



Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin
Nationales Metrologieinstitut

Erstprüfung nach IEC 60079-14

20. Seminar für Ex-Sachverständige

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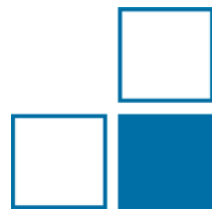
Leiter PTB-Fachbereich „Explosionsgeschützte Sensorik und Messtechnik“

Immediate Past Chair of ExNBG

IEC TC 31 Chair “Equipment for Explosive Atmospheres”

Vorsitzender des DKE K241 „Schlagwetter- und explosionsgeschützte elektrische Betriebsmittel“

Vorsitzender des VDE Bezirksverein Braunschweig e.V.



1

IEC 60079-14 → Wunsch und Wirklichkeit



ICH MACH MIR
DIE WELT
WIE SIE MIR
GEFÄLLT!

PIPPi
LANGSTRUMPF



&



und natürlich
viele andere

erschaffen eine Normvorstellung
(eine ideale Ex-Welt)

wohl wissend, dass die Realität
(erschreckend) anders ist

basierend auf Ex-Geräten,
die sicher sind



2

IEC 60079-14:2024



- Titel der 6. Ausgabe aus August 2024:
Explosive atmospheres – Part 14: Electrical installation design, selection and installation of equipment, including initial inspection
- Im Anwendungsbereich heißt es:
This part of IEC 60079 contains the specific requirements for the design of electrical systems, selection, installation and the required initial inspection of electrical installations of Ex Equipment in, or associated with, explosive atmospheres including requirements for documentation and personnel competency.

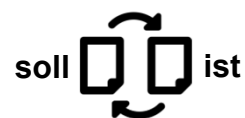
These requirements are in addition to the requirements for installations in non-hazardous areas.
- Clause 9 regelt die Anforderungen an die „initial inspection“, mit dem Verweis auf den Anhang O.
C5 The previous normative tables in the section "Initial inspection" are included in the informative Annex O. This allows checklists to be customized for specific installations.



IEC 60079-14:2024 Clause 9



9 Initial inspection



Ex Equipment shall be installed in accordance with its documentation. It shall be ensured that replaceable items are of the correct type and rating. On completion of the installation of equipment and prior to first use, initial detailed inspection of the Ex Equipment and installation shall be carried out. Some initial inspection checks may be done during the design stage or as part of the design verification, for example selection of luminaires could be performed during the design such that the installer only needs to confirm the luminaire type matches the item specified.

NOTE Inspection schedules are derived from IEC 60079-17 for detailed inspections.

Examples of initial inspection schedules are given in Annex O. The tables are not intended to be applied exactly as presented. Items within the tables may be deleted or modified or added to according to the nature of the equipment or site requirements.



IEC 60079-14:2024 Anhang O



– 128 –

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Annex O (informative)

Inspection tables for initial inspections (from IEC 60079-17)

Table O.1 shows the initial inspection schedule for Ex "d", Ex "e", Ex "n" and Ex "t"/"TD" installations.

Table O.1 – Initial inspection schedule for Ex "d", Ex "e", Ex "n" and Ex "t"/"TD" installations

Table O.2 shows the initial inspection schedule for Ex "i" installations.

Table O.2 – Initial inspection schedule for Ex "i" installations

Table O.3 shows the inspection schedule for Ex "p" and "pD" installations.

Table O.3 – Inspection schedule for Ex "p" and "pD" installations

Table O.4 shows the inspection schedule for Ex "o" installations.

Table O.4 – Inspection schedule for Ex "o" installations

Check that:		Ex "d"	Ex "e"	Ex "n" Ex "tD"
X = required for all types, – = not required for initial inspection, n = type "n" only, t = type "t" and "TD" only		Initial Inspection		
A	GENERAL (ALL EQUIPMENT)			
1	Equipment is appropriate to the EPL/Zone requirements of the location	X	X	X
2	Equipment group is correct	X	X	X
3	Equipment temperature class is correct (only for gas)	X	X	n
4	Equipment maximum surface temperature is correct			t
5	Degree of protection (IP grade) of equipment is appropriate for the level of protection/group/conductivity	X	X	X
6	Equipment circuit identification is correct	X	X	X
7	Equipment circuit identification is available	X	X	X
8	Enclosure, glass parts and glass-to-metal sealing gaskets and/or compounds are satisfactory	X	X	X
9	There is no damage or unauthorized modifications	X	X	X
10	There is no evidence of unauthorized modifications	-	-	-
11	Bolts, cable entry devices (direct and indirect) and blanking elements are of the correct type and are complete and tight			
	– physical check	X	X	X
	– visual check	-	-	-
12	Threaded covers on enclosures are of the correct type, are tight and secured			
	– physical check	X	-	-
	– visual check	-	-	-
13	Joint surfaces are clean and undamaged and gaskets, if any, are	X		

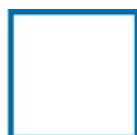
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5



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6