



Marking of 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 operation 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 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				
		ammonia methane ethane propane	ethyl alcohol cyclohexane n-butane	galsoline n-hexane	acetaldehyde	
I IA	I IA					
I IB	I IB	town gas, acrylnitril	ethylene oxide	ethylene glycol sulphide	ethyl-ether	
I IC	I IC	hydrogen	ethine (acetylene)			sulphide of carbon

Temperature classes						
T1	T2	T3	T4	T5	T6	
Subdivision of gases and vapours according to the ignition temperature						
> 450 °C	> 300 up to ≤ 450 °C	> 200 up to ≤ 300 °C	> 135 up to ≤ 200 °C	> 100 up to ≤ 135 °C	> 85 up to ≤ 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 is declared by the manufacturer if the part is fitted into a complete device.	U

CE 0044 Ex II 2G Ex d IIB T4 NB 04 ATEX 1234 X

Notified Bodies	Country	Code	Application	Principle of protection	Type of protection	Symbol	Marking	May be used in zone	CENELEC	IEC
LCIE	France	0081	all applications	-	general requirements		-	-	EN 60079-0	IEC 60079-0
INERIS	France	0080	control stations, motors, fuses, switchgear, power electronics	an propagation of an explosion inside to the outside is excluded	flameproof enclosure		Ex d	1 or 2	EN 60079-1	IEC 60079-1
BAM	Germany	0589	installation materials, motors, luminaries	avoidance of arcs, sparks and excessive temperature	increased safety		Ex e	1 or 2	EN 60079-7	IEC 60079-7
DEKRA EXAM	Germany	0158	measurement and control, automation technology, sensors, actuators	limitation of energy as well as arcs and temperature	intrinsic safety		Ex i	0, 1 or 2	EN 60079-11* EN 60079-25**	IEC 60079-11* IEC 60079-25**
DQS	Germany	0297	switch- and control cupboards, analyse-apparatus, computers	ex-atmosphere keep at a distance from the ignition source	pressurisation		Ex p	1 or 2	EN 60079-2	IEC 60079-2
TÜV (Nord Cert)	Germany	0044	coils of motors or relays, solenoid valves	ex-atmosphere keep at a distance from the ignition	encapsulation		Ex m	1 or 2	EN 60079-18	IEC 60079-18
SNCH	Luxembourg	0499	transformers, relays, control stations, magnetic contactors	ex-atmosphere keep at a distance from the ignition source	oil immersion		Ex o	1 or 2	EN 60079-6	IEC 60079-6
KEMA	Netherlands	0344	capacitors, transformers	an propagation of an ignition inside to the outside is excluded	powder filling		Ex q	1 or 2	EN 60079-5	IEC 60079-5
SP	Sweden	0402	see at the top - only for zone 2	see at the top - only for zone 2	'non sparking'		Ex n	2	EN 60079-15	IEC 60079-15
LOM	Spain	0163								
EECS (BASEEFA)	UK	1180								
SIRA	UK	0518								

*Devices ia use in zones 0, 1, 2 / ib use in zones 1,2 ** intrinsically safe systems