IPX4 test

IMG_39415 (800x600).JPG

	Bilder / pictures IEC 60529:1989 + A1:1999 + A2:2013	VA-Nr. / Order-No.	2402070
		ID-	123-2400225.3
		Abt./Name / Dept./name:	IPL-M/Peters
		Datum/Date	2024-10-25

Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

**Zeichnung/Fert./
Drawing./prod.:**

**Ausführung/Beschreibung /
Design/description:**



Device after the IPX4 test
(before open)

IMG_39426 (800x600).JPG



Device after the IPX4 test

Function test passed

IMG_39448 (800x600).JPG

	Bilder / pictures	
	IEC 60529:1989 + A1:1999 + A2:2013	
		VA-Nr. / Order-No. 2402070
		ID- 123-2400225.4
		Abt./Name / Dept./name: IPL-M/Peters
		Datum/Date 2024-10-25

Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./ Drawing./prod.:

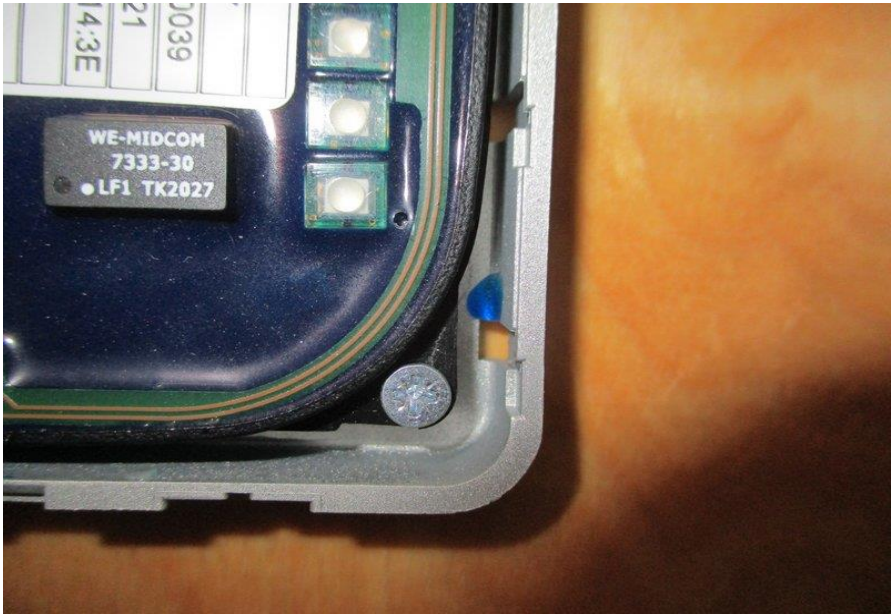
Ausführung/Beschreibung / Design/description:



Device after the IPX4 test (open)

Some water drops inside visible, but don't touch any electrical components (water blue coloured)

IMG_39509 (800x600).JPG



Device after the IPX4 test (open) detail

Some water drops inside visible, but don't touch any electrical components (water blue coloured)

IMG_395110 (800x600).JPG

	Bilder / pictures IEC 60529:1989 + A1:1999 + A2:2013	VA-Nr. / Order-No. 2402070 ID- 123-2400225.5 Abt./Name / Dept./name: IPL-M/Peters Datum/Date 2024-10-25
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Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

Zeichnung/Fert./ Drawing./prod.:

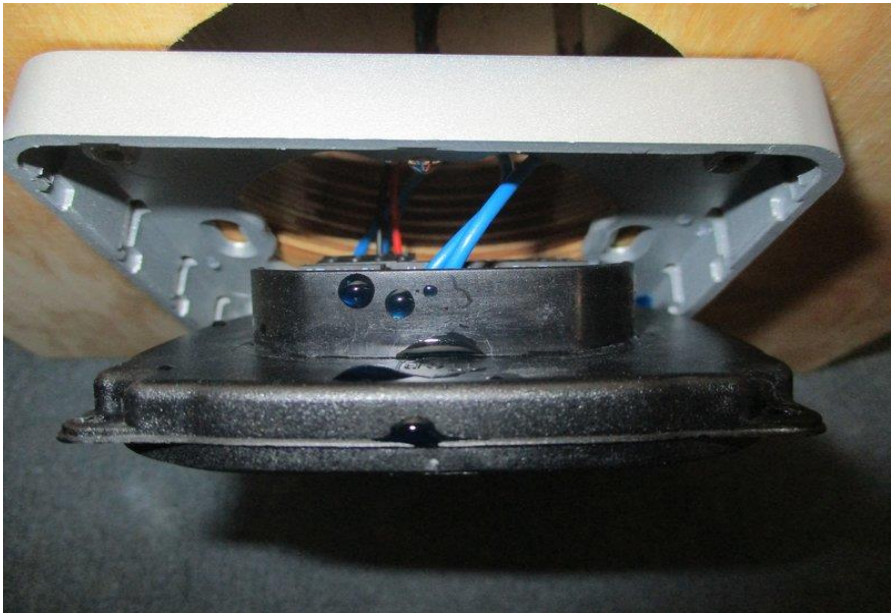
Ausführung/Beschreibung / Design/description:



Device after the IPX4 test
(open)

Some water drops inside visible,
but don't touch any electrical
components
(water blue coloured)

IMG_395411 (800x600).JPG



Device after the IPX4 test
(open)

Some water drops inside visible,
but don't touch any electrical
components
(water blue coloured)

IMG_395612 (800x600).JPG

	Bilder / pictures IEC 60529:1989 + A1:1999 + A2:2013	
	VA-Nr. / Order-No.	2402070
		ID- 123-2400225.6
		Abt./Name / Dept./name: IPL-M/Peters
		Datum/Date 2024-10-25

Type/type: AccessManager V2, AccessManager Terminal V2, AccessManager ITT V2, RF NetManager V2

Gerät/Device: ENiQ / Tapkey / ELS AccessManager V2

**Zeichnung/Fert./
Drawing./prod.:**

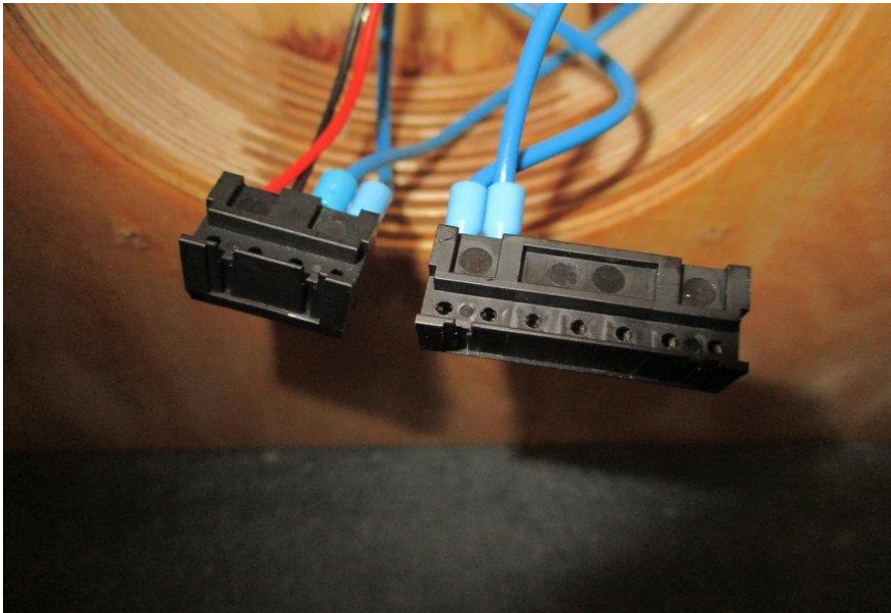
**Ausführung/Beschreibung /
Design/description:**



Device after the IPX4 test
(open) detail

No water inside visible

IMG_395813 (800x600).JPG



Device after the IPX4 test
(open) detail

No water inside visible

IMG_395914 (800x600).JPG

		Verwendete Prüfmittel Instruments used in tests	Datum: 2024-10-25 Date:	
PMV-Nr. des Messgerätes Instrument ID	Bezeichnung Prüfmittel Equipment name	Benutzer Messbereich Range used	Kalib.datum Calib.date YYYY-MM	Ablaufdat. Expiry date ¹ YYYY-MM

VA 2402070 IEC 60529:1989 + A1:1999 + A2:2013
PS 10 IP Schutzart, 1. Kennziffer

400123000848	Rollbandmaß / tape measure	0 ... 5 m	2023-10	2024-10
400123001050	Elektro-Multifunktions-Zähler/ Timer	0 sec. ... 99 min.	2024-03	2025-03
400123000992	Prüfsonde / test probe	1,0 mm / 1 N	2022-08	2025-08
400130901442	Multifunktionsmeßgerät mit Feuchtefühler und Druckmodul / climate datalogger	700 hPa ... 1050 hPa	2024-06	2025-06
400123000640	Feuchtefühler mit Anzeigegerät / temperature and humidity instrument	-20 °C ... 60 °C / 5 %rH ... 98 %rH	2024-08	2025-08

VA 2402070 IEC 60529:1989 + A1:1999 + A2:2013
PS 20 IP Schutzart, 2. Kennziffer

400123000848	Rollbandmaß / tape measure	0 ... 5 m	2023-10	2024-10
400123001050	Elektro-Multifunktions-Zähler/ Timer	0 sec. ... 99 min.	2024-03	2025-03
400123000107	Durchflußwächter / flowrate instrument	200 l/h ... 1600 l/h	2024-03	2027-03
400130901442	Multifunktionsmeßgerät mit Feuchtefühler und Druckmodul / climate datalogger	700 hPa ... 1050 hPa	2024-06	2025-06
400123000640	Feuchtefühler mit Anzeigegerät / temperature and humidity instrument	-20 °C ... 60 °C / 5 %rH ... 98 %rH	2024-08	2025-08

Index 1: Ablaufdatum ist der letzte Tag des Monats/ Expiry date is the last day of the month