



Certificate of Compliance

Certificate: 1477696

Master Contract: 174756

Project: 2508266

Date Issued: October 04, 2012

Issued to: Emerson Process Management Valve Automation Division
Asveldweg 11
Hengelo, 7556 BR
THE NETHERLANDS
Attention: Mr. Ruud van Dorp

The products listed below are eligible to bear the CSA Mark shown



Issued by: E.Giusti
E.Giusti

PRODUCTS

CLASS 2258-02 PROCESS CONTROL EQUIPMENT-For Hazardous Locations

QC Modules: Class I,II,III, Div. 2, Groups A, B, C, D, F, G, T4
Ex nA II T4, IP65, (Class I, Zone 2)
Ex nL IIC T4, IP65 (Class I, Zone 2)
DIP A22 TA 90°C

Ambient temperature : -20 °C ... +73°C (Type QC02)
-20 °C ... +75°C (Type QC01, QC30)
-20 °C ... +50°C (Type QC34)
-20 °C ... +80°C (Type QC31)

Component Type Function Modules Type QCabcd

with	a	=	01	Smart/discrete "on/off" 24 Vdc	- Ex nA
			02	Smart/discrete "on/off" 85 .. 254 Vac	- Ex nA
			30	On/off AS-I communications	- Ex nA
			31	On/off DeviceNet communications	- Ex nA
			34	On/off Foundation Fieldbus communications	- Ex nA or Ex nL



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- b = 4 digits for connectivity options (4 th digit A)
- c = P4 CSA certified for NI, Class I, II, III, Div. 2, groups A, B, C, D, (E*), F, G (* for QC31)
- d = 3 digits for other options (as software and language).

CLASS 2258-04 PROCESS CONTROL EQUIPMENT-Intrinsically Safe, Entity - For Hazardous Locations

QC Modules:

Intrinsically Safe Class I, II, III, Division 1, Groups A, B, C, D, E, F and G, T4
 Ex ia IIC T4, IP65, (Class I, Zone 0/1)

Ambient temperature: -20 °C ... +50 °C.

Enclosure Type 4X

Component Type Function Modules Type QCabcd

- with a = 03 Smart/discrete "on/off" IS - intrinsically safe
 04 Smart/discrete "on/off" IS-N - intrinsically safe
 34 On/off Foundation Fieldbus communications - intrinsically safe

- b = 4 digits for connectivity options (4 th digit A)
- c = P1 CSA certified for IS, Class I, II, III, Div. 1, groups, A, B, C, D, E, F, G
- d = 3 digits for other options (as software and language).

ELECTRICAL PARAMETERS

The intrinsically safe circuits are intended to be connected to certified associated intrinsically safe circuits, in accordance with the following table:

Control Module Type and Circuit	U_i, V_{max} (V)	I_i, I_{max} (mA)	P_i (W)	C_i (nF)	L_i (μ H)
QC03, QC04, supply circuit	30	300	1,2	15	0
QC03, QC04, control circuit	30	300	1,2	15	0
QC03, QC04, digital output circuit	30	300	1,2	18	0
QC34, fieldbus circuit	30	380	1,5	5	10
or FISCO	17,5	380	5,32	5	10

Note: Type QC34 is in accordance with the FISCO Model as described in IEC 60079-27.

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The electrical data of the for Division 2 / Zone 2 installations of the control modules FieldQ Type QC are listed in the following table:

Control Module Type and Circuit	Electrical data
QC01, supply circuit	U = 20,4 ... 27,6 Vdc I _n = 0,11 A P _n = 2,6 W
QC01, control circuit	U = 20,4 ... 27,6 Vdc I = 5 mA
QC01, feedback output circuits	U ≤ 30 Vac or dc I ≤ 0,5 A P ≤ 15 VA
QC02, supply circuit	U = 85 ... 254 Vac, 50 or 60 Hz, or dc P _n = 2,85 W
QC02, control circuit	U = 85 ... 254 Vac or dc R _i = 50 kΩ
QC02, feedback output circuits	U ≤ 254 Vac or dc I ≤ 150 mA P ≤ 15 VA
Control Module Type and Circuit	Electrical data
QC30, fieldbus circuit	AS-I bus; <u>supply:</u> U = 20,4 ... 31,6 Vdc I < 0,21 A P < 3,3 W
QC31, fieldbus circuit	DeviceNet bus; <u>supply:</u> U = 11 ... 25 Vdc I _n = 120 mA @ 11V; 75 mA @ 25V P _n = 1.8W (24Vdc)
QC34, fieldbus circuit,	U = 9 .. 30Vdc I ≤ 22 mA
QC34, fieldbus circuit, FNICO	U _i = 30 V C _i = 5 nF L _i = 10 μH

Note 1: For Type QC34; provisions must be made to prevent the rated supply voltage from being exceeded by more than 40%.

Note 2: Type QC34 is in accordance with the FNICO Model as described in IEC 60079-27.



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TEMPERATURE CLASS

The temperature classification of the different Control Modules, depending on the maximum ambient temperature and on the applied electrical power is listed in the following table:

Control Module	Max. Ambient temperature (°C)	Temperature class I.S. apparatus	Temperature class N.I. apparatus
QC01, QC30	75	--	T4
QC02	73	--	T4
QC03, QC04	50	T4	--
QC34	50	T4	T4
QC31	80		T4

APPLICABLE REQUIREMENTS

- CAN/CSA-C22.2 No. 0-M91 - General Requirements - Canadian Electrical Code, Part II
- CAN/CSA-C22.2 No. 157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
- CAN/CSA-C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
- CAN/CSA-E60079-0-02 - Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements
- CAN/CSA-E60079-11-02 - Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"
- CAN/CSA-E60079-15-02 - Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Type of Protection "n"
- CAN/CSA-C22.2 No. 25-92 - Enclosures for use in Class II, Groups E, F and G Hazardous Locations
- CAN/CSA-E61241-1-1-02 - Electrical Apparatus for use in the Presence of Combustible Dust- Part 1: Electrical Apparatus Protected by Enclosures
- CAN/CSA- C22.2 No. 61010-1-04 - Safety requirements for Electrical equipment for Measurement control, and Laboratory Use - Part 1: General requirements

SPECIAL CONDITIONS FOR SAFE USE

The equipment shall be installed in accordance with Control Drawings No's: C0542-06, C0542-07, C0542-08.



Supplement to Certificate of Compliance

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*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
2508266	October 4, 2012	Update to cover minor changes of the product.
2116455	October 22, 2009	Update to add QC31 module, add dc rating to QC02 module, minor update of QC30 module and deletion of obsolete QM modules
2007101	January 22, 2008	Updated electronics and new manual control for Control Modules Types QC01, QC02, QC03, QC04, QC30, QC34. QC03, QC04, QC30, QC34 complies also to CAN/CSA- C22.2 No.213-M1987.
1803346	July 18, 2006	Addition of range of Control Modules Types QC01, QC02, QC03, QC04, QC30, QC34.
1477696	October 7, 2003	Original Certification Function Modules Types QM01..., QM02..., QM03..., QM04..., QM30..., QM32..., QM33..., QM34...