(1) # EU - Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres – **Directive 2014/34/EU**

(3) EU - Type Examination Certificate Number

EPS 15 ATEX 1 040 **Revision 2**

(4) Equipment: VIB 8.3…--EX-- VIBRONET Multiplexer

(5) Manufacturer: Fluke Corporation

(6) Address: 6920 Seaway Blvd
Everett, WA 98203
United States of America

(7) This equipment and any acceptable variation thereto are specified in the annex to this certificate and the documentation therein referred to.

(8) Bureau Veritas Consumer Products Services Germany GmbH, notified body No. 2004 in accordance with Article 21 given in the Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014, 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 of the Directive. The examination and test results are recorded in the confidential documentation under the reference number 15TH0280.

(9) Compliance with the essential health and safety requirements has been assured by compliance with:

EN IEC 60079-0:2018 **EN 60079-11:2012**

(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 annex to this certificate.

(11) This EU - Type Examination Certificate relates only to the design and construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacture of this equipment and its placing on the market. Those requirements are not covered by this certificate.

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

II 2G Ex ib [ib] IIC T4 Gb

Certification department of explosion protection

Hamburg, 2021-12-16

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(13) # Annex

(14) **EU - Type Examination Certificate EPS 15 ATEX 1 040** **Revision 2**

(15) Description of equipment:

The VIBRONET Multiplexer type VIB 8.3...--EX-- is an electrical device used for control of rotation frequency, temperature and vibration. It can be equipped with different sensor circuits listed below. Several multiplexer can be connected in series.

Maximum ambient temperature range: $-40\ °C \leq T_a \leq +70\ °C$

Electrical data:

All electronic circuits comply with kind of ignition protection Ex ib IIC. The sensor circuits shall only be connected to load circuits.

The VIBRONET Multiplexer type VIB 8.3...--EX-- is supplied by an associated apparatus type VIB 3.550. Electrical output ratings:

U_o = 13 V, I_o = 18 mA, P_o = 240 mW, rectangular characteristic.

Combined inductances and capacitances of the complete multiplexer circuit shall never exceed the following values:

L_o [mH]	1.000	0.500	0.200	0.100	0.050	0.020
C_o [µF]	0.500	0.590	0.750	0.920	1.000	1.000

Impedances of the input line (Master_Line) and the output line (NEXT_Mux) are effectively connected through each multiplexer. This shall be respected for the assessment of the complete system. Impedances connected to each of the sensor-output and the sensor-input circuits are effectively separated.

Overview (electrical Data):

Master_Line type VIB 8.306--EX--	U_i = 13 V I_i = 18 mA P_i = 240 mW	C_i = 17.33 nF L_i = 0 µH	C_o, L_o: see above
Next_MUX type VIB 8.306--EX--	U_o = 13 V I_o = 18 mA P_o = 240 mW	C_i = 17.33 nF L_i = 0 µH	C_o, L_o: see above
Sensor Vibration type VIB 8.314--EX--	U_o = 13 V I_o = 18 mA P_o = 240 mW	C_i = 0 nF L_i = 0 µH	C_o = 25 nF L_o = 30 µH
Sensor Rotation type VIB 8.313--EX--	U_o = 13 V I_o = 18 mA P_o = 240 mW	C_i = 11 nF (output) L_i = 0 µH	C_o = 110 nF L_o = 120 µH
Sensor temperature type VIB 8.310--EX--	U_o = 3.6 V I_o = 18 mA P_o = 65 mW	C_i = 0 nF L_i = 0 µH	C_o = 3 nF L_o = 10 µH

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(16) Reference number: 15TH0280

(17) Special conditions for safe use:

None.

(18) Essential health and safety requirements:

Met by compliance with standards.

Certification department of explosion protection

Hamburg, 2021-12-16

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