



Safety instructions

VEGAPULS 69

Flameproof enclosure "d"

4 ... 20 mA/HART - two-wire

4 ... 20 mA/HART - four-wire

Modbus

Profibus PA

Foundation Fieldbus



CE 0044



Document ID: 50353



VEGA

DE	Sicherheitshinweise für den Einsatz in explosionsgefährdeten Bereichen
EN	Safety instructions for the use in hazardous areas
FR	Consignes de sécurité pour une application en atmosphères explosibles
IT	Normative di sicurezza per l'impiego in luoghi con pericolo di esplosione
ES	Instrucciones de seguridad para el empleo en áreas con riesgo de explosión
PT	Normas de segurança para utilização em zonas sujeitas a explosão
NL	Veiligheidsaanwijzingen voor gebruik op plaatsen waar ontploffingsgevaar kan heersen
SV	Säkerhetsanvisningar för användning i explosionsfarliga områden
DA	Sikkerhedsforskrifter til anvendelse i explosionsfarlig atmosfære
FI	Turvallisuusohjeet räjähdysvaarallisissa tiloissa käyttöä varten
EL	Υποδείξεις ασφαλείας για τη χρησιμοποίηση σε περιοχές που υπάρχει κίνδυνος έκρηξης

DE	Die vorliegenden Sicherheitshinweise sind im Download unter www.vega.com standardmäßig in den Sprachen deutsch, englisch, französisch und spanisch verfügbar. Weitere EU-Landessprachen stellt VEGA nach Anforderungen zur Verfügung.
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ES	Las indicaciones de seguridad presentes están disponibles en la zona de descarga de www.vega.com de forma estándar en los idiomas inglés, francés y español. VEGA pone a disposición otros idiomas de la UE cuando son requeridos.

1 Area of applicability

These safety instructions apply to the VEGAPULS 69 of type series:

- VEGAPULS PS69(*).AE***H/B//P/F/U*****(*) (*)
- VEGAPULS PS69(*).AJ***H/B//P/F/U*****(*) (*)
- VEGAPULS PS69(*).VE***H/B//P/F/U*****(*) (*)

With the electronics versions:

- H - Two-wire 4 ... 20 mA/HART
- B - Four-wire 4 ... 20 mA/HART; 90 ... 250 V AC; 50/60 Hz
- I - Four-wire 4 ... 20 mA/HART; 9.6 ... 48 V DC; 20 ... 42 V AC; 50/60 Hz
- P - Profibus PA
- F - Foundation Fieldbus
- U - Modbus

According to EU type approval certificate PTB 15 ATEX 1009 X, Issue 01 (certificate number on the type label) and for all instruments with safety instruction 50353.

The classification as well as the respective standards are stated in the EU type approval certificate:

- EN 60079-0: 2012 + A11: 2013
- EN 60079-1: 2014
- EN 60079-26: 2015

Ignition protection label:

- II 1/2G, 2G Ex db IIC T6 ... T1 Ga/Gb, Gb

2 Important specification in the type code

VEGAPULS 69(*).abcdefghijklm(*) (*)

Position	Feature	Description
a	Scope	A ATEX / Europe
		V Combination (ATEX, IECEx, FM, CSA)
b	Approval	E II 1/2G, 2G Ex db IIC T6...T1 Ga/Gb, Gb
		J II 1/2G, 2G Ex db IIC T6...T1 Ga/Gb, Gb or II 1D, 1/2D, 1/3D, 2D Ex ta IIIC T... (see safety instructions) Da, Da/ Db, Da/Dc, Db
c	Version / Material	B Plastic horn antenna / PP
		C Metal-jacketed lens antenna with rinsing connection / PEEK
		U Thread with integrated horn antenna / PEEK
de	Process fitting / Material	* One or two-digit alphanumeric code for gas-tight threaded connections, pipe connections and industrial flanges acc. to ASME, BS, DIN, EN, GOST, HG/T, JIS, other international, national or industrial standards, regulations or standards with pressure specifications

Position		Feature	Description
f	Seal / Process temperature	A	FKM (SHS FPM 70C3 GLT) and PEEK / -40 ... +130 °C
		B	FKM (SHS FPM 70C3 GLT) and PEEK / -40 ... +200 °C
		C	PP / -40 ... +80 °C
		D	FKM (SHS FPM 70C3 GLT) and PP / -40 ... +80 °C
		E	EPDM (COG AP310) and PP / -40 ... +80 °C
		F	EPDM (COG AP302) and PEEK / -40 ... +130 °C
		*	Other comparable seal suitable for the application including the process temperature to be taken into account
g	Electronics	H	Two-wire, 4 ... 20 mA/HART, U = 12 ... 35 V DC
		B	Four-wire, 4 ... 20 mA/HART, U = 90 ... 253 V AC; 50/60 Hz
		I	Four-wire, 4 ... 20 mA/HART, U = 9.6 ... 48 V DC; 20 ... 42 V AC
		P	Two-wire Profibus PA, 9 ... 32 V DC
		F	Two-wire Foundation Fieldbus, 9 ... 32 V DC
		U	Four-wire Modbus, 8 ... 30 V DC
h	Supplementary electronics	X	without
		Z	Additional current output 4 ... 20 mA
i	Housing / Protection	A	Aluminium / IP 66/IP 68 (0.2 bar)
		H	Special colour Aluminium / IP 66/IP 68 (0.2 bar)
		D	Aluminium double chamber / IP 66/IP 68 (0.2 bar)
		S	Special colour Aluminium double chamber / IP 66/IP 68 (0.2 bar)
		V	Stainless steel (precision casting) 316L / IP 66/IP 68 (0.2 bar)
		W	Stainless steel double chamber / IP 66/IP 68 (0.2 bar)
j	Cable entry / Connection	D	M20 x 1.5 / Blind plug
		1	M20 x 1.5 / without
		N	½ NPT / Blind plug
		Q	½ NPT / without
		O	M20 x 1.5 / Cable gland brass nickel-plated (ø 6 ... 12 mm)
		6	M20 x 1.5 / Cable gland brass nickel-plated, for shielded cable (ø 9 ... 13 mm)
		8	½ NPT / Cable gland brass nickel-plated (ø 6 ... 12 mm)
		P	½ NPT / Cable gland brass nickel-plated, for shielded cable (ø 9 ... 13 mm)
		*	Other cable glands or fittings approved for the ignition protection type

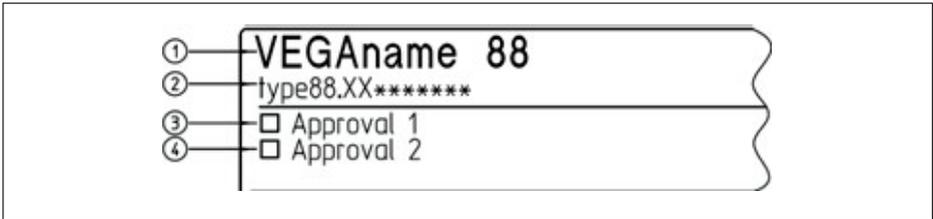
Position		Feature	Description
k	Display and adjustment module PLICSCOM	X	without
		A	mounted
		F	without; lid with inspection window
		B	Laterally mounted
		K	mounted; with Bluetooth, magnetic pen operation
		L	laterally mounted; with Bluetooth, magnetic pen operation
l	Additional equipment	X	without
		R	Reflux valve for rinsing connection
		V	Purging connection with reflux valve (only for antenna type B)
m	Certificates	X	No
		M	Yes

In the following, all above mentioned versions are called VEGAPULS 69. If parts of these safety instructions refer only to certain versions, then these will be mentioned explicitly with their type code.

3 Different ignition protection types

The VEGAPULS 69 can be either used in explosive dust atmospheres or in explosive gas atmospheres.

The operator must specify the selected ignition protection type before installation. The selected ignition protection must be marked by scratching off on the identification mark of the type label.



- 1 VEGAPULS 69
- 2 Instrument version
- 3 Identification label: Approval in dust ignition protection type e. g. „Ex t“
- 4 Identification label: Approval in Gas ignition protection type e. g. „Ex i“, „Ex d“

If VEGAPULS 69 is installed in a dust atmosphere, then the safety instructions and the instructions in the respective certificates must be noted:

Installation	Feature	Certificate	Safety instruction
Dust	"AJ"	BVS 16 ATEX E 022 X	53030

4 General information

The VEGAPULS 69 in ignition protection type flameproof enclosure "d" are used for detection of the distance between product surface and sensor by means of high frequency, electromagnetic waves in the GHz range.

The electronics uses the running time of the signals reflected by the product surface to calculate the distance to the product surface.

The VEGAPULS 69 consist of an electronics housing, a