



Translation

(1) **EC-TYPE EXAMINATION CERTIFICATE**

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



TÜV 04 ATEX 2492 X

- (4) Equipment: Hydrostatic filling level measuring device type Hydrocont Ex_K... and Ex_B... resp. pressure measuring device type Precont Ex_TM...
- (5) Manufacturer: ACS CONTROL SYSTEM GmbH
- (6) Address: Lauterbachstraße 57
D-84307 Eggenfelden
- (7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV NORD CERT GmbH & Co. KG, TÜV CERT-Certification Body, notified body number N° 0032 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), 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 the confidential report N° 04YEX551117.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN 50014:1997+A1+A2 EN 50020:2002 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 in accordance to the 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 or protective system must include the following:

II 1/2 G EEx ia IIC T4 or II 2 G EEx ib IIC T4

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Hanover, 2004-04-30

Head of the
Certification Body



TÜV NORD CERT



(13)

SCHEDULE

(14) **EC-TYPE EXAMINATION CERTIFICATE N° TÜV 04 ATEX 2492 X**

(15) Description of equipment

The hydrostatic filling level measuring device type Hydrocont Ex_K... and Ex_B... is used for the filling level measurement of pumpable media in basins, deep wells or tanks.

The pressure measuring device type Precont Ex_TM... is used for pressure measurement of gases, mists and fluids in tanks and pipes.

The connection housing of the devices resp. the wall mounted housing may be installed in hazardous explosive areas that require apparatus of category 2.

The sensor resp. the sensor with carrying cable may be installed in hazardous explosive areas that require apparatus of category 1.

The maximum permissible temperatures at the components of the devices in dependence of the category have to be taken from the following table:

category	maximum permissible temperatures				
	sensor	sensor with carrying cable	sensor connection housing		wall mounted housing
1	60°C	60°C	--		--
2	85°C	70°C	85°C		70°C
	with temperature partition piece: 125°C *		connection housing with cable: 70°C	if 125°C at the sensor: 50°C	

* only Hydrocont Ex_K...

Electrical data

Supply and

Signal circuit in type of protection Intrinsic Safety EEx ia IIC
 (Cable connection, only for the connection to a certified intrinsically safe circuit
 plug/socket connection or terminals)

maximum values:

$U_i = 30 \text{ V}$

$I_i = 140 \text{ mA}$

$P_i = 0.9 \text{ W}$

effective internal capacitance: 4 nF

effective internal capacity to earth potential: 5 nF

effective internal inductance: 0,11 mH

**Hydrocont Ex_B...**

Pt100 circuit in type of protection Intrinsic Safety EEx ia IIC
(Cable connection only for the connection to a certified intrinsically safe circuit
or terminals)

maximum values:

$$U_i = 5,9 \text{ V}$$

$$I_i = 39 \text{ mA}$$

$$P_i = 163 \text{ mW}$$

The effective internal capacitances and inductances are negligibly small.

The installation of a transmitter according to EC-Type Examination Certificate TÜV 02 ATEX 1924 X or of another separately certified transmitter in the wall mounted housing is permissible.

The details of the respective EC-Type Examination Certificate have to be observed.

In addition to the above stated values also the capacitances and inductances of the connection line (length L) have to be taken into consideration.

without venting tube	$L_i = L \times 0,65 \text{ } \mu\text{H/m}$
	$C_i = L \times 120 \text{ pF/m (wire/wire)}$
	$C_i = L \times 160 \text{ pF/m (wire/shield)}$
with venting tube	$L_i = L \times 1 \text{ } \mu\text{H/m}$
	$C_i = L \times 45 \text{ pF/m (wire/wire)}$
	$C_i = L \times 105 \text{ pF/m (wire/shield)}$

The intrinsically safe Pt100 circuit and the intrinsically safe supply and signal circuit are safe galvanically separated.

(16) The test documents are listed in the test report no. 04YEX551117.

(17) Special conditions for safe use

1. The sensor of the hydrostatic filling level measuring device type Hydrocont Ex_K... and Ex_B... resp. of the pressure measuring device type Precont Ex_TM... may be operated in explosion hazardous areas that require apparatus of category 1 only if atmospheric conditions exist (temperature from -20°C to 60°C, pressure from -0.8 bar to 1.1 bar).

For explosion hazardous areas that require apparatus of category 2 the permissible temperatures have to be taken from the table.

The supply and signal circuits as well as the Pt100-circuits may be connected to intrinsically safe circuits of the protection level ib. The marking of the device in this case is II 2 G EEx ib IIC T4.

The permissible operation pressures and temperatures for none-explosive gas mixtures have to be taken from the manufacturer specifications (operation instruction).



2. At the chargeable plastic parts of the hydrostatic filling level measuring device type Hydrocont Ex_K... and Ex_B... resp. of the pressure measuring device type Precont Ex_TM... there is a danger of ignition by electrostatic discharges. The operator has to ascertain the suitability of this equipment for his use (Observe warning label of the manufacturer).
3. At possible risks by pendulum or vibration the hydrostatic filling level measuring devices type Hydrocont Ex_K... and Ex_B... in the execution with carrying cable have to be secured effectively against these dangers.
4. At devices with integrated surge protection unit the intrinsically safe supply and signal circuit is connected with earth potential for safety reasons. Potential equalization has to exist in the complete course of the erection of the intrinsically safe circuit.

(18) Essential Health and Safety Requirements

no additional ones