Instructions

TÜV 99 ATEX 1508 X

Evaluation Unit VAPORIX-Control …

Edition: 01.2014

I Range of application

The evaluation unit VAPORIX-Control … is used to monitor vapour recovery.

II Standards

The equipment is designed in accordance with the following European standards

EN 60079-0:2012	Equipment – General requirements
EN 60079-11:2012	Equipment protection by intrinsic safety „i"
EN 60079-26:2007	Equipment with equipment protection level (EPL) Ga

III Information on safe …

III.a … use

The evaluation unit serves as associated equipment and is not for use in potentially explosive areas. The intrinsically safe electric circuits of the evaluation unit may be routed to zone 0 and can be used for gas groups IIA and IIB.

The approval is valid for the evaluation unit VAPORIX-Control and VAPORIX-Control Basic.

III.b … assembling and dismantling

The housing must not be opened!

III.c … installation

All wiring operations must solely be carried out with the power disconnected. Special rules and regulations, including EN 60079-14 and local installation regulations, must be observed.

The evaluation unit is suitable for DIN rail and wall mounting. The evaluation unit must be installed outside potentially explosive atmospheres/areas.

The evaluation unit must be mounted with splash-proof protection. The casing protection class is IP20. If the evaluation unit is erected outdoors, the degree of protection provided by enclosure must be at least IP54.

When wiring the sensor (VAPORIX-Flow) to the evaluation unit (preferably with a blue-coloured cable), the inductance and capacitance approved in clause V must not be exceeded.

Terminal designation:

Connection	Terminal	Pins
Power supply	230V~	PE, N and L
Sensor circuits	B resp. A	1 to 8 as appropriate
Pulse input	Pulse	-B+ resp. -A+
Control outputs	Out B resp. Out A	-2+ resp. -1+ as appropriate
Voltage output	5V	- and +
Two-wire RS485	*RS485	G, B and A
Four-wire RS485	*RS485-4	(Cradle connector)
RS232 interface	Service	(Sub D jack)

Table 1: Terminal labelling on the evaluation unit

* In the case of the type VAPORIX-Control Basic, the RS485 communication terminal is not marked

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III.d ... adjustment

No safety-related calibration is required to operate the evaluation unit.

III.e ... putting into service

Before commissioning, all equipment must be checked to ensure it is properly connected and installed. The power supply, as well as connected equipment, must be checked.

III.f ... maintenance, overhaul and repair

In general, the evaluation unit is maintenance-free. In case of a defect it must be send back to the manufacturer FAFNIR, or one of his representatives.

The unit complies with the dielectric strength requirements as set out in EN 60079-11, clause 6.3.13.

IV Equipment marking

1	Manufacturer:	FAFNIR GmbH, Hamburg
2	Type designation:	VAPORIX-Control ...
3	Serial number:	Ser. N°: ...
4	Certificate number:	TÜV 99 ATEX 1508 X
5	Ex marking:	Ex II (1) G [Ex ia Ga] IIB
6	CE marking:	CE 0044
7	Technical data:	$T_a \leq +65$ °C $U_o \leq 23.9$ V $I_o \leq 325$ mA $P_o \leq 1.9$ W $L_o \leq 300$ µH $C_o \leq 530$ nF

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V Technical data

The power supply for the evaluation unit, depending on model is

U = 115 V a.c. ± 10 %, 50 Hz ... 60 Hz, approx. 18 VA, resp.
U = 230 V a.c. ± 10 %, 50 Hz ... 60 Hz, approx. 18 VA

The maximum safety voltage is

U_m = 130 V at 115 V a.c., resp.
U_m = 253 V at 230 V a.c.

The electric circuits of the sensors have "Intrinsic safety" [ia] ignition protection class with a linear output characteristic. Output values per electric circuit are

$U_o \leq$ 23.9 V
$I_o \leq$ 325 mA
$P_o \leq$ 1.9 W
$C_o \leq$ 530 nF
$L_o \leq$ 300 µH

The intrinsically safe sensor circuits are safely galvanically isolated from the supply circuit up to a peak value of the nominal voltage of 375 V.

The intrinsically safe sensor circuits are safely galvanically isolated from the pulse inputs, control outputs, communication interfaces, and voltage output up to a peak value of the nominal voltage of 190 V.

As a reference, the corresponding pulse output of the fuel dispenser computer must be connected to the pulse input (Pulse). The permissible voltage signal is between

U = 5 V ... 30 V

The control outputs (Out) can loaded with following electrical values

U ≤ 30 V
I ≤ 200 mA

The signal voltage of the communication interfaces (RS485, RS485-4 and Service) is

U ≤ 12 V

The maximum safety voltage of the pulse inputs, the control outputs and the communication interfaces is

U_m = 130 V

The voltage output supplies the following electrical values

U = 5 V
I ≤ 50 mA

The evaluation unit may be used in the following ambient temperature range

T_a = -20 °C ... +65 °C

The evaluation unit achieves a degree of protection provided by enclosure of

Degree of protection IP20

VI Specific conditions of use

Were revoked in the 2nd supplement.

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