



## EU - Type Examination Certificate

(1)

(2)

Equipment or Protective Systems Intended for Use  
in Potentially Explosive Atmospheres  
(Directive 2014/34/EU)

(3) EU - Type Examination Certificate number:

**FTZÚ 17 ATEX 0143X**

(4) Product: **Gas-Volume Conversion Device ELCOR, ELCORplus, ELCORplus indexer  
Datalogger DATCOM, DATCOMplus**

(5) Manufacturer: **ELGAS, s.r.o.**

(6) Address: **Semtínská 211, Ohrazenice, 533 53 Pardubice, Czech Republic**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report number:

**17/0134 dated 30.04.2018**

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2012+A11:2013, EN 60079-11:2012**

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use specified in the schedule to this certificate.

(11) This certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

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

 **II 1G Ex ia IIB T4 Ga**

This certificate is valid till: **30.04.2023**

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



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(15) Description of Product:

The product Gas-Volume Conversion Device ELCOR and ELCORplus is measuring instrument designed to convert the volume of gas measured under operating conditions to volume under basic conditions. The gas volume information is scanned through the meter's impulse outputs. Gas temperature and gas pressure are measured by integrated transducers. The device is built into a housing made of durable plastic with IP66 protection. It features a graphical display and a 6-key keyboard. It is also equipped with pulse inputs for gas meter connection and binary inputs, digital outputs. For communication with the master system, the device is equipped with a serial interface RS232 or RS485.




The instrument is supplied in two basic types, either ELCOR (DATCOM) or ELCORplus (DATCOMplus). These types differ in size and equipment.

Communications can use infrared, GSM/LTE modem, supplied from the battery-volume HB 03 / HB-04.

The device is powered from the B-03 battery pack. 2G / GSM modem from battery pack HB-03, 4G / LTE modem from HB-04 battery pack.

The ELCORplus (DATCOMplus) can be powered from an external intrinsically safe source, the device equipped with a modem can also be powered from an external power supply dedicated to the modem.

The devices can be equipped with a number of expansion modules, some of which change the device marking (12):

1. Communication board 2G, LTE:  II 1G Ex ia IIB T3 Ga
2. PWR2 board:  II 2G Ex ib IIA T3 Gb
3. SCR interface board:  II 2G Ex ib IIB T4 Gb

Intrinsically safe parameters:

Digital inputs DIN (Terminals DI1, GND, DI2, GND, DI3, GND, DI4, GND)

$U_o = 6,5 \text{ V}$ ,  $I_o = 2 \text{ mA}$ ,  $P_o = 3 \text{ mW}$

Gas Group IIA:  $C_o = 100 \mu\text{F}$ ,  $L_o = 100 \text{ mH}$

Gas Group IIB:  $C_o = 20 \mu\text{F}$ ,  $L_o = 10 \text{ mH}$

Digital outputs DOUT (Terminals U0+, GND0, DO1, DO2, DO3, DO4)

$U_i = 15 \text{ V}$ ,  $I_i = 0,3 \text{ A}$ ,  $\sum P_i = 0,5 \text{ W}$ ,  $C_i = 3,3 \mu\text{F}$ ,  $L_i = 0$

Internal bus IB0, IB1 (Terminals GND, U+, D+, D-)

$U_o = 6,5 \text{ V}$ ,  $I_o = 2,2 \text{ A}$ ,  $P_o = 1,1 \text{ W}$

Gas Group IIA:  $\sum C_o = 50 \mu\text{F}$ ,  $\sum L_o = 1 \mu\text{H}$

Gas Group IIB:  $\sum C_o = 24 \mu\text{F}$ ,  $\sum L_o = 1 \mu\text{H}$

Maximal cable length: 100 m

Responsible person:

  
Dipl. Ing. Lukáš Martinák  
Head of Certification Body



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Interface Indexer (Terminals SLOT0 TERMINALS: GND, U+, TXD, RXD, UB)

$U_o = 6,5 \text{ V}$ ,  $I_o = 2.2 \text{ A}$ ,  $P_o = 1,1 \text{ W}$

Gas Group IIA:  $\Sigma C_o = 50 \mu\text{F}$ ,  $\Sigma L_o = 1 \mu\text{H}$

Gas Group IIB:  $\Sigma C_o = 24 \mu\text{F}$ ,  $\Sigma L_o = 1 \mu\text{H}$

Interface SCR (Terminals SLOT0 TERMINALS: A, B)

$U_o = 8,0 \text{ V}$ ,  $I_o = 20\text{mA}$ ,  $P_o = 160 \text{ mW}$

Gas Group IIA:  $C_o = 100 \mu\text{F}$ ,  $L_o = 10 \mu\text{H}$

Gas Group IIB:  $C_o = 14 \mu\text{F}$ ,  $L_o = 8 \mu\text{H}$

Maximal cable length: 30 m

Interface NAMUR (Terminals SLOT0 TERMINALS: NAMUR+, NAMUR-)

$U_o = 10,0 \text{ V}$ ,  $I_o = 11\text{mA}$ ,  $P_o = 27 \text{ mW}$

Gas Group IIA:  $C_o = 20 \mu\text{F}$ ,  $L_o = 1 \text{ mH}$

Gas Group IIB:  $C_o = 20 \mu\text{F}$ ,  $L_o = 1 \text{ mH}$

Interface RS485 (Terminals SLOT1, 2 TERMINALS: D+, D-, GND, U+)

$U_i = 10 \text{ V}$ ,  $I_i = 0,15 \text{ A}$ ,  $\Sigma P_i = 0,33 \text{ W}$ ,  $C_i = 4 \mu\text{F}$ ,  $L_i = 0$

Interface RS232 (Terminals SLOT1, 2 TERMINALS: GND, CTS, RXD, TXD)

$U_i = 20 \text{ V}$ ,  $I_i = 0,15 \text{ A}$ ,  $\Sigma P_i = 0,46 \text{ W}$ ,  $C_i = 1 \mu\text{F}$ ,  $L_i = 0$

External power supply PWR1 (Terminals SLOT3, PWR1+, PWR1-)

$U_i = 6,5 \text{ V}$ ,  $I_i = 0,2 \text{ A}$ ,  $P_i = 0,41 \text{ W}$ ,  $C_i = 40 \mu\text{F}$ ,  $L_i = 1,1 \text{ mH}$

External power supply PWR2 (Terminals SLOT4, PWR2+, PWR2-)

$U_i = 6,2 \text{ V}$ ,  $I_i = 1,0 \text{ A}$ ,  $P_i = 6,2 \text{ W}$ ,  $C_i = 13 \text{ mF}$ ,  $L_i = 55 \mu\text{H}$

Degree of protection by enclosure: IP66

Ambient temperature:  $-40^\circ\text{C} \leq T_a \leq +70^\circ\text{C}$

(16) Report Number.: 17/0143

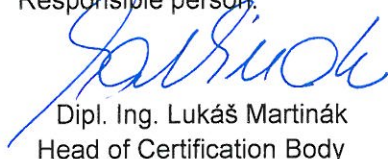
(17) Specific Conditions of Use:

1. Under certain extreme circumstances, the plastic enclosure may store an ignition-capable level of electrostatic charge. Therefore the device shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge. The equipment shall only be cleaned with a damp cloth.

(18) Essential Health and Safety Requirements:

Compliance with the Essential Health and Safety Requirements is covered by standards mentioned in clause (9) of this certificate.

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(13) **Schedule**

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(19) List of Documentation:

<i>Document/Drawings:</i>	<i>Type of doc.:</i>	<i>Rev.:</i>	<i>Date:</i>	<i>Nr. of pages:</i>
KP 108	46/105	0	04.2018	105
User manual	-	0	04.2018	79
KP 107	01/1	01	15.02.2018	1
KP 107 01	01/1	01	13.02.2018	1
KP 107 30	01/1	01	01.02.2018	1
KP 108	01/1	01	15.02.2018	1
KP 108 01	01/1	01	13.02.2018	1
KP 108 30	01/1	01	01.02.2018	1
KP 109	01/1	01	11.04.2018	1
KP 107 30	01/1	01	10.04.2018	1
KP 100 030	01/1	01	15.02.2018	1
KP 100 050	01/1	01	16.02.2018	1
KP 100 070	01/1	01	15.02.2018	1
KP 100 030	01/1	01	15.02.2018	1
KP 100 041	01/1	01	15.02.2018	1
KP 100 041 D	01/1	01	15.02.2018	1
KP 100 110	01/1	01	15.02.2018	1
KP 100 141	01/1	01	15.02.2018	1
DKP 100 092	24/2	-	01.02.2018	2
KP 100 092	01/2	00	01.02.2018	2
KP 100 092	03/4	03	01.04.2015	4
KP 100 092	10/2	03	01.02.2018	2
DKP 100 030-01	24/2	-	01.02.2018	2
KP 100 030-01	01/2	00	01.02.2018	2
KP 100 030-01	03/3	02	01.04.2015	3
KP 100 030-01	10/3	02	01.02.2018	3
DKP 100 040-01	24/2	-	01.02.2018	2
KP 100 040-01	01/2	00	01.02.2018	2
KP 100 040-01	03/1	02	01.04.2015	1
KP 100 040-01	03/1	02	04.05.2015	1
KP 100 040-01	03/1	02	01.02.2018	1
KP 100 040-01	10/2-10/3	02	01.02.2018	3
DKP 100 041-01	24/2	00	01.02.2018	2
KP 100 041-01	01/2	-	01.02.2018	2
KP 100 041-01	03/1	02	08.02.2015	1
KP 100 041-01	03/1	03	01.04.2015	1
KP 100 041-01	03/3	03	01.02.2018	1
KP 100 041-01	10/2-10/3	02	01.02.2018	2
DKP 100 050-01	24/1	-	01.02.2018	1
KP 100 050-01	01/3	00	01.02.2018	3
KP 100 050-01	03/1	00	09.02.2018	1
KP 100 050-01	10/1	00	01.02.2018	1

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(19) List of Documentation:

<i>Document/Drawings:</i>	<i>Type of doc.:</i>	<i>Rev.:</i>	<i>Date:</i>	<i>Nr. of pages:</i>
DKP 100 060	24/1	-	01.02.2018	1
KP 100 060	01/2	00	01.02.2018	2
KP 100 060	03/1	01	01.04.2015	1
KP 100 060	10/1	01	01.02.2018	1
DKP 100 061	24/1	-	01.02.2018	1
KP 100 061	01/2	00	01.02.2018	2
KP 100 061	03/4	03	20.02.2017	4
KP 100 061	10/3	03	01.02.2018	3
DKP 100 062	24/1	-	01.02.2018	1
KP 100 062	01/2	00	01.02.2018	2
KP 100 062	03/3	03	27.01.2017	3
KP 100 062 Mod Aia	10/2	03	01.02.2018	2
KP 100 062 Mod Aib	10/2	03	01.02.2018	2
DKP 100 070-01	24/1	-	01.02.2018	1
KP 100 070-01	01/3	00	01.02.2018	3
KP 100 071-01	03/1	02	01.04.2015	1
KP 100 070-01	10/1	02	01.02.2018	1
DKP 100 080	24/1	-	01.02.2018	1
KP 100 080	01/1	00	01.02.2018	1
KP 100 080	03/1	04	10.02.2015	1
KP 100 080	10/1	04	01.02.2018	1
DKP 100 090	24/2	-	01.02.2018	2
KP 100 090	01/2	00	01.02.2018	2
KP 100 090	03/2	02	01.04.2015	2
KP 100 090	10/2	02	01.02.2018	2
DKP 100 092	24/2	-	01.02.2018	2
KP 100 092	01/2	00	01.02.2018	2
KP 100 092	03/4	03	01.04.2015	4
KP 100 092	10/2	03	01.02.2018	2
DKP 100 100	24/1	-	01.02.2018	1
KP 100 100	01/1	00	01.02.2018	1
KP 100 100	03/1	01	01.04.2015	1
KP 100 100	10/1	01	01.02.2018	1
DKP 100 110-01	24/1	-	01.02.2018	1
KP 100 110-01	01/2	00	01.02.2018	2
KP 100 110-01	03/1	01	01.04.2015	1
KP 100 110-01	10/1	01	01.02.2018	1
DKP 100 121-01	24/1	-	01.02.2018	1
KP 100 121-01	01/2	00	01.02.2018	2
KP 100 121-01	03/1	01	01.04.2015	1
KP 100 121-01	10/1	01	01.02.2018	1
DKP 100 140-01	24/2	-	01.02.2018	2

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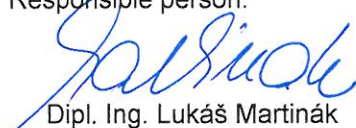
Schedule

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<i>Document/Drawings:</i>	<i>Type of doc.:</i>	<i>Rev.:</i>	<i>Date:</i>	<i>Nr. of pages:</i>
KP 100 140-01	01/2	00	01.02.2018	2
KP 100 140-01	03/2	01	19.05.2016	2
KP 100 140-01	10/1	01	01.02.2018	1
KP 102	01/1	01	23.10.2015	1
KP 102	70/11	Z102002	15.03.2016	11
KP 102 01	01/1	01	14.12.2015	1
KP 102 01-01	01/1	01	06.04.2016	1
KP 102 01-02	01/1	01	06.04.2016	1
KP 102 01-03	01/1	01	06.04.2016	1
KP 102 01-04	01/1	01	06.04.2016	1
KP 102 01-15	20/1	Z102001	08.02.2016	1
KP 102 01-15	23/1	Z102001	08.02.2016	1
DKP 102 01-15	24/2	Z102001	08.02.2016	2
DKP 102 01-15	26/1	Z102001	08.02.2016	1
KP 102 01-15	01/2	Z102001	08.02.2016	2
KP 102 01-15	03/1	Z102005	17.08.2015	1
KP 102 01-15	10/1	Z102005	04.01.2017	1
KP 102 01-15	35/6	Z102003	30.03.2016	6
KP 102 01-15	01/1	Z102004	26.05.2016	1
KP 096	-	-	04.2018	40
KP 101	-	-	04.2018	19

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