

CSA and ATEX Hazardous Area Certifications



Contents

Defining CSA Hazardous Locations	2
Classes	2
Divisions	2
Groups	2
Defining ATEX Hazardous Locations	2
Gas, Mists, or Vapors	2
Dusts	2
SureCross Certifications Summary by Model Groups	3
DX80...C, DX85...C, DX70...C Models	4
DX80...B Models	5
DX99 Polycarbonate Housings	6
DX99 Metal Housings	7

Defining CSA Hazardous Areas

Classes

Class I	Flammable gases may be present in sufficient quantities to produce explosive or flammable mixtures.
Class II	The presence of combustibile dust.
Class III	Contain easily ignitable fibers and flyings.

Divisions

Division 1	Flammable gases, vapors, liquids, combustibile dusts or ignitable fibers and flyings are likely to exist under normal operating conditions.
Division 2	Flammable gases, vapors, liquids, combustibile dusts or ignitable fibers and flyings are not likely to exist under normal operating conditions.

Groups

Hazardous atmospheres are further defined by "groups." These include:

Group A	Atmospheres containing acetylene.
Group B	Atmospheres containing hydrogen, gases or vapors of equivalent hazard such as manufactured gas.
Group C	Atmospheres containing ethyl-ether vapors, ethylene, or cyclo-propane.
Group D	Atmospheres containing gasoline, hexane, naphtha, benzene, butane, propane, alcohol, acetone, benzol, lacquer solvent vapors, or natural gas.
Group E	Atmospheres containing metal dust - including aluminum, magnesium, and their commercial alloys, and other metals of similarly hazardous characteristics.
Group F	Atmospheres containing carbon black, coal, or coke dust.
Group G	Atmospheres containing flour, starch, or grain dusts.

Defining ATEX Hazardous Areas

Gas, Mists, or Vapors

Zone 0	A mixture of air and flammable substances in the form of gas, vapor, or mist is present frequently, continuously or for long periods.
Zone 1	A mixture of air and flammable substances in the form of gas, vapor, or mist is likely to occur in normal operation occasionally.
Zone 2	A mixture of air and flammable substances in the form of gas, vapor, or mist is not likely to occur in normal operation but, if it does occur, will persist for only a short period.

Dusts

Zone 20	A cloud of combustibile dust in the air is present frequently, continuously or for long periods.
Zone 21	A cloud of combustibile dust in the air is likely to occur in normal operation occasionally.
Zone 22	A cloud of combustibile dust in the air is not likely to occur in normal operation but, if it does occur, will persist for only a short period.

SureCross Certifications Summary by Model Groups

CSA C/US	Class I, Division 1, Groups A, B, C, D Ex ia IIC	Class I, Division 1, Groups A, B, C, D Class II, Division 1, Groups E, F, G Class III, Division 1 Ex ia IIC	Class I, Division 2, Group A, B, C, D Ex/A Ex nA II	Class I, Division 2, Group A, B, C, D Class II, Division 1, Group E, F, G Class III, Division 1 Ex/A Ex nA II
CSA Certificate	2008243 (LR 41887)	2008243 (LR 41887)	1921239	1921239
LCIE/ATEX	Zone 0, Group IIC Temperature Class T4 II 1 G Ex ia IIC T4	Zone 0 (Group IIC) and 20 (Group II) Temperature Class T4 II 1 GD Ex ia IIC T4 Ex iaD 20 IP66 T82°C	Zone 2, Group IIC II 3G Ex nA IIC	Zone 2 (Group IIC) and 22 (Group IIIC) II 3GD Gc Ex nA IIC T4 Dc Ex tc IIIC T92°C
LCIE/ATEX Certificate	LCIE 08 ATEX 6098 X	LCIE 08 ATEX 6098 X	LCIE 09 ATEX 1035 U	LCIE 09 ATEX 1034 X
Control Drawings	141513	141513	143086	143086
Models				
DX99 Polycarbonate Housing	x			
DX99 Metal Housing		x		
DX80...C			x	
DX80...B (Metal housing)				x
DX70...C			x	
DX85...C			x	
DX80G*M2S FlexPower Gateway			x	
DX80DR*M Data Radio			x	
DX81 Battery Supply			x	
DX80 Counter FlexNode, Int Batt			x	
DX80 Serial FlexNode, Int Batt			x	
DX80 M-GAGE Node, Int Batt (Square)			x	
DX90 and DX91			x	

DX80...C, DX85...C, DX70...C Models

Please refer to the table on page 3 for a list of all devices under this certification.

CSA

Class I, Division 2, Groups A, B, C, D
Ex/A Ex nA II



ATEX

Certificate: LCIE 09 ATEX 1035 U

Compliance with the Essential Health and Safety Requirements has been assured by reference to: EN 60079-0 (2006); EN 60079-15 (2005).

Certification	Definition	Definition	Atmospheres
II 3G		Category 3G, Group II, Zone 2	Gas Atmospheres
Ex nA IIC	Ex	Explosion Protected	
	nA	No arcs, sparks, or hot surfaces	
	IIC	EU/IEC: Up to Group IIC US and CA: Up to Class I, Group A	

CA: Canada

EU: European Union

IEC: International Electrotechnical Commission

US: United States

DX80...B Models

CSA

Class I, Division 2, Groups A, B, C, D
 Class II, Groups E, F, G
 Class III
 Ex/A Ex nA II



ATEX

Certificate: LCIE 09 ATEX 1034 X

Compliance with the Essential Health and Safety Requirements has been assured by reference to: EN 60079-0 (2006); EN 60079-15 (2005); EN 60079-31 (2008).

Certification	Definition	Definition	Atmospheres
II 3GD		Category 3G, Group II, Zone 2 Category 3D, Group II, Zone 22	
Gc Ex nA IIC T4	Gc	EPL: Gc, Group II EU (Atex): Category 3G, Group II (gas atmosphere, "enhanced" level of protection) Typical Zone: Zone 2	Gas Atmospheres
	Ex	Explosion Protected	
	nA	No arcs, sparks, or hot surfaces	
	IIC	EU/IEC: Up to Group IIC US and CA: Up to Class I, Group A	
	T4	Temperature Class T4: Up to 135° C	
Dc Ex tc IIIC T92°C	Dc	EPL: Dc, Group III (dust atmosphere, "enhanced" level of protection) EU (ATEX): Category 3D, Group II Typical Zone: Zone 22	Dust Atmospheres
	Ex	Explosion Protected	
	tc	Category 3D (dust atmosphere, "enhanced" level of protection; keep combustible dust out)	
	IIIC	EU/IEC: Up to Group IIIC US and CA: Up to Class II, Group E	
	T92°C	Temperature Class: Up to 92° C	

CA: Canada
 EPL: Equipment Level Protection
 EU: European Union
 IEC: International Electrotechnical Commission
 US: United States

DX99 Polycarbonate Housings

CSA

Class I, Division 1, Groups A, B, C, D
Ex ia IIC



ATEX

Certificate: LCIE 08 ATEX 6098 X / 01

Compliance with the Essential Health and Safety Requirements has been assured by reference to: EN 60079-0 (2006); EN 60079-11 (2007); EN 61241-0 (2006); EN-61241-11 (2006).

Certification	Definition	Definition	Atmospheres
II 1 G		Category 1G, Group II, Zone 0	Gas Atmospheres
Ex ia IIC T4	Ex	Explosion Protected	
	ia	Category 1G, Group II, Zone 0 (Limit energy of sparks and surface temperature)	
	IIC	EU/IEC: Up to Group IIC US and CA: Up to Class I, Group A	
	T4	Temperature Class T4: Up to 135° C	

CA: Canada

EPL: Equipment Level Protection

EU: European Union

IEC: International Electrotechnical Commission

US: United States

DX99 Metal Housings

CSA

Class I, Division 1, Groups A, B, C, D
 Class II, Division 1, Groups E, F, G
 Class III, Division 1



ATEX

Certificate: LCIE 08 ATEX 6098 X / 01

Compliance with the Essential Health and Safety Requirements has been assured by reference to: EN 60079-0 (2006); EN 60079-11 (2007); EN 61241-0 (2006); EN-61241-11 (2006).

Certification	Definition	Definition	Atmospheres
II 1 GD		Category 1G, Group II, Zone 0 Category 1D, Group II, Zone 20	
Ex ia IIC T4	Ex	Explosion Protected	Gas Atmospheres
	ia	Category 1G, Group II, Zone 0 (Limit energy of sparks and surface temperature)	
	IIC	EU/IEC: Up to Group IIC US and CA: Up to Class I, Group A	
	T4	Temperature Class T4: Up to 135° C	
Ex iaD 20 IP66 T82°C	Ex	Explosion Protected	Dust Atmospheres
	iaD	Category 1D, Group II, Zone 20 (Limit energy of sparks and surface temperature)	
	20	Zone 20	
	IP66	IP66 (Ingress Protection)	
	T82°C	Temperature Class: Up to 82° C	

CA: Canada
 EU: European Union
 IEC: International Electrotechnical Commission
 US: United States