



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.:	IECEX NEM 09.0001	Issue No: 2	<u>Certificate history:</u> Issue No. 2 (2015-03-30) Issue No. 1 (2010-12-20) Issue No. 0 (2009-05-04)
Status:	Current	Page 1 of 4	
Date of Issue:	2015-03-30		
Applicant:	Palmstierna International AB Korta Gatan 9 SE-171 54, Solna Sweden		
Electrical Apparatus: <i>Optional accessory:</i>	D3E, D20E & APEX 9000		
Type of Protection:	Ex d IIB / tb IIIC		
Marking:	Ex d IIB +H2 T6 Gb Ta:60°C Ex tb IIIC T100°C Db Ta: 80°C		

*Approved for issue on behalf of the IECEx
Certification Body:*

Asle Kaastad

Position:

Certification Manager

*Signature:
(for printed version)*

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:

NEMKO
Gautadelleen 30
Oslo N-0314
Norway





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Manufacturer: **Palmstierna International AB**
Korta Gatan 9
SE-171 54, Solna
Sweden

Additional Manufacturing
location(s):
same as above.

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 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

*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:

NO/NEM/ExTR09.0001/00 NO/NEM/ExTR09.0001/01 NO/NEM/ExTR09.0001/02

Quality Assessment Report:

NO/NEM/QAR08.0008/00 NO/NEM/QAR08.0008/01



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

General product information:

Models D3E, D20E, APEX 9000 is digital positioner designed primarily to control modulating valves. The positioner can be used with single or double action actuators with either rotary or linear movement. These positioners comprises an electronic board with microprocessor, hart modem, display etc, a valve block, a positional feedback with potentiometer and a compartment for electrical connections. The pushbuttons and display are accessible from underneath the threaded lid cover. The whole assembly is contained in a flameproof aluminium enclosure with two threaded lids and two threaded openings for cable glands/conduits. Flame arresters are integrated in the enclosure in each air inlet and outlet. The alternate material used is stainless steel with two same threaded lids and two threaded openings for cable glands (NPT & M20).

Type Designations

D3E, D20E & APEX 9000

The additional letters and digits in the type reference concern different accessories and functions of the instrument.

a: Air pipe connection thread type, b: Surface treatment, c: Function, de: Spindle, fgh: Cover and indicator, i: Temperature/Seals, j: Input signal/protocol, k: Feedback option, l: Accessories.

Input signal / Protocoll for APEX 9000:

4-20mA / None

4-20mA / HART

Input signal / Protocoll for D20E:

4-20mA / None

4-20mA / HART

Profibus PA

Foundation Fieldbus

Electrical Data: 28V DC, 24mA

Range of Ambient Temperature: Gas Ta. -20°C to 60°C, Dust Ta. -20°C to 80°C.

Degree of protection: IP 66 according to IEC 60529.

CONDITIONS OF CERTIFICATION: NO



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):


New issue to include the following:

1.
M20 cable entry in the stainless steel enclosure &
2.
Updated to new version standard EN 60079-0:2012 (IEC 60079-0:2011).
3.
Removal of type Logix 800si-15.

Annex:

[ANNEX to IECEx NEM 09.0001 Rev 2.pdf](#)

[ANNEX TO IECEx Cert NEM 09.0001.pdf](#)

 Flowserve Palmstierna International AB	Certification document		Document name D3-D20 Modelcode-Exd			
	SUBJECT D3E-D20E (APEX9000E) Ex d model code					
FILE NAME D3-D20 MODELCODE-EXD_REV0_150126_LRW.DOCX						
CREATOR OF DOCUMENT LRW	DATE OF CREATION 2015-01-26	REMITTANCE NO. x	REV.NO. 0	REV.SIGN. LRW	REV.DATE	PAGE 1(2)
Schedule Document – No modification permitted without reference to the notified body						

D3Ex Model code

AA=	Model no	
	D 3	Digital positioner with display,
B=	Approval	
	E	Explosion proof
	F	Explosion proof, Direct mount to Flowact
C=	Connections	
	G	1/4" G air, M20 x 1,5 electrical
	N	1/4" NPT air, 1/2" NPT electrical
	M	1/4" NPT air, M20 x 1,5 electrical
D=	Surface treatment	
	U	Powder epoxy
	E	Stainless steel enclosure
E=	Function	(Airblock function don't affect Certificate)
FF=	Spindle	(Spindle interface outside unit, don't affect Certificate)
GGG=	Cover	(don't affect Certificate)
H=	Sensors/Temperature/Seals	(Internal board population/software configuration, dont affect Certificate) / (Non Certificate related ambient temperature restraints)
I=	Input signal/Protocol	(Internal board population/software configuration, dont affect Certificate)
J=	Feedback option	(Internal board population/software configuration, dont affect Certificate)
K=	Accessories	(External accessories don't affect Certificate)

A	A	B	C	D
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E	F	F	G	G	G
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H	I	J	K
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D20E Model code

AAA =	Model no	
	D 2 0	Digital compact positioner, Single button interface, LED status
	D 2 2	Digital positioner, full LCD menu, LED status
B =	Approval, Certificate	
	E	Explosion proof
	F	Explosion proof, Direct mount to Flowact
C =	Connections Air, Electrical	
	G	1/4" G air, M20 x 1,5 electrical x 2
	M	1/4" NPT air, M20 x 1,5 electrical x 2
	N	1/4" NPT air, 1/2" NPT electrical x 2
D =	Housing/Surface treatment	
	U	Aluminium/Powder epoxy, black
	R	Aluminium/Powder epoxy, black, Remote mounted feedback sensor
	S	Explosion proof Stainless steel enclosure (Connections N only)
E =	Function	(Airblock function don't affect Certificate)
FF =	Mounting options / Spindle	(Spindle interface outside unit, don't affect Certificate)
GGG =	Cover Coulor	(Don't affect Certificate)
H =	Temperature/seals	(Non Certificate related ambient temperature restraints)
I =	Input signal/Protocol	(Internal board population/software configuration, dont affect Certificate)
J =	Feedback option, 4-20 mA transmitter, switches	(Internal board population/software configuration, dont affect Certificate)
K =	Options, Add in electronics	(Internal board population/software configuration, dont affect Certificate)
L =	Accessories	(External accessories don't affect Certificate)


A	A	A	B	C	D
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E	F	F	G	G	G
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H	I	J	K	L
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 Flowserve Palmstierna International AB	Certification document				Document name D3-D20 Modelcode-Exd	
	SUBJECT D3E-D20E (APEX9000E) Ex d model code					
FILE NAME D3-D20 MODELCODE-EXD_REV0_150126_LRW.DOCX						
CREATOR OF DOCUMENT LRW	DATE OF CREATION 2015-01-26	REMITTANCE NO. x	REV.NO. 0	REV.SIGN. LRW	REV.DATE	PAGE 2(2)
Schedule Document – No modification permitted without reference to the notified body						

APEX 9000E Model code

AA=	Prefix	
BB=	Model	
C=	Approvals, Certifications	
	E Explosion proof	
D=	Connections Air, Electrical	
	M 1/4" NPT air - M20 x 1,5 electrical	
	N 1/4" NPT air - 1/2" NPT Electrical	
E=	Housing / Surface treatment	
	U Aluminium / Powder Epoxy / Black	
	R Remote mount sensor	
	S Stainless steel	
F=	Function	(Airblock function don't affect Certificate)
GG=	Shaft	(Spindle interface outside unit, don't affect Certificate)
E=	Cover	(don't affect Certificate)
F=	Temperature / Seals	(Non Certificate related ambient temperature restraints)
G=	Input signal / Protocoll	(Internal board population/software configuration, dont affect Certificate)
H=	Feedback options	(Internal board population/software configuration, dont affect Certificate)
I=	Feedback Options	(Internal board population/software configuration, dont affect Certificate)
J=	Acessories	(External accessories don't affect Certificate)

A	A	B	B	C	D	E	F	G	G	E	F	G	H	I	J
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ANNEX to IECEx Certificate of Conformity

IECEX NEM 09.0001 Issue 0

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D3 digital positioner model code

A= Model no

- D 3 E Digital positioner with display, no indicator, Explosion proof ATEX, CSA/FM, IEC
- D 3 F Digital positioner with display, Explosion proof ATEX, CSA/FM, IEC ,Direct mount to Flowact

B= Connections

- G 1/4" G air, M20 x 1,5 ectrical
- N 1/4" NPT air, 1/2" NPT electrical
- M 1/4" NPT air, M20 x 1,5 electrical

C= Surface treatment

- U Powder epoxy
- E Stainless steel enclosure

D= Function

- S Single acting
- L Single acting, Fail Freeze
- P Single acting, Fail freeze remote mounted
- M Single acting, remote mounted
- D Double acting acting
- K Double acting Fail Freeze function
- Q Double acting Fail freeze remote mounted
- R Double acting Remote mounted

E= Spindle

- 2 3 Rotary VDI/VDE 3845
- 3 9 D type with thread/nut for Linear actuators
- 0 9 Double D type & adator spindle

F= Cover and Indicator (No indicator on D3E, D3F)

- P V A Black PMV, 90 deg, Arrow indicator
- P V B Black, Extended travel, 270 deg Arrow indicator
- F S W White cover, Flowserve, 90 deg, Arrow indicator
- F S Y Yellow cover, Flowserve, 90 deg, Arrow indicator
- W C A Worcester Controls,Pulsair III, Arrow indicator

G= Sensors/Temperature/seals

- Z No pressure sensors, NBR -30 to 80 deg C
- Y On Board pressure sensors, NBR -30 to 80 deg C

H= Input signal/Protocoll

- 4 4-20 mA
- 5 HART, 4-20 mA
- P Profibus PA
- F Foundation Fieldbus

I= Feedback option

- X No feedback option
- T Plug in 4-20 mA transmitter only + Alarm module

J= Accessories

- X No accessories
- M Gauge block For D3X, D3I only (Default on D3E, D3F) No gauges included
- 1 Gauge block For D3X, D3I only (Default on D3E, D3F) 1 gauge included
- 2 Gauge block For D3X, D3I only (Default on D3E, D3F) 2 gauges included
- 3 Gauge block For D3X, D3I only (Default on D3E, D3F) 3 gauges included

D 3 A D C - D E E F F F - G H I J