



(Pty) Ltd
Reg No: 1999/027771/07

APPROVED/ACCREDITED TEST LABORATORY
(previously referred to as Approved Inspection Authority)

IN TERMS OF:
ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTION APPARATUS"

IA CERTIFICATE

EMERSON PROCESS MANAGEMENT - VALVE AUTOMATION
PO BOX 223
HENGELO
7550AE, Netherlands

Issued: **20 Sep 2011**
*Expire: **20 Sep 2012**
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Rev 3

Equipment: Conventional Control Module for Field Q valve actuator
Manufacturer: Emerson Process Management Valve Automation
Type: QC1*.xP4yxx
Serial No: All units imported between 'Issued' and 'Expired'.
Supplied by

EMERSON PROCESS AUTOMATION (EL-O-Matic)

Identified by Inspection Authority number

S-XPL/08650 X

And as described in the Explolabs file number XPL/9757/08650 is hereby certified "Explosion Protected Ex nA IIC T4/T5 and Ex tD A22 T90 °C IP65", having been examined and inspected in accordance with the relevant requirements of South African Standards.

IEC / SANS 60079-0: 2006	"Electrical apparatus for explosive gas atmospheres, Part 0: General requirements"
SANS 60079-15: 2006 Ed 3 IEC 60079-15: 2005 Ed 3	"Electrical apparatus for explosive gas atmospheres, Part 15: Construction, test and marking of type of protection 'n' electrical apparatus"
SANS 61241-0: 2005 Ed 1 IEC 61241-0: 2004 Ed 1	"Electrical apparatus for use in the presence of combustible dust, Part 0: General requirements"
SANS 61241-1: 2005 Ed 1 IEC 61241-1: 2004 Ed 1	"Electrical apparatus for use in the presence of combustible dust, Part 1: Protection by enclosures 'tD'"

Locations	Zone 2 Zone 22	Gas: Surface Dust: Surface
Frequency		Intermittent as could occur under normal operation
Environment	Group IIC	Propane to Hydrogen plus Ethelene
Limiting Temp.	T4 /T5	135 °C / 100 °C

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 8(1) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

- i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
- ii) Any conditions mentioned in the above report;
- iii) Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; and
- iv) Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.
- v) * - New equipment may only be presented for sale between the "Issued" and "Expire" dates.

This certificate all previous documents bearing the reference no XPL/9757/08650 Rev 2.

XPL0105

- vi) If and when your QAN (Quality Assurance Notification) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted the existing IA Certification will then be cancelled. It is thus the client's responsibility to always submit the updated and valid QAN certificate(s) to Explolabs (Pty) Ltd.

1. GENERAL

The Control Module had previously been certified by TUV Authority as Ex d nA IIC T4/T5 and Ex tD A22 T90°C IP65 (Certificate No. TUV 07 ATEX 553926 X). The marking of the Control Module was assessed for compliance with the requirements of clause 1 above and against the certificate submitted. The authenticity of the certificate was assessed as well.

The differences between the two standards was evaluated and found to comply.

2. SPECIAL CONDITIONS OF USE (X)

- For the application in explosive gas/dust atmosphere the maximum surface of the enclosure the temperature is determined without a dust layer.
- Do not open module when circuits are energized.

3. ELECTRICAL DATA

Power pilot valve
(Terminals 8, 9)

not-energy-limited circuits with the following maximum ratings:

Type	Un	Pn
QC11.xP4 ^y xx	24 Vdc ± 10 %	≤ 1.3 W
QC12.xP4 ^y xx	115 Vac ± 10 %	≤ 1.3 W
QC13.xP4 ^y xx	230 Vac ± 10 %	≤ 1.9 W

Switching circuits for
Switch Type D
(Terminals 1, 2, 3 and 4, 5, 6)

not-energy-limited circuits with the following max. ratings
(for each output):

Type	Un	I _{max}
D	250 Vac	5 A
	30 Vac	5 A
	250 Vdc	0.03 A
	30 Vdc	5 A

The maximum ratings are only valid for a cos φ = 0.9

or

Switching circuits for
Switch Type T
(Terminals 1, 2, 3 and 4, 5, 6)

not-energy-limited circuits with the following max. ratings
(for each output):

Type	Un	In
T	10...30 Vdc	0...100 mA

or

Switching circuits for
Switch Type N
(Terminals 1, 2 and 4, 5)

not-energy-limited circuits with the following max. ratings
(for each output):

$U_{max} = 16 \text{ Vdc}$ $I_{max} = 25 \text{ mA}$

PE-connection
(Terminal 7)

for the connection to the equipotential bonding conductor

- For the application in explosive gas/dust atmosphere the maximum surface of the enclosure the temperature is determined without a dust layer.
 - Do not open module when circuits are energized.
- The permitted ambient temperature is:

Typ	temperature class T4	temperature class T5
QC1*.xP4Dxx	$-20\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +80\text{ }^{\circ}\text{C}$	$-20\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +45\text{ }^{\circ}\text{C}$
QC1*.xP4Txx	$-20\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +34.5\text{ }^{\circ}\text{C}$	$-20\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +34.5\text{ }^{\circ}\text{C}$
QC1*.xP4Nxx	$-20\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +80\text{ }^{\circ}\text{C}$	$-20\text{ }^{\circ}\text{C} \leq T_{\text{amb}} \leq +45\text{ }^{\circ}\text{C}$

4. MARKING

The following marking must be added to the units in a legible and durable manner:

Supplier: Emerson Process Automation (EL-O-Matic)

IA Number: S-XPL/08650 X

Rating: Ex d nA IIC T4/T5 and Ex tD A22 T90°C IP65

If the above marking does not appear on the unit, this certificate does not cover it.



D Young
TESTING OFFICER