



PROTECTION CONCEPTS		
ZONE	HAZARD	PROTECTION CONCEPTS
0	In which an explosive gas/air mixture is continuously present for long periods	Exia or Exs
1	In which an explosive gas/air mixture is likely to occur in normal operation.	Exd, Exe, Exib, Exp, Exia, Exs
2	In which an explosive gas/air mixture is not likely to occur in normal operation.	All concepts suitable for Zone 0 & 1, ExN, ExO and Exq

STANDARDS FOR METHODS OF PROTECTION		
METHOD OF PROTECTION	PERMITTED ZONE OF USE IN UK	CODE LETTER IEC, EX., CENELEC, EEX
General requirement	-	-
Oil immersion	2	o
Pressurisation	1 or 2	p
Powder filling	2	q
Flameproof	1 or 2	d
Increased safety	1 or 2	e
Intrinsic safety	* 0, 1 or 2	ia or ib
Non-incendive	2	n #
Encapsulation	1 or 2	m
Special	1 or 2	s

* ia: Zone 0,1,2. ib: Zone 1,2. not Zone 0. # n: used locally in UK.

GAS GROUPING	
GAS GROUP CENELEC EN 50 014, IEC	REPRESENTATIVE GAS
I (mining)	Methane
IIA	Propane
IIB	Ethylene
IIC	Hydrogen

TEMPERATURE CLASSIFICATION	
T Class / IEC BS EN 60079-0	Max. surface temp °C
T1	450 °C
T2	300 °C
T3	200 °C
T4	135 °C
T5	100 °C
T6	85 °C

CERTIFICATION CODE (CENELEC marking information - example [Ex ia] IIC T4)						
[E	Ex	ia]	IIC	T4
Associated apparatus*	Certified to the CENELEC standard	Explosion protected	Protection concept (IS)	Associated apparatus*	Apparatus group (gas group)	Temperature classification (not Gp I)

* (see IEC BS EN 60079-0, clause 3.2)

Important:
Users are advised to refer to BS 5345 Parts 1 and 6 prior to installation of equipment in hazardous areas.

