



Quality Assessment Report	
QAR Free Reference No.:	4791666711
QAN No.	DEMKO 14 ATEX Q5161 Rev. 8
QAR No.:	DK/ULD/QAR14.0002/08
INMETRO No.	BR/ULBR/INMETRO22.20464/02
IECEX Certification Body:	UL Solutions (Demko)
ATEX Notified Body:	UL International Demko A/S
INMETRO Certification Body:	UL do Brasil

Manufacturer:	Name:	Piezocryst Advanced Sensorics GmbH
	Address:	Hans List Platz 1, 8020 Graz Austria
Site(s) Audited:	Name:	Same as Manufacturer
	Reference Number:	A28477
Total Number of Employees⁽¹⁾:		170
Number of Employees Involved in the Production of Ex Products⁽¹⁾:		170
Product Type(s) Covered Under Scope:		Pressure transducers/transmitters
Scope of Audit:		
Scheme	Protection Method(s)/Standard(s)	Requirements
ATEX PQAN	Increased Safety "e", Intrinsic safety "i"	ATEX Directive ATEX Module D (Annex IV) EN ISO/IEC 80079-34:2020
IECEX QAR	Increased Safety "e", Intrinsic safety "i"	IECEX ISO/IEC 80079-34, Edition 2.0, 2018-08
INMETRO	Increased Safety "e", Intrinsic safety "i"	INMETRO Portaria 115:2022
<i>Note⁽¹⁾: List for each site audited.</i>		

Summary Report

Assessment Summary and Conclusions:

The surveillance audit at Piezocryst Advanced Sensorics GmbH, showed that all persons interviewed demonstrated a strong commitment to the high quality standards set by Piezocryst.

All requirements of the underlying standards (EN/ISO/IEC 80079-34, INMETRO Portaria 115:2022) are fully met.

The quality management system at Piezocryst Advanced Sensorics GmbH can be considered state of the art and a role model.

The audit was conducted in an open, professional, and friendly manner.

All persons interviewed took the requirements as well as the execution very seriously and were open to suggestions for improvements.

There was no need to adjust the audit program from the audit plan.

The ISO 9001 report, nonconformities and correction actions were reviewed during the audit.

The Manufacturer has demonstrated the conformity and the effectiveness of the management system as evident in the Documentation Review and Assessment of Implementation section of this report.



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The Manufacturer is effectively controlling the use of the certification documents and marks.		
The verification of effectiveness of taken corrective actions for previously identified nonconformities, if applicable, can be found in the Closing Meeting Summary, Form-ULID-004253 (DCS:00-EX-F0068).		
A list of interviewed representatives and critical suppliers can be found in the IECEX System, ATEX, & INMETRO Quality Audit checklist, Form-ULID-004254 (DCS:00-EX-F0400).		
The scope of the assessment was appropriate for the documents noted under Reference Documents below.		
The recommendation from the audit team, as well as the signature of the Manufacturer's Representative, can be found in the Closing Meeting Summary Form, Form-ULID-004253 (DCS:00-EX-F0068).		
The requirements of INMETRO Portaria 115:2022 are supplemented by INMETRO Portaria 200:2021 and those have been covered by this audit.		
Audit Team Leader Recommendations		
PQAN / QAR / INMETRO Audit Report to be maintained; audit objectives have been achieved, system in compliance (no findings).		
Audit Team Leader:	Name:	Tim Freidank
	Signature:	<i>Tim Freidank</i>
	Date (YYYY-MM-DD):	2025-06-03
Certification Body Representative:	Name:	Erin LaRocco
	Signature:	<i>Erin LaRocco</i>
	Date (YYYY-MM-DD):	2025-06-13
Audit Information**		
Type of Audit:	Surveillance	
** Auditing is based on a sampling process of the available information.		
QS Registration:	ISO 9001	Registrar: Bureau Veritas UK
		Registrar Accreditor: UKAS
		Registrar accredited by IAF Member: Yes
		Certificate No.: AT002873
		Expiration Date: 2027-01-31
Auditor(s):	Team Leader:	Tim Freidank
	Other (Role):	Babak Donyadideh (Observer)



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Initial Audit Date(s) ⁽⁶⁾ :		2014-12-03	
Audit Date(s):		2025-05-15	
Next Audit By (YYYY-MM-DD) ⁽⁷⁾ :		2026-10-03 (Certification expires 2026-12-03)	
Special focus on (if applicable):		N/A	
Reference Documents: <i>(include quality manual and other documents or procedures referenced during the audit)</i>	Document Number:	Name	Revision
	Form-ULID-004254 (DCS:00-EX-F0400)	Audit Checklist:	27.0
	Handbuch	QEHS Handbuch	Web, Sharepoint (59th Edition, 18.02.2025)
	PZ-IR-06.01	Kompetenzmatrix	As of 2025-05-14
	PZ-IR-124_ATEX-EX_Schulungsunterlagen	ATEX-EX Schulungsunterlagen	
	PZ-AA-147-ATEX/IECEX	Verguß des Verstärkers GO32M	01, 24.01.2023
	PZ-IR-264_1	Übersicht ATEX Dokumente PZI	05
	PZ-IR-212	CP5X Änderungsübersicht	01
	PZ-IR-282	Bearbeitung Mängelrüge	12.05.2025
	PZ-VA-001	Verfahren zur Lenkung von Dokumenten	19, 06.05.2025
	PZ-VA-09-001	Prüfmittelüberwachung	07
	PZ-VA-10-001	Lenkung fehlerhafter Produkte und verbessernde Maßnahmen	09
List of all applicable Certificates ⁽⁸⁾ :	IECEX	Danfoss A/S Certificates: IECEX ULD 18.0004X (Applicant Danfoss A/S) IECEX PRE 15.0029X (Applicant Danfoss A/S)* Piezocryst Certificates: IECEX LCIE 16.0040X IECEX LCIE 17.0002X IECEX LCIE 17.0024X IECEX LCIE 21.0014X IECEX LCIE 22.0009X IECEX LCIE 23.0005X	1 Discontinued 0 2 0 0 0 0
	ATEX	Danfoss A/S Certificates: Presafe 15 ATEX 6650X (Applicant Danfoss A/S)* DEMKO 18 ATEX 2006X (Applicant Danfoss A/S)	Discontinued 2



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		Piezocryst Certificates: LCIE 16 ATEX 3051X LCIE 17 ATEX 3007X LCIE 17 ATEX 3027X LCIE 21 ATEX 3011X LCIE 22 ATEX 3004X LCIE 23 ATX 1003X LCIE 24 ATEX 1001 X SIQ 20 ATEX 005X SIQ 20 ATEX 006X	0 1 0 0 0 0 0 0 2 2
	INMETRO	UL-BR 20.0979X	02
<p>*These certificates should be cancelled. Applicant (Danfoss) has been notified by Piezocryst to do so. Protection method "n" has been removed from IECEX QAR and INMETRO accordingly. Verify cancellation has occurred during next audit.</p>			
<p>Note⁽⁶⁾: All initial audit dates should be listed here for each scheme if they are different. Note⁽⁷⁾: Next audit date should be calculated 12 or 18 months from the initial audit date. Note⁽⁸⁾: List certificates in alphanumerical order.</p>			
Nonconformities: (as detailed in the attached Nonconformity (NCR) Report(s), when applicable)	<input checked="" type="checkbox"/> None <input type="checkbox"/> Major - <input type="checkbox"/> Minor -		
Observations:	Any observations are summarized in the Closing Meeting Summary, Form-ULID-004253 (DCS:00-EX-F0068).		
Scope Limitations:	<input type="checkbox"/> None <input checked="" type="checkbox"/> SL1		
		INMETRO certificate may be discontinued. The customer complaint treatment is YTD performed by Piezocryst in Graz. The INMETRO certificate is for a sensor used by Mitsubishi in a large turbine and embedded in the larger equipment, no sale of single modules to Brazil directly). Mitsubishi seems to be unwilling to have the CCT outsourced to Brazil and the certificate will be discontinued once expired. <i>Additional provisions for INMETRO certified products: Complaints will be handled in Brazil by Marlim Azul Energia S. A. (Rua Tabapua, 841, Cj. 101,102 E103, 04533-013, Itaim Bibi, SP looked after and forwarded to us via Mitsubishi and Sankyo. We evaluate all complaints and follow-up measures in terms of content and statistics on a quarterly basis and present them in the management review.</i>	



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Documentation Review and Assessment of Implementation:

Clause No.	Clause Description	Clause Assessed?			Scope Limitation – (SL1, SL2, etc.)	Nonconformity Information	
		Yes	No	N/A		NCR Reference (JM-1, JM-2, etc.)	Department / Area Audited, In Relation to NCR
4.1	Understanding the organization and its context	X					
4.2	Understanding the needs and expectations of interested parties	X					
4.3	Determining the scope of the quality management system	X					
4.4	Quality management system and its processes	X					
5.1	Leadership and commitment	X					
5.2	Policy	X					
5.3	Organizational roles, responsibilities and authorities	X					
6.1	Action to address risks and opportunities	X					
6.2	Quality objectives and planning to achieve them	X					
6.3	Planning of changes	X					
7.1	Resources	X					
7.1.1	Support - General	X					
7.1.2	People	X					
7.1.3	Infrastructure	X					
7.1.4	Environment for the operation of processes	X					
7.1.5	Monitoring and measuring resources	X					
7.1.6	Organizational Knowledge	X					
7.2	Competence	X					
7.3	Awareness	X					
7.4	Communication	X					
7.5	Documented Information	X					
7.5.1	Documented information - General	X					
7.5.2	Creating and updating	X					
7.5.3	Control of documented Information	X					
8.1	Operational planning and control - General	X					
8.2	Requirements for products and services	X					
8.2.1	Customer Communication	X					
8.2.2	Determining the requirements for	X					



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		Yes	No	N/A		NCR Reference (JM-1, JM-2, etc.)	Department / Area Audited, In Relation to NCR
	products and services						
8.2.3	Review of the requirements for products and services	X					
8.2.4	Changes to requirements for products and services	X					
8.3.1-8.3.5	Design and Development of products and services			X			
8.3.6	Design and Development Changes	X					
8.4	Controls of externally provided processes, products and services	X					
8.4.1	Controls of externally provided processes, products and services - General	X					
8.4.2	Type and extent of control	X					
8.4.3	Information for External Providers	X					
8.5	Production and service provision	X					
8.5.1	Control of production and service provision	X					
8.5.2	Identification and traceability	X					
8.5.3	Property belonging to customers or external providers	X					
8.5.4	Preservation	X					
8.5.5	Post-delivery Activities	X					
8.5.6	Control of Changes	X					
8.6	Release of Products and Services	X					
8.7	Control of nonconforming outputs	X					
9.1	Monitoring, measurement, analysis and evaluation	X					
9.2	Internal audit	X					
9.3	Management review	X					
9.3.1	Performance Evaluation - General	X					
9.3.2	Management review inputs	X					
9.3.3	Management review outputs	X					
10.1	Improvement - General	X					
10.2	Nonconformity and Corrective Action	X					
10.3	Continual improvement	X					



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A.2	Information relevant to particular types of protection - General	X					
A.3	Ex d - Flameproof enclosures covered by IEC 60079-1			X			
A.4	Ex i - Intrinsic safety covered by IEC 60079-11	X					
A.5	Ex e - Increased safety, covered by IEC 60079-7	X					
A.6	Ex p - Pressurized equipment covered by IEC 60079-2			X			
A.7	Ex m – Encapsulation covered by IEC 60079-18			X			
A.8	Ex o - Liquid immersion covered by IEC 60079-6			X			
A.9	Ex q - Powder filling covered by IEC 60079-5			X			
A.10	Equipment covered by IEC 60079-15			X			
A.11	Ex t – Dust Ignition protection by enclosure covered by IEC 60079-31			X			
A.12	Ex op – Optical radiation covered by IEC 60079-28			X			
A.13	Gas detectors covered by IEC 60079-29			X			
A.14	Ex h – Non-electrical equipment covered by ISO 80079-36			X			
A.15	Non Electrical Equipment protected by constructional safety “c” covered by ISO 80079-37			X			
A.16	Non-electrical equipment protected by control of ignition sources “b” covered by ISO 80079-37			X			
A.17	Non-electrical equipment protected by liquid immersion “k” covered by ISO 80079-37			X			
A.18	Flame arresters covered by ISO 16852			X			
ZB.9	Fans (EN 14986)			X			
ZB.10	Petrol dispensers, metering pumps, and remote pumping units (EN 13617-1/ABNT NBR 15456)			X			



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		Yes	No	N/A		NCR Reference (JM-1, JM-2, etc.)	Department / Area Audited, In Relation to NCR
A.19	Electrical resistance trace heating – Typical routine tests from IEC/IEEE/EN 60079-30-1			X			
A.20	Nozzles – Typical routine tests from EN 13012			X			
A.21	Safe Breaks – Typical routine tests from EN 13617-2			X			
A.22	Shear Valves – Typical routine tests from EN 13617-3			X			
A.23	Swivels – Typical routine tests from EN 13617-4			X			
A.24	Submersible Pump Assemblies – Typical routine tests from EN 15268			X			
A.25	Group I, Category M1 equipment (EN 50303)			X			
Annex B	Verification criteria for elements with non-measurable paths used as integral part of a Type of Protection			X			



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		Yes	No	N/A		NCR Reference (JM-1, JM-2, etc.)	Department / Area Audited, In Relation to NCR
Portaria 115:2022 (Clause 6.1.1.1) and Portaria 200:2021 (Clause 6.2.1.2 f)							
6.1.1.1 + 6.2.1.2 f)	Instruction manual in Portuguese language ⁽¹⁰⁾	X					
INMETRO Portaria 115:2022							
Annex II	INMETRO Conformity identification seal ⁽¹¹⁾	X					
INMETRO Portaria 115:2022 (Clause 8) + INMETRO Portaria 200:2021 (Clause 7)							
7	Customer complaints treatment			X	SL1		
7.1 – a	Customer complaints system policy			X	SL1		
7.1 – b	Customer complaints treatment systematic			X	SL1		
7.1 – c	Indication of responsible person or team for customer complaints treatment			X	SL1		
7.1 – d	Means for customer complaints treatment			X	SL1		
7.2	Annual critical analysis of customer complaints			X	SL1		
7.3	Customer complaints treatment locations			X	SL1		
7.3.1	MPE Location			X	SL1		
<p>Note⁽¹⁰⁾: Confirm the manufacturer is providing the instructions in Brazilian Portuguese language. If not an NCR must be issued and referenced as “Clause 6.1.1.1 of Portaria 115:2022 and Clause 6.2.1.2 f) of Portaria 200:2021.”</p> <p>Note⁽¹¹⁾: Confirm the manufacturer is placing the UL/INMETRO product label on the product and the UL/INMETRO package label on the package. See Annex II of INMETRO Portaria 115:2022.</p>							