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 KEM 07.0046X issue No.:1

Certificate history:
Issue No. 1 (2009-8-3)
Issue No. 0 (2008-2-15)

Status: **Current**

Date of Issue: **2009-08-03** Page 1 of 5

Applicant: **Emerson Process Management Valve Automation Division**
Asveldweg 11
7556 BR Hengelo
The Netherlands

Electrical Apparatus: **Control Modules for FieldQ Type QC01...P4..., QC02...P4..., QC30...P4..., QC34...P4...**
Optional accessory:

Type of Protection: **Non sparking and Dust protection**

Marking: **Ex nA II T4**
Ex nL IIC T4 (QC34 only)
Ex tD A22 IP65 T90 °C

Approved for issue on behalf of the IECEx Certification Body: C.G. van Es

Position: Certification Manager

Signature:
(for printed version)

Date: 2009-08-03

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.

Certificate issued by:

KEMA Quality B.V.
Utrechtseweg 310
6812 AR Arnhem
The Netherlands

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Manufacturer: **Emerson Process Management Valve automation Division**
Asveldweg 11
7556 BR Hengelo
The Netherlands

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 60079-15 : 2001 Edition: 2	Electrical apparatus for explosive gas atmospheres - Part 15: Type of protection 'n'
IEC 60079-27 : 2005-04 Edition: 1.0	Electrical apparatus for explosive atmospheres- Part 27: Fieldbus intrinsically safe concept (FISCO) and Fieldbus non-incendive concept (FINCO)
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*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:

NL/KEM/ExTR07.0068/00
NL/KEM/ExTR07.0068/01

Quality Assessment Report:
NL/KEM/QAR07.0003/01

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Description

The Control Modules Type QC01....P4..., Type QC02....P4..., Type QC30....P4... and Type QC34....P4... are used with FieldQ series pneumatic valve actuators for control and position feedback of a valve:

- Type QC01…P4… and Type QC02…P4… with on/off control, for external supply, with a control input and two solid state output switches for position feedback.

- Type QC30…P4… for connection to an AS-I bus, for supply, control and position feedback.

- Type QC34…P4… for connection to a Foundation Fieldbus system for supply, control and position feedback.

The enclosure of the Control Modules provides a degree of protection of at least IP65 in accordance with IEC 60529.

Ambient temperature range -20 °C to +75 °C for Modules QC01 and QC30
-20 °C to +73 °C for Module QC02
-20 °C to +50 °C for Module QC34

The maximum surface temperatures T90 °C is referred to the maximum ambient temperature and is determined for a dust layer with a thickness of maximum 5 mm.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. For the wiring of the Control Modules cable entries in accordance with IEC 60079-15, clause 6.2.6, suitable for the conditions of use, shall be used and correctly installed. Unused openings shall be closed by suitable blanking elements.

2. For an ambient temperature higher than 70 °C, suitable heat resistant cables shall be used for Control modules Type QC01, Type QC02 and Type QC30.

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EQUIPMENT(continued):

Electrical data

Control Module QC01... P4...

Supply circuit (terminals 7 and 8):
U = 20,4 ... 27,6 Vdc; In ⩽ 110 mA; Pn ⩽ 2,6 W

Control input (terminals 5 and 6):
U = 20,4 ... 27,6 Vdc; In = 5 mA

Feedback outputs (terminals 1 and 2, 3 and 4):
U ⩽ 30 Vac or dc; I ⩽ 500 mA; P ⩽ 15 VA

Control Module QC02.. P4...

Supply circuit (terminals 1 and 2):
U = 85 ... 254 V, 50 or 60 Hz or dc; P ⩽ 2,85 W

Control input (terminals 3 and 4):
U = 85 ... 254 Vac or dc; Ri = 50 kohm

Feedback outputs (terminals 5 and 6, 7 and 8):
U ⩽ 254 Vac or dc; I ⩽ 150 mA; P ⩽ 15 VA

Control Module QC30..P4...

AS-I bus circuit (bus terminals 3, 4):
U = 20,4 ... 31,6 Vdc; I < 0,21 A; P < 3,3 W

Control Module QC34.. P4...

Fieldbus circuit (bus terminals 1 and 3):
U = 9 .. 30 Vdc; I ⩽ 22 mA

Control Module QC34... P4...

Fieldbus circuit (terminals 1 and 3):
in type of protection energy limitation Ex nL IIC, for connection to an associated energy limited fieldbus system, e.g. according to FNICO, with the following maximum values:
Ui = 30 V; Ci = 5 nF; Li = 10 µH

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

Issue 1:
Minor modification of the electronic circuit of module QC30 for operational reasons and correction of the QC02 marking label