



Level Switch CV120StEx / CV130StEx / CV150StEx
Safety guidelines for use of the vibrating level switches
CV120StEx / CV130StEx / CV150StEx in the presence of combustible dust
(Type CV is direct equivalent of DP** and vice versa)**

General:

The vibrating level switches CV120StEx / CV130StEx / CV150StEx can be used in the presence of combustible dust according to ATEX directive 94/9/EG: equipment group II, category 1 / 2 D.

Marking of approved instruments according to directive 94/9/EG:

The following data is engraved in the lid of the enclosure of the vibrating level switches CV120StEx / CV130StEx / CV150StEx:

P T L Hermann GmbH ,		D-79618 Rheinfelden	
CE	Level Switch	CV120 DIN StEx	Ser.No.:
	Power Supply:	20-250V AC/DC 3VA	xxxxxxStEx
Ex	II 1 / 2 D T 95°C IP67		IBExU03ATEX1033
	Umgebungstemperatur Gehäuse (Zone 21):		-20... + 60°C
Prozesstemperatur Sond (Zone20):		-20... + 80°C	

e.g.
 CV120 StEx with wide range power supply
 Type CV**0 is direct equivalent of
 DP**0 and vice versa.

Categories and allowed Zones of the components:

Component	Categorie	Can be used in Zone
Probes	1 D	20, 21 or 22
Enclosure with PCB	2 D	21 or 22

Protection according to EN 50281-1-1:

- Protection by dust-tight enclosure IP6X
- Limited surface temperatures of the apparatus

Maximum surface temperatures:

Zone	Max. permissible ambient temperature	Max. surface temperature at failure	Heat up due to failure
Zone 20	80°C for standard units	80°C for standard	0 K
	70°C for probe CV150	70°C	0 K
	150°C for high temperature (= process temperature)	150°C for high temperature	0 K
Zone 21	60°C	95°C	+35 K

The 35K maximum heat up of the enclosure surface results on 25K heat up of the electronics at failure and additional 10K due to heat conduction via the probe in cases where the process temperature is higher than 60°C.

Special guidelines for installation, set-up and maintenance of apparatus in the presence of combustible dust:

- Installation, set-up and maintenance must be performed in conjunction with the instruction manual and by qualified technical personnel only.
- Local governing regulations must be followed
- The requirements of Din EN 5028-1-2 regarding temperatures and dust deposits must be followed.
- The enclosure must only be opened when power supply on all wires has been switched off.
- Before opening the enclosure dust deposits must be removed and dust clouds must be avoided.
- In order to maintain the protection by dust-tight enclosure it is essential that assembling of the instruments must be performed according to the descriptions in the instruction manual. Special care must be taken that all sealings and sealing planes are not to be damaged and that all sealings sit in the appropriate position. All screwings must be fastened by applying the torques according to the instruction manual.