

# (1) TYPE EXAMINATION CERTIFICATE

(2) **Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC**

(3) Type Examination Certificate Number: **KEMA 02ATEX1258 X** Issue Number: **2**

(4) Equipment: **Control Modules for FieldQ series Valve Actuators  
Type QC01....P4..., Type QC02....P4..., Type QC30....P4... and Type QC34....P4...**

(5) Manufacturer: **Emerson Process Management Valve Automation Division**

(6) Address: **Asveldweg 11, 7556 BR Hengelo, The Netherlands**

(7) This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the directive.

The examination and test results are recorded in confidential test report no. 2103694/2.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-15 : 2003  
EN 61241-0 : 2006**

**EN 60079-27 : 2006  
EN 61241-1 : 2004**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This Type Examination Certificate relates only to the design, examination and tests of the specified equipment and not to the manufacturing process and supply of this equipment.

(12) The marking of the equipment shall include the following:



**II 3 G Ex nA II T4 or Ex nL IIC T4  
II 3 D Ex tD A22 IP65 T90 °C**

This certificate is issued on 16 January 2008 and, as far as applicable, shall be revised before the date of cessation of presumption of conformity of (one of) the standards mentioned above as communicated in the Official Journal of the European Union.

KEMA Quality B.V.



C.G. van Es  
Certification Manager



(13) **SCHEDULE**

(14) **to Type Examination Certificate KEMA 02ATEX1258 X**

Issue No. 2

(15) **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:

- Control Modules 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.
- Control Modules Type QC30...P4... for connection to an AS-I bus, for supply, control and position feedback.
- Control Modules 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 EN 60529.

Ambient temperature range from: -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.

**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 kΩ
Feedback outputs..... (terminals 5 and 6, 7 and 8)	U ≤ 254 Vac or dc I ≤ 150 mA P ≤ 15 VA

(13) **SCHEDULE**

(14) **to Type Examination Certificate KEMA 02ATEX1258X**

Issue No. 2

Control Module QC30...P4...

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

Control Module QC34...4...

Fieldbus circuit .....	U	=	9 .. 30 Vdc
(bus terminals 1 and 3)	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:  
 $U_i = 30 \text{ V}$ ;  $C_i = 5 \text{ nF}$ ;  $L_i = 10 \text{ μH}$

(16) **Test Report**

KEMA No. 2103694/2.

(17) **Special conditions for safe use**

1. For the wiring of the Control Modules cable entries in accordance with EN 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.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

As listed in Test Report No. 2103694/2.