KEMA
REGISTERED QUALITY

(1) EC-TYPE EXAMINATION CERTIFICATE

(2) Equipment or protective system intended for use in potentially explosive atmospheres – Directive 94/9/EC

(3) EC-Type Examination Certificate Number: **KEMA 00ATEX1111 X**

(4) Equipment or protective system: **Smart Valve Positioner Models AVP300, AVP301 and AVP302.**

(5) Manufacturer: **Yamatake Corporation Shonan Factory**

(6) Address: **4-1-1 Omagari, Samukawa-machi, Koza-gun Kanagawa-ken 253-0113 Japan**

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

(8) KEMA, notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system 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 report no. 2001770.

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

EN 50014 : 1997 EN 50020 : 1994 EN 50281-1-1 : 1998 EN 50284 : 1999

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

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance with the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and the supply of the equipment or protective system. These are not covered by the certificate.

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

II 1 GD EEx ia IIC T4 T 135 °C

Arnhem, 18 January 2001
by order of the Board of Directors of N.V. KEMA

L.M.J. Vries
Certification Manager

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ACCREDITED BY THE DUTCH COUNCIL FOR ACCREDITATION

(13) # SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 00ATEX1111 X**

(15) **Description**

The Smart Valve Positioner Models AVP300, AVP 301 and AVP302 receives a supply and input signal (4-20 mA and/or digital) for control of the position of a valve. The output circuit (4-20 mA and/or digital) can be connected to a supervisory monitoring system.
The enclosure has a degree of ingress protection of IP66 in accordance with EN 60529 (when suitable cable glands are fitted).

Ambient temperature range -40 °C ... +60 °C.

The maximum surface temperature of the enclosure "T" is based on an ambient temperature of 60 °C.

Electrical data

Model AVP300

Supply/input circuit ..... (terminals +/- IN) in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

U_i = 30 V
I_i = 100 mA (resistively limited)
P_i = 1 W

The effective internal capacitance C_i = 1 nF,
the effective internal inductance L_i = 0,2 mH.

Monitoring/output circuit ..... (terminals +/- OUT) in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit with the following maximum values:

U_i = 30 V
I_i = 100 mA (resistively limited)
P_i = 1 W

The effective internal capacitance C_i = 1 nF,
the effective internal inductance L_i = 0,3 mH.

The Supply/input circuit and the monitoring/output circuit shall, from a safety point of view, considered to be connected to ground.

Model AVP301

Supply/input circuit ..... (terminals +/- IN) in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

U_i = 30 V
I_i = 100 mA (resistively limited)
P_i = 1 W

The effective internal capacitance C_i = 1 nF,
the effective internal inductance L_i = 0,2 mH.

(13) # SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 00ATEX1111 X**

Electrical data (continued)

Monitoring/output circuit ..... (terminals +/- OUT)

in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit with the following maximum values:

U_i = 30 V
I_i = 100 mA (resistively limited)
P_i = 1 W

The effective internal capacitance C_i = 3 nF,
the effective internal inductance L_i = 0,2 mH.

The Supply/input circuit and Monitoring/output circuit shall, from a safety point of view, considered to be connected to ground.

Model AVP302

Supply/input circuit ..... (terminals +/- IN)

in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

U_i = 30 V
I_i = 100 mA (resistively limited)
P_i = 1 W

The effective internal capacitance C_i = 33 nF,
the effective internal inductance L_i = 0,2 mH.

Monitoring/output circuit ..... (terminals +/- OUT)

in type of explosion protection intrinsic safety EEx ia IIC, only for connection to a certified intrinsically safe circuit with the following maximum values:

U_i = 30 V
I_i = 100 mA (resistively limited)
P_i = 1 W

The effective internal capacitance C_i = 1 nF,
the effective internal inductance L_i is negligibly small.

The Supply/input circuit and Monitoring/output circuit shall, from a safety point of view, considered to be connected to ground.

(16) **Report**

KEMA No. 2001770

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

For application in explosive atmospheres caused by air/dust mixtures
- the dust layer may not exceed a thickness of 5 mm,
- conduit or cable glands must be selected and used in such a way that a minimum ingress protection of IP6x is guaranteed.

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(13) # SCHEDULE

(14) **to EC-Type Examination Certificate KEMA 00ATEX1111 X**

Essential Health and Safety Requirements

(18)

Essential Health and Safety Requirements not covered by the standards listed at (9)	
Clause	Subject
1.0.5	Marking
1.0.6 b) d)	Instructions

These Essential Health and Safety Requirements are examined and positively judged. The results are laid down in the report listed at (16)

(19) **Test documentation**

			dated
1.	Description (3 pages)		15.02.2000
2.	Drawing No.	80391168 Rev.1	16.06.2000
		80391169 Rev.1 (2 sheets)	21.09.2000
		80391177 Rev.1	21.09.2000
		80391170 Rev.1 (2 sheets)	21.09.2000
		80391171 Rev.1 (2 sheets)	21.09.2000
		80391178 Rev.1	21.09.2000
		80391172 Rev.1 (2 sheets)	21.09.2000
		80391179 Rev.1	21.09.2000
		80391176 Rev.0	03.02.2000
		80391180 Rev.1	05.09.2000
		80391175 Rev.1	18.06.2000
		80391181 Rev.2	12.12.2000
3.	Samples		

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AMENDMENT 1

to EC-Type Examination Certificate KEMA 00ATEX1111 X

Manufacturer: **Yamatake Corporation**
Shonan Factory

Address: **4-1-1 Omagari**
Samukawa-machi, Koza-gun
Kanagawa-ken 253-0113
Japan

Description

The Smart Valve Positioner Models AVP300, AVP 301 and AVP302 may also be constructed in accordance with the documentation listed below.

This amendment concerns changes of the electronics.

All other data remain unchanged.

Test documentation

			dated
1.	Description	(1 page)	15.06.2001
2.	Drawing No.	80391169 Rev.2 (2 sheets))	
		80391177 Rev.2)	
		80391171 Rev.2 (2 sheets))	06.06.2001
		80391178 Rev.2)	
		80391172 Rev.2 (2 sheets))	
		80391179 Rev.2)	
3.	Samples		

Arnhem, 10 August 2001
by order of the Board of Directors of N.V. KEMA

T. Pijpker
Certification Manager

Code: Ex II 1 GD EEx ia IIC T4 T 135 °C

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