

[1] **EC-TYPE EXAMINATION CERTIFICATE**  
according to Directive 94/9/EC, Annex III  
(Translation)



[2] Equipment and Protective Systems intended for use in  
Potentially Explosive Atmospheres, Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **IBExU09ATEX1133**

[4] Equipment: **Vibration Level Switch**  
Type DP\*\*0 StEx

[5] Manufacturer: HYCONTROL LTD.

[6] Address: Orchard Street  
Redditch, Worcestershire B98 7DP  
UNITED KINGDOM

[7] The design of the equipment mentioned under [4] and any acceptable variations thereto are specified in the schedule to this EC-Type Examination Certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, NOTIFIED BODY number 0637 in accordance with article 9 of the directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that the equipment mentioned under [4] has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.  
The test results are recorded in the test report IB-09-3-282 of 30 September 2009.

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 61241-0:2006 and EN 61241-1:2004.

[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 under [17] in the schedule to this certificate.

[11] This EC-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this directive apply to the manufacture and supply of this equipment.

[12] The marking of the equipment mentioned under [4] shall include the following:

**Ex II 1/2 D Ex tD A20/21 IP6X T95 °C**  
**-20 °C ≤ T<sub>a</sub> ≤ +60 °C**

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Authorised for certifications  
-Explosion protection-

By order

(Dr. Wagner)



- Seal -  
(ID no. 0637)

Freiberg, 1 October 2009

Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

**Schedule**

[13] **Schedule**

[14] **to the EC-Type Examination Certificate IBExU09ATEX1133**

[15] **Description of equipment**

The probes of the vibration type level switch get driven by piezoelectric crystals to vibrate on its resonance frequency. When the probe gets covered by filling material the vibration stops and a binary output signal switches. They are suitable for use in areas which are endangered by dust explosions and which require category 1/2D equipment.

Technical data:

Type designations:	DP120 StEx, DP130 StEx, DP150 StEx DP600 StEx
Degree of protection of the enclosure:	IP 6X
Ambient temperature (electronics):	-20 °C to + 60 °C
Media temperatures:	up to +70 °C for cable probe DP150 StEx up to +80 °C for the standard types up to +150 °C with temperature adapter
Resonance frequency range:	280 Hz to 480 Hz
Power supply:	115/230 V AC resp. 20 - 250 VAC/DC
Power input:	< 3 W

[16] **Test report**

The proof of the explosion protection is explained in detail in the test report IB-09-3-282 of 30 September 2009. The test documents are listed in the test report.

Summary:

The vibration type level switches fulfil the requirements of dust explosion protection for equipment of Group II, Category 1/2D. The maximum surface temperature at the electronics enclosure is 95 °C (without any dust layer) in the worst case and in compliance with the installation location and the maximum ambient temperature of 60 °C.

Comments for safe use

The permitted media and ambient temperatures have to be respected according to the user manual. The enclosure of the vibration type level switches must be equipotentially earthed.

[17] **Special conditions for safe use**

none

[18] **Essential Health and Safety Requirements**

Confirmed by compliance with standards (see [9]).

By order

Freiberg, 1 October 2009



(Dr. Wagner)