



Translation

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

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

(3) **DMT 00 ATEX E 092 X**

(4) **Equipment: Pre-amplifier type PV24**

(5) **Manufacturer: Bopp & Reuther Messtechnik GmbH**

(6) **Address: 68305 Mannheim**

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

(8) The certification body of Deutsche Montan Technologie 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 00.2083 EG.

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

EN 50014:1997+A1-A2 General requirements
EN 50020:1994 Intrinsic Safety "i"

(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 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 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:

 **II 2G EEx ib IIC T6/5**

Deutsche Montan Technologie GmbH

Essen, dated 12. December 2000

Signed: Jockers

Signed: Dill

DMT-Certification body

Head of special services unit

(13)

Appendix to

(14)

EC-Type Examination Certificate

DMT 00 ATEX E 092 X

(15) 15.1 Pre-amplifier type PV24

15.2 Description

The Pre-amplifier type PV24 is used to amplify signals of a density sensor.

The classification of temperature class and maximum ambient temperature can be take from the following table:

Temperature class	Maximum ambient temperature
T6	70 °C
T5	85 °C

The minimum ambient temperature is -50 °C

15.3 Parameters

15.3.1 Supply circuit (terminals: + / -)

voltage U_i	30	V
current I_i	93	mA
power P_i	653	mW
effective internal capacitance C_i	negligible	
effective internal inductance L_i	0,2	mH

15.3.2 Sensor circuit (terminals: ws / sw)

voltage U_o	1	V
current I_o	11	mA
power P_o	3	mW
max. external capacitance C_o	200	μF
max. external inductance L_o	280	mH

15.3.2 Field control circuit (terminals: bl / ge)

voltage U_o	6,6	V
current I_o	86	mA
power P_o	142	mW
max. external capacitance C_o	3	μF
max. external inductance L_o	5	mH

(16) Test and assessment report
BVS PP 00.2083 EG as of 12.12.2000

(17) Special conditions for safe use

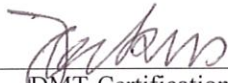
17.1 The Pre-amplifier type PV24 shall be installed in an enclosure which at least complies with degrees of protection IP 54 as defined in IEC publication 529

17.2 The Pre-amplifier type PV24 may be used in ambient temperatures of -50°C up to $70/85^{\circ}\text{C}$ (depending on the temperature class T6/T5).

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.

45307 Essen, 12.12.2000
BVS-Kann/Hm A 20000684

Deutsche Montan Technologie GmbH



DMT-Certification body



Head of special services unit