Atex Directive 2014/34/EU

Equipment for use in potentially explosive atmospheres

Conditions in hazardous areas				
Flammable substances	Temporary behaviour of flammable substances in hazardous places	**Subdivision** of hazardous places	**Required marking** for installation	
			equipment group	category group
gases vapours	is present continuously or for long periods or frequently	zone 0	**II**	**1G**
	is likely to occur in normal operation occasionally	zone 1	**II**	**2G** or **1G**
	is not likely to occur in normal opration but, if it does occur, will persist for a short period only	zone 2	**II**	**3G** or **2G** or **1G**
dusts	is present continuously or for for long periods or frequently	zone 20	**II**	**1D**
	is likely to occur in normal operation occasionally	zone 21	**II**	**2D** or **1D**
	it is not likely to occur in normal operation but, if it does occur, will persist for a short period only	zone 22	**II**	**3D** or **2D** or **1D**
methane dusts	-	mines	**I**	**M1**
	-	mines	**I**	**M2** or **M1**

Subdivision of gases and vapours							
Apparatus may be used in	**Explosion subgroup**	**Gases and vapours**					
IIA	**IIA**	ammonia methane ethane propane	ethyl alcohol cyclohexane n-butane	galsoline n-hexane	acetaldehyde		
IIB	**IIB**	town gas, acrylnitril	ethylene ethylene oxide	ethylene glycol hydrogen sulphide	ethyl-ether		
IIC	**IIC**	hydrogen	ethane				sulphide of carbon
	Temperature classes subdivision of gases and vapours according to the ignition temperature						
	T1 > 450 °C	**T2** > 300 to ≤ 450 °C	**T3** > 200 to ≤ 300 °C	**T4** > 135 to ≤ 200 °C	**T5** > 100 to ≤ 135 °C	**T6** > 85to ≤ 100 °C	

apparatus may be used in

T1 T2 T3 T4 T5 T6

Restriction for using apparatus	
Requirements	**Marking**
without restriction	**-**
special condition may be noted	**X**
Ex component, which is not intended to be used alone and requires additional certification. CE-Conformity of the component is certified when installed in a complete equipment or protective system.	**U**

CE 0081 Ex **II 2G EEx d IIC T3** **NB (n°)ATEX(n°) U**

LCIE	France	**0081**
INERIS	France	**0080**
BAM	Germany	**0589**
DMT	Germany	**0158**
DQS	Germany	**0297**
FSA	Germany	**0588**
IBExU	Germany	**0637**
PTB	Germany	**0102**
TÜV (Nord Cert)	Germany	**0032**
SEE	Luxembourg	**0499**
KEMA	Netherlands	**0344**
SP	Sweden	**0402**
LOM	Spain	**0163**
EECS (BASEEFA)	UK	**0600**
SCS	UK	**0518**
Notified Bodies	**Country**	**Code**
Accredite test Laboratory		

Application	**Principle of protection**	**Type of protection**	**Symbol**	**Marking**	May be used in **zone**	**CENELEC**	**IEC**
all applications	-	general requirements			-	EN 50014	60079-0
control stations, motors, fuses, switchgear, power electronics	an propagation of an explosion inside to the outside is excluded	flameproof enclosure		**EEx d**	1 or 2	EN 50018	60079-1
installation materials, motors, luminaries	avoidance of arcs, sparks and excessive temperature	increased safety		**EEx e**	1 or 2	EN 50019	60079-7
measurement and control, automation technology, sensors, actuators	limitation of energy as well as arcs and temperature	intrinsic safety		**EEx i**	0, 1 or 2***	EN 50020* EN 50039**	60079-11
switch- and control cupboards, analyse-apparatus, computers	ex-atmosphere keep at a distance from the ignition source	pressurisation		**EEx p**	1 or 2	EN 50016**	60079-2
coils of motors or relays, solenoid valves	ex-atmosphere keep at a distance from the ignition	encapsulation		**EEx m**	1 or 2	EN 50028	60079-18
transformers, relays, control stations, magnetic contactors	ex-atmosphere keep at a distance from the ignition source	oil immersion		**EEx o**	1 or 2	EN 50015	60079-6
capacitors, transformers	an propagation of an ignition inside to the outside is excluded	powder filling		**EEx q**	1 or 2	EN 50017	60079-5
see at the top - only for zone 2	see at the top - only for zone 2	'non sparking'		**EEx n**	2	EN 50021	60079-15