



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: issue No.: Certificate history:

Status:

Date of Issue: **2013-02-27** Page 1 of 4

Applicant: **Festo AG & Co. KG**
Rüter Straße 82
73734 Esslingen
Germany

Electrical Apparatus: **EA module type CPX-P-8DE-N-IS**
Optional accessory: manifold blocks type CPX-P-AB-2XKL-8POL-8DE-N-IS resp. CPX-P-AB-4XM12-4POL-8DE-N-IS


Type of Protection: **Intrinsic Safety**

Marking: [Ex ia Ga] IIC resp.
[Ex ia Da] IIIC

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Harald Zelm

Position: Head of Certification Body

Signature:
(for printed version)



2013-02-27

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

ZELM Explosionsschutz GmbH
Siekgraben 56
D-38124 Braunschweig
Germany

ZELM 



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Manufacturer: **Festo AG & Co. KG**
Ruiter Straße 82
73734 Esslingen
Germany

Additional Manufacturing location
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition: 6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition: 6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-26 : 2006 Edition: 2	Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
[DE/ZLM/ExTR12.0008/00](#)

Quality Assessment Report:
[NL/DEK/QAR12.0012/00](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The EA module type CPX-P-8DE-N-IS with manifold blocks type CPX-P-AB-2XKL-8POL-8DE-N-IS resp. CPX-P-AB-4XM12-4POL-8DE-N-IS is used for sending, receiving and processing of intrinsic safe and non-intrinsic safe signals. The EA module can be used with valve terminals of type CPX-P resp. MPA-FB. The valve terminals CPX-P resp. MPA-FB consists out of interlinking blocks, in which bus nodes resp. control blocks, other function modules with separate manifold blocks, and pneumatic valves can be assembled. The end of the valve terminal is formed by the associated end plates. The supply of the modules, as well as the communication to higher positions resp. other modules will be provided by the common bus, which is connected by the interlinking blocks. The manifold blocks CPX-P-AB-2XKL-8POL-8DE-N-IS resp. CPX-P-AB-4XM12-4POL-8DE-N-IS provide different intrinsic safe circuits.

Permissible ambient temperature range of the EA module:

$$-5\text{ °C} < T_{\text{amb}} < 70\text{ °C}$$

Permissible ambient temperature range of the valve terminal CPX-P resp. MPA-FB resp. manifold block CPX-P-AB-2XKL-8POL-8DE-N-IS resp. CPX-P-AB-4XM12-4POL-8DE-N-IS:

$$-5\text{ °C} < T_{\text{amb}} < 50\text{ °C}$$

Permitted manifold blocks:

- CPX-P-AB-2XKL-8POL-8DE-N-IS
- CPX-P-AB-4XM12-4POL-8DE-N-IS

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The EA module CPX-P-8DE-N-IS shall be only used with interlinking blocks of type CPX-M-GE-EV-* and manifold blocks of type CPX-P-AB-2XKL-8POL-8DE-N-IS or CPX-P-AB-4XM12-8POL-8DE-N-IS.
2. The EA module is part of valve terminals type CPX-P resp. MPA-FB. Between the non-intrinsic safe and the intrinsic safe modules an isolation plate of type CPX-P-AB-IP shall be used. If no electrical interface is nearby the module, the isolation plate must not be used.
3. For the installation of EA Modules CPX-P-8DE-N-IS a heat input of 6 W power dissipation was taken into account by neighboring modules.
4. The operating instructions and the special documentation must be observed.



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EQUIPMENT(continued):

Electrical Data

Supply

only for use in a valve terminal of type CPX-P resp.
MPA-FB with an interlinking block of type CPX-M-GE-EV-
Nominal voltage: $24\text{ V} \pm 25\%$
Nominal power: $P_n = 1,8\text{ W}$
maximum r.m.s. a.c. voltage: $U_m = 60\text{ V}$

Communication

via the bus interface of the interlinking blocks of
type CPX-M-GE-EV-* according IEC 60947-5-6
Open-circuit voltage: $U_n = 5,0\text{ V} \pm 10\%$
maximum r.m.s. a.c. or d.c. voltage $U_m = 60\text{ V}$

Output circuit
(with CPX-P-AB-4XM12-4POL-8DE-N-IS
X1 up to X4 each with
Pin 1, 2 resp. Pin 3, 4
resp.
with CPX-P-AB-2XKL-8POL-8DE-N-IS
X1 and X2 each with
Pin 1, 2 resp. Pin 3, 4 resp.
Pin 5, 6 resp. Pin 7, 8)

in type of protection intrinsic safe Ex ia IIC resp. Ex ia IIIC
with following maximum values per circuit:
 $U_o = 10\text{ V}$
 $I_o = 16,8\text{ mA}$
 $P_o \leq 42\text{ mW}$
maximum permissible external Capacitance
 $C_o = 3\text{ }\mu\text{F}$
maximum permissible external Inductance
 $L_o = 125\text{ mH}$

The Output circuits are galvanical separated from the supply and communication circuits.