

# Safety Instructions for 6000 Series Servo Tank Gauge



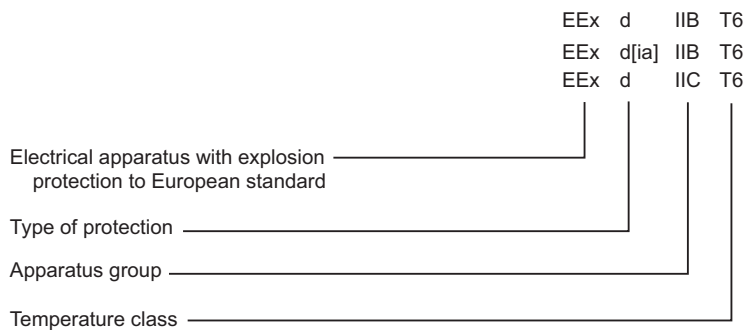
Safety instructions for electrical apparatus certified for use in explosion-hazardous areas according to: KEMA 05 ATEX 2071

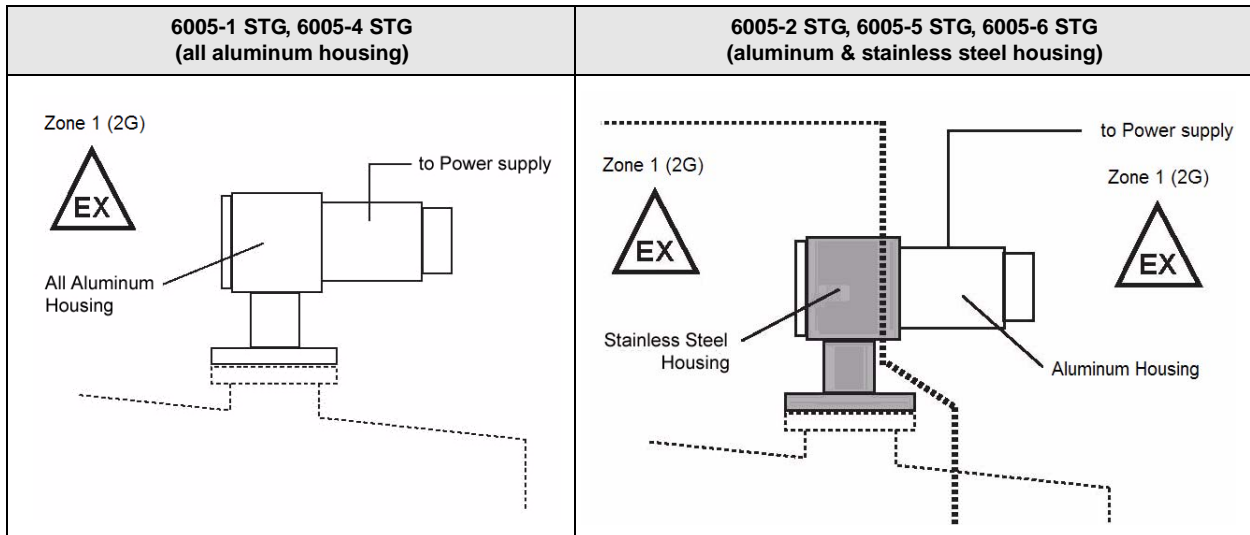
Designation according to Directive 94/9/EC: **CE** **Ex**

Hazardous zone at the mounting point		Category in Directive 94/9/EC
Hazard due to explosive gas-air mixture	Zone 0	1G
Hazard due to explosive gas-air mixture	Zone 1	2G
Hazard due to explosive gas-air mixture	Zone 2	3G

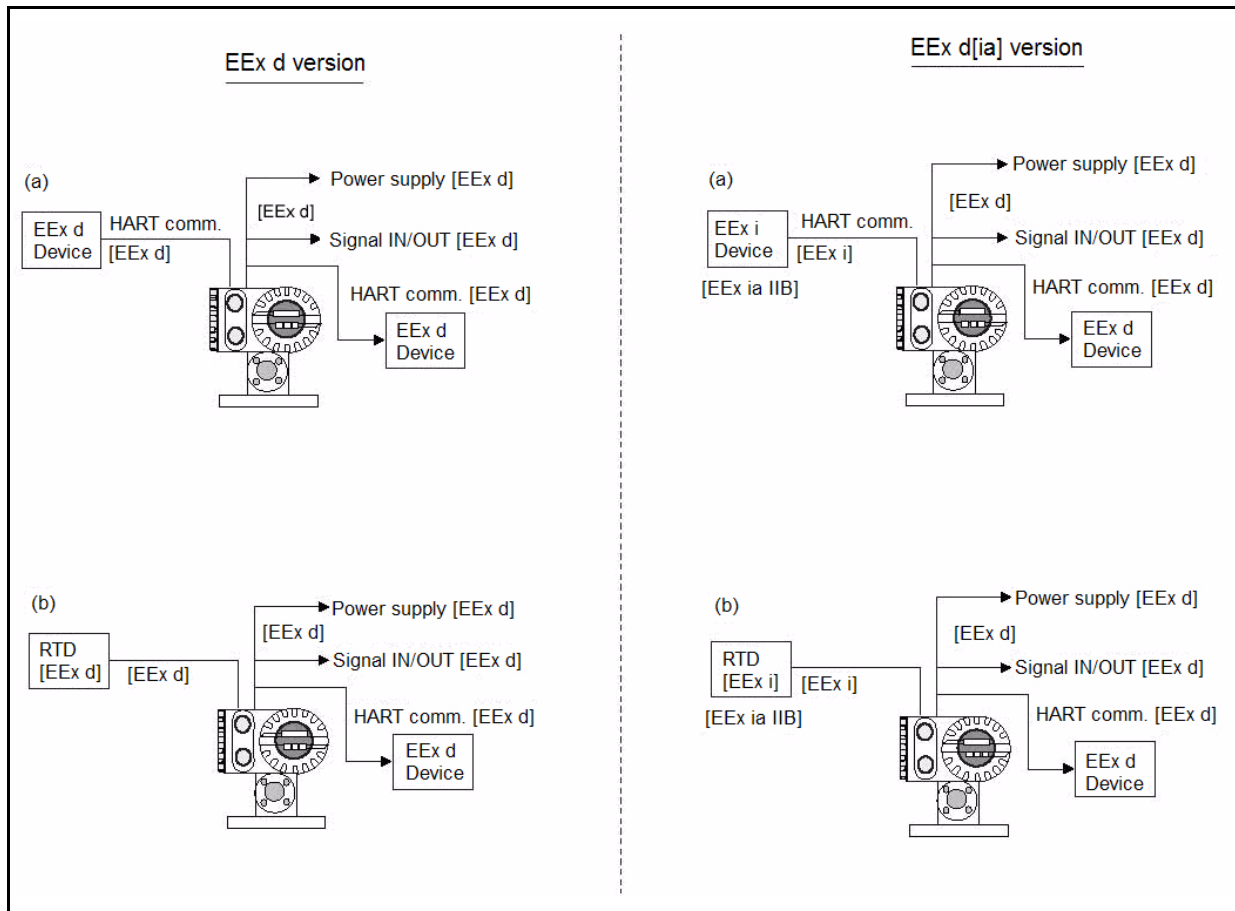
6005-1 STG, 6005-4 STG	6005-2 STG, 6005-5 STG, 6005-6 STG
II 2 G	II 1/2 G
Equipment Group _____	Equipment Group _____
Equipment Category Drum compartment and Electric compartment Cat. 2 _____	Equipment Category Drum compartment Cat. 1/ Electric compartment Cat. 2 _____
For explosive mixture composed of gases, mists, or vapors _____	For explosive mixture composed of gases, mists, or vapors _____

## Designation of explosion protection





External connection



## Safety notes for installation in hazardous areas

1. Install according to the manufacture’s instructions and other valid standards and guidelines.
2. Do not open the connection compartment cover and/or electric compartment cover under voltage in explosive atmospheres.
3. Installation of the 6000 Series Servo Tank Gauge is to be made so, that no waving or rolling motion of the displacer can occur in operation causing a contact of the displacer with the tank wall.
4. Cable entry:
  - Only certified cable entries must be used for the intended cables. Selection criteria as per DIN / IEC 60079–14 must be observed.
  - For operating the tank gauge housing at an ambient temperature under -20°C, appropriate cables and cable entries permitted for this application must be used.
  - Cable connection: The cable entry device shall be certified in type of protection flameproof enclosure “d”, suitable for the conditions of use and correctly installed. The cable and cable glands shall be suitable for at least 80°C.
  - Conduit connection: A certified sealing device in type of protection flameproof enclosure “d”, such as a conduit seal with setting compound shall be provided immediately to the entrance of the enclosure. The wiring and setting compound in the conduit seal shall be suitable for at least 80°C. Blanking elements of unused apertures shall be certified in type of protection flameproof enclosure “d”, suitable for the conditions of use and correctly installed.
  - Wiring of the intrinsically safe circuit: If the product is provided with the optionally intrinsically safe circuit, the connection shall be made via separate cable gland and with a cable type permitted for that purpose.
  - Close unused gland openings with suitable ATEX EEx d authorized sealing plugs.
5. Supply and Interface circuit and intrinsic safety signal circuit
  - [EEx d version] Power supply: [Terminals: 1(L+), 2(N-), 3(GND)]

High voltage type	Low voltage type
6005-.....3....	6005-.....4....
85V...264V AC, 50/60 Hz, max. 25 VA	19V ... 55V AC, 50/60 Hz, max. 25 VA 19V ... 62 V DC, max. 25W

- [EEx d version] Interface circuit:

Interface	Terminals	Low voltage type
Interface circuit	[Terminals:4-23]	U=24V, max.50 mA
External device connection	[Terminals: 24(+), 25(-), 26(N.C.)]	U=28.7 V
External RTD connection	[Terminals: 24(A), 25(B), 26(b)]	U=11.3 V

- [EEx d [ia] version] Power supply: [Terminals: 1(L+), 2(N-), 3(GND)]

High voltage type (6005-...3 STG)	Low voltage type (6005...4 STG)
85V...253V AC, 50/60 Hz, max. 25 VA Um = 253 V	19V ... 55V AC, 50/60 Hz, max. 25 VA 19V ... 62 V DC, max. 25W Um = 253 V

- [EEx d [ia] version] Interface circuit: [Terminal: 4–23]

U=24V, max.50 mA, Um=253 V

- [EEx d [ia] version] External Intrinsic Safety device connection: [Terminals: 24(+), 25(-), 26(N.C.)]

Only for connection to a certified intrinsically safe device with the following maximum values.

Item	Maximum value
Uo	28.7 V
Lo	114 mA
Po	816 mW
Co (external capacitance)	615 nF
Lo (external inductance)	10 mH

- [EEx d [ia] version] External RTD connection: [Terminals: 24(A), 25(B), 26(b)]

Only for connection to a certified intrinsic safety RTD (EEx ia IIB) or simple apparatus with the following maximum values.

Item	Maximum value
Uo	11.3 V
Lo	81.6 mA
Po	406 mW
Co (external capacitance)	1.3 uF
Lo (external inductance)	4.0 mH

#### 6. Ambient Temperature range of application

- -20 °C to 60 °C (standard version, EEx d IIC version)
- -40 °C to 60 °C (low temperature version for cold area, IIB version only)

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### Safety notes for Zone 0

Potentially explosive vapor/air mixtures may arise under atmospheric conditions only:

-20 °C ≤ T ≤ +60 °C

0.8 bar ≤ P ≤ 1.1 bar