



Translation

(1) **EC-Type Examination Certificate**

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

(3) **BVS 08 ATEX E 032 X**

(4) **Equipment:** Pressure transmitter VEGAWELL WL51, WL52 and WELL72

(5) **Manufacturer:** VEGA Grieshaber KG

(6) **Address:** 77757 Schiltach, Germany

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.

(8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, 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 the test and assessment report BVS PP 08.1024 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2006 General requirements
EN 60079-11:2007 Intrinsic safety "i"
EN 50303:2001 Group I, category M1

(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 appendix to this certificate.

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

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

M1 Ex ia I resp. M2 Ex ia I

DEKRA EXAM GmbH

Bochum, dated 27. March 2008

Signed: Dr. Jockers

Signed: Dr. Eickhoff

Certification body

Special services unit

(13) Appendix to

(14) **EC-Type Examination Certificate**

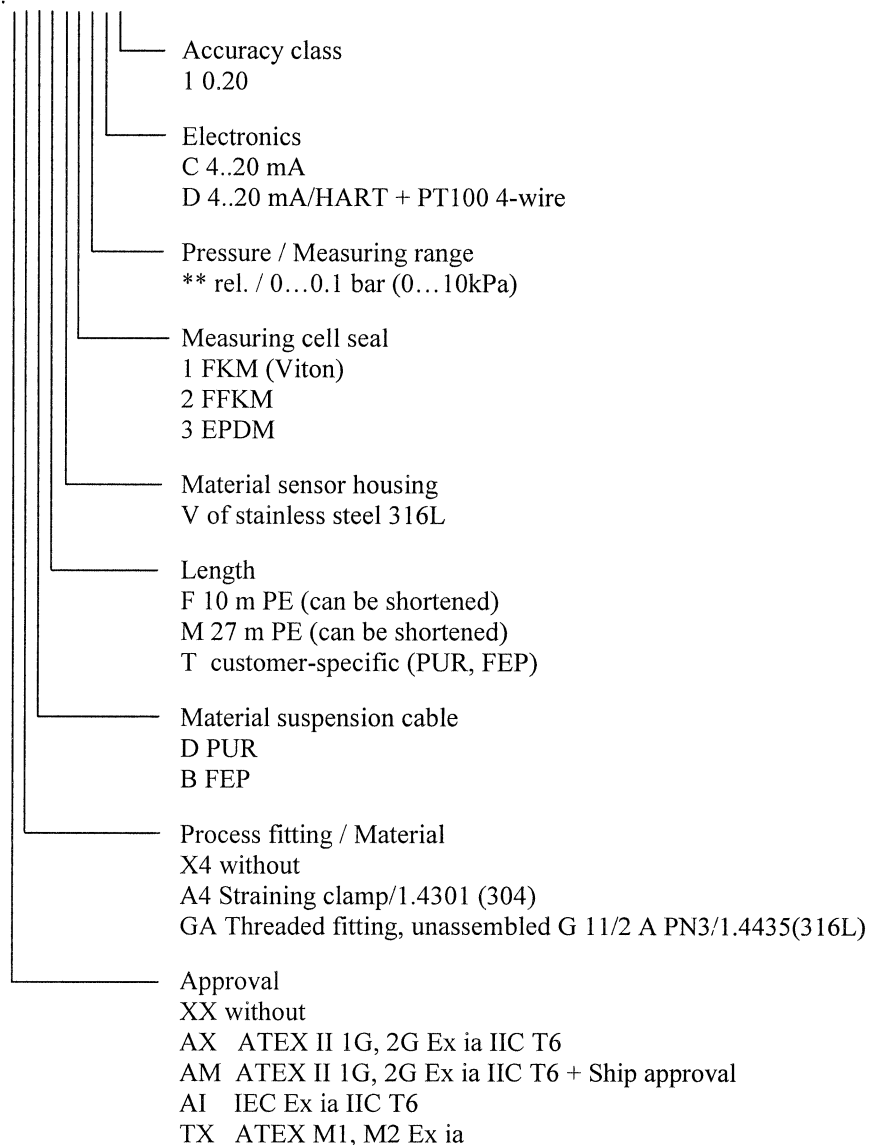
BVS 08 ATEX E 032 X

(15) 15.1 Subject and type

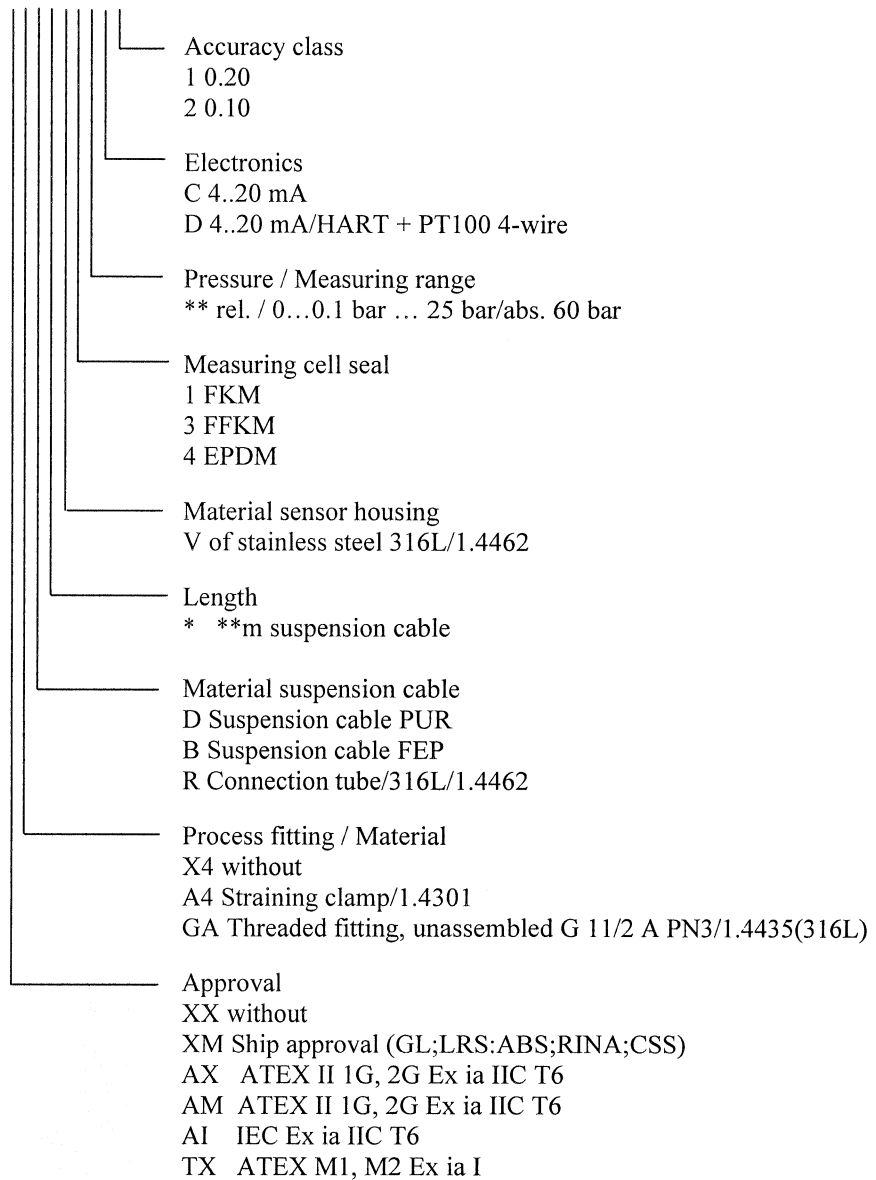
Pressure transmitter VEGAWELL
 type WL51.TX*****C*, type WL52.TX*****C* and type WELL72.TX*****C*
 suitable for applications in category M1 or M2
 type WL51.TX*****D*, type WL52.TX*****D*, type WELL72.TX*****D*
 suitable for applications in category M2 with temperature measuring circuit.
 Type WL51.TX*****D*, type WL52.TX*****D*, type WELL72.TX*****D*
 suitable for applications in category M1 without temperature measuring circuit

Type code VEGAWELL51

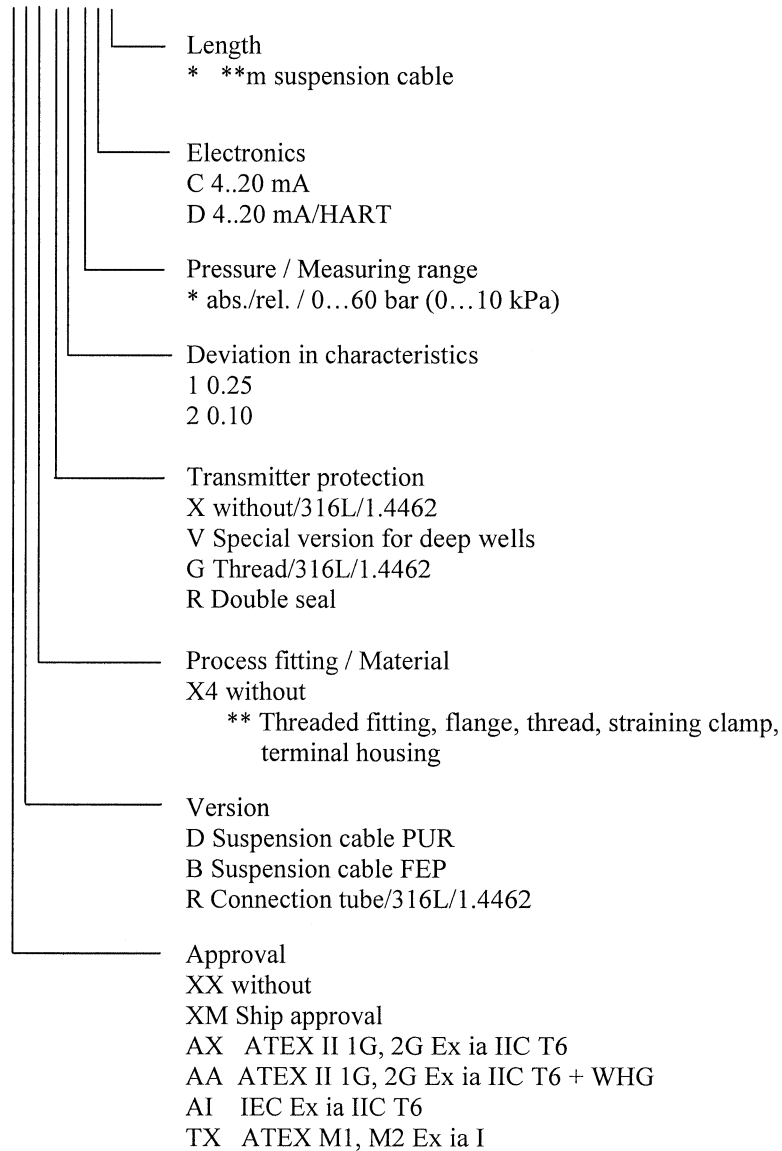
VEGAWELL WL51.*****



VEGAWELL WL52.*****



VEGAWELL WELL72.*****



15.2 Description

The pressure transmitters type VEGAWELL WL51/52 and type VEGAWELL WELL72 with integrated electronic insert WL50 or WL50H have intrinsically safe circuits. The connection of this intrinsically safe circuits is made directly on the fix mounted connection cable.

The pressure transmitters type VEGAWELL WL51/52 and type VEGAWELL WELL72 with integrated electronic insert WL50, type WL51/52.TX*****C* and WELL72.TX*****C* have an intrinsically safe 4-20 mA signal circuit for hydrostatic pressure detection.

The pressure transmitters type VEGAWELL WL51/52 and type VEGAWELL WELL72 with integrated electronic insert WL50, type WL51/52.TX*****D* and WELL72.TX*****D* have two intrinsically safe circuits, one intrinsically safe 4-20 mA signal circuit with superimposed HART signal for hydrostatic pressure detection and one intrinsically safe temperature measuring circuit for detection of the process temperature by means of a PT100 4-wire measurement.

When the pressure transmitter type WL51/52.TX*****D* and WELL72.TX*****D* with integrated electronic insert WL50H is used in applications as category M1 equipment only the signal circuit with superimposed HART signal may be connected and operated for hydrostatic pressure detection. The temperature measuring circuit must not be connected and operated in applications as category M1 equipment.

15.3 Parameters

15.3.1 Versions WL51/52.TX*****C* and WELL72.TX*****C* As category M1 and M2 equipment

Supply and signal circuit
(wires: brown [+], blue [-])

in type of protection intrinsic safety Ex ia I for M1
in type of protection intrinsic safety Ex ia I or
Ex ib I for M2
For connection to an intrinsically safe circuit.
Max. values:
 $U_i = 30 \text{ V}$
 $I_i = 131 \text{ mA}$
 $P_i = 983 \text{ mW}$
Effective internal inductance $L_i = 51 \mu\text{H}$
Effective internal capacitance $C_i \text{ wire/wire} = 2.4 \text{ nF}$
Effective internal capacitance $C_i \text{ wire/screen} = 1.5 \text{ nF}$
From the fix mounted connection cable in addition to the
above mentioned C_i and L_i values also the following line
inductances L' and line capacitances C' must be taken into
account:
 $L' = 0.6 \mu\text{H/m}$
 $C' \text{ wire/wire} = 133 \text{ pF/m}$
 $C' \text{ wire/screen} = 215 \text{ pF/m}$

The metal parts of the suspension pressure transmitter are electrically connected to the screen of the fix connected connection cable.

The intrinsically safe circuit for the pressure signal is safe galvanically separated from parts that can be grounded.

15.3.2 Versions WL51/52.TX*****D* and WELL72.TX*****D* As category M1 equipment

Supply and signal circuits
(wires: brown [+], blue [-])

in type of protection intrinsic safety Ex ia I
for connection to an intrinsically safe circuit.
Max. values:
 $U_i = 30 \text{ V}$
 $I_i = 131 \text{ mA}$
 $P_i = 983 \text{ mW}$
Effective internal inductance $L_i = 51 \mu\text{H}$
Effective internal capacitance $C_i \text{ wire/wire} = 2.4 \text{ nF}$
Effective internal capacitance $C_i \text{ wire/screen} = 1.5 \text{ nF}$
From the fix mounted connection cable in addition to the
above mentioned C_i and L_i values also the following line
inductances L' and line capacitances C' must be taken into
account:
 $L' = 0.6 \mu\text{H/m}$
 $C' \text{ wire/wire} = 133 \text{ pF/m}$
 $C' \text{ wire/screen} = 215 \text{ pF/m}$

The metal parts of the suspension pressure transmitter are electrically connected to the screen of the fix connected connection cable.

The intrinsically safe circuit for the pressure signal is safe galvanically separated from parts that can be grounded.

15.3.3 Versions WL51/52.TX*****D* and WL72.TX*****D*
As category M2 equipment

Supply and signal circuit
(wires: brown [+], blue [-])
M2

in type of protection intrinsic safety Ex ia I for M1
in type of protection intrinsic safety Ex ia I or Ex ib I for

For connection to an intrinsically safe circuit

Max. values:

$U_i = 30 \text{ V}$

$I_i = 131 \text{ mA}$

$P_i = 983 \text{ mW}$

Effective internal inductance $L_i = 51 \mu\text{H}$

Effective internal capacitance C_i wire/wire = 2.4 nF

Effective internal capacitance C_i wire/screen = 1.5 nF

From the fix mounted connection cable in addition to the above mentioned C_i and L_i values also the following line inductances L' and line capacitances C' must be taken into account:

$L' = 0,6 \mu\text{H/m}$

C' wire/wire = 133 pF/m

C' wire/screen = 215 pF/m

Temperature measuring circuit
(wires: white/yellow, red/black)

in type of protection intrinsic safety Ex ia I for M1
in type of protection intrinsic safety Ex ia I or Ex ib I
for M2

For connection to an intrinsically safe circuit

Max. values;

$U_i = 30 \text{ V}$

$P_i = 80 \text{ mW}$

L_i and C_i are negligible low

From the fix mounted connection cable also the following line inductance L' and line capacitance C' must be taken into account:

$L' = 0,6 \mu\text{H/m}$

C' wire/wire = 188 pF/m

C' wire/screen = 555 pF/m

The metal parts of the suspension pressure transmitter are electrically connected to the screen of the fix connected connection cable.

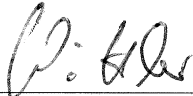
The intrinsically safe circuit for the pressure and temperature signal are safe galvanically separated from parts that can be grounded.

- (16) Test and assessment report
BVS PP 08.1024 EG as of 27.03.2008
- (17) Special conditions for safe use
- 17.1 The pressure transmitter type WL51/52.TX***** and WELL72.TX***** as category M1 or M2 equipment must be installed in such a way that an impact to the vessel wall can be sufficiently excluded taking into account the installations and flow conditions inside the vessel.


We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 14.07.2008
BVS-Ha/Ar E 1029/08

DEKRA EXAM GmbH



Certification body



Special services unit