

CONTROLS FOR HAZARDOUS LOCATIONS



HAZARDOUS LOCATION CLASSIFICATIONS

NEC 500

PROBABILITY OF HAZARDOUS MATERIAL

DIVISION 1	DIVISION 2
Explosive atmosphere is continually or likely present.	Explosive atmosphere is not likely present.

NATURE OF HAZARDOUS MATERIAL

CLASS I — GASES & VAPORS

DIVISION 1	DIVISION 2
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GROUP A | Acetylene

GROUP B | Hydrogen

GROUP C | Ethylene

GROUP D | Propane

CLASS II — DUST

DIVISION 1	DIVISION 2
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GROUP E | Metal Dusts

GROUP F | Carbon-based Dusts

GROUP G | Non-conductive Dusts

CLASS III — FIBERS & FLYINGS

ATEX / IECEx

PROBABILITY OF HAZARDOUS MATERIAL

ZONE 0 / 20	ZONE 1 / 21	ZONE 2 / 22
Explosive atmosphere is continually present.	Explosive atmosphere is likely present.	Explosive atmosphere is not likely present.

NATURE OF HAZARDOUS MATERIAL

G — GASES & VAPORS

ZONE 0	ZONE 1	ZONE 2
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IIC | Acetylene & Hydrogen

IIB+H2 | Hydrogen

IIB | Ethylene

IIA | Propane

D — DUST

ZONE 20	ZONE 21	ZONE 22
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IIIC | Conductive Dusts

IIIB | Non-conductive Dusts

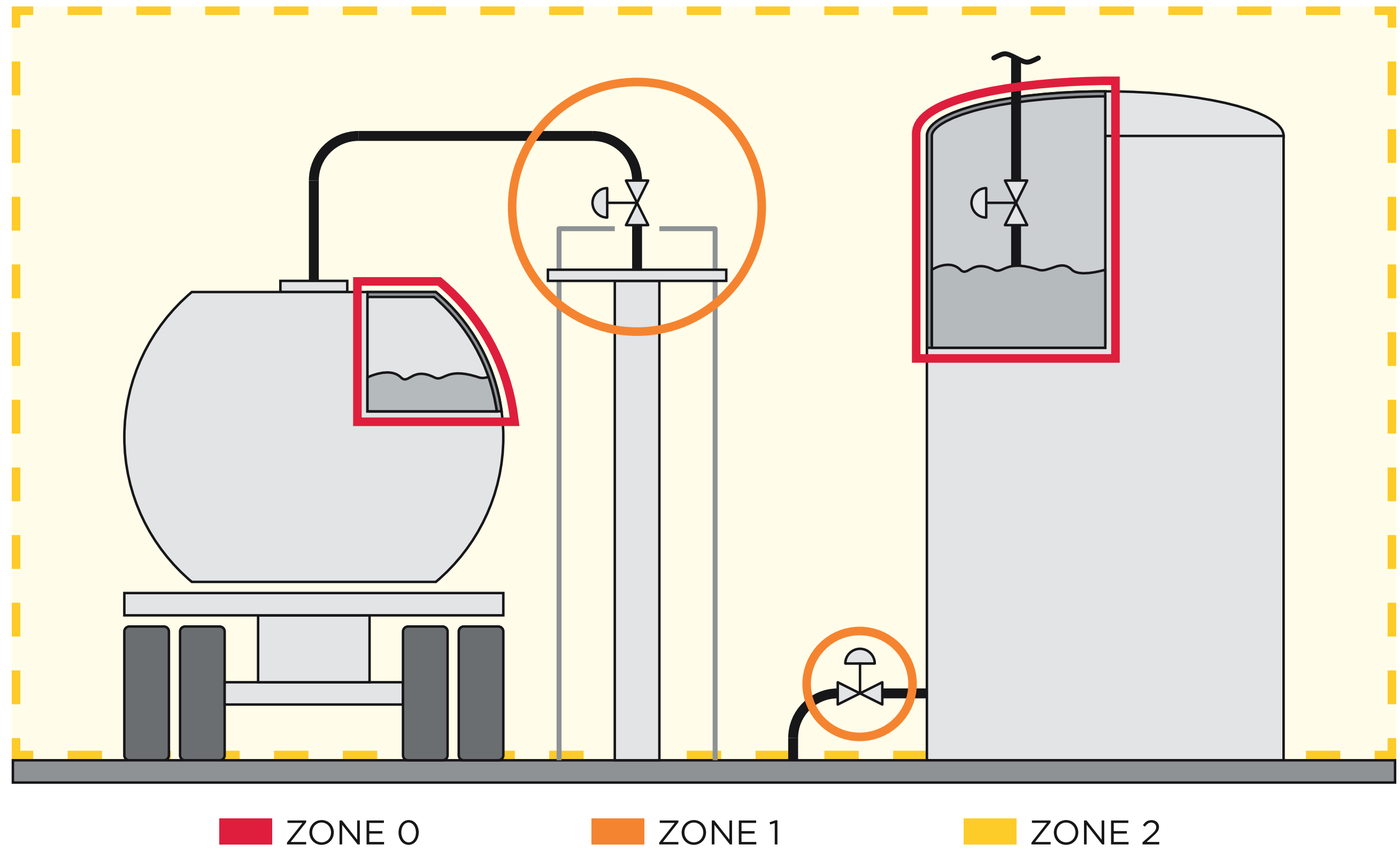
IIIA | Fibers

ALTERNATE NORTH AMERICA CLASSIFICATION — NEMA

TYPE 7 | Enclosures constructed for indoor use in hazardous (classified) locations classified as Class I, Division 1, Groups A, B, C, or D as defined in NFPA 70.

TYPE 9 | Enclosures constructed for indoor use in hazardous (classified) locations classified as Class II, Division 1, Groups E, F, or G as defined in NFPA 70.

TYPICAL HAZARDOUS GASES & VAPORS APPLICATION



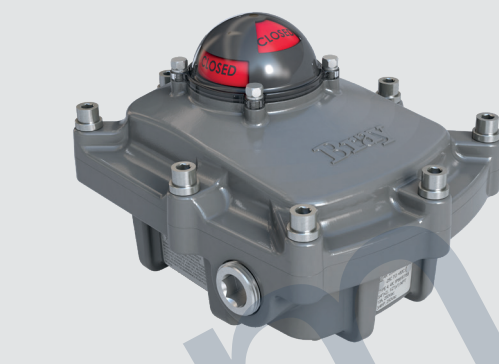
EXPLOSION PROOF PRODUCTS¹ Contains Explosion (Ex d)



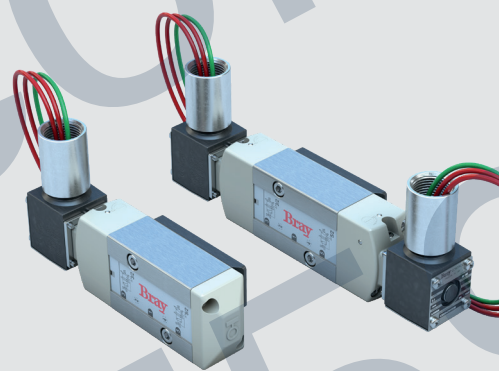
**SERIES 70
ELECTRIC ACTUATOR**
NEC
CLASS I DIV 1 C,D
CLASS II DIV 1 E,F,G



**SERIES 6A
POSITIONER**
NEC
CLASS I DIV 1 A,B,C,D
CLASS II/III DIV 1 E,F,G
ATEX/IECEx
G ZONE 1 IIC
D ZONE 22 IIIC



**SERIES 5C
VALVE STATUS MONITOR**
NEC
CLASS I DIV 1 A,B,C,D
CLASS II DIV 1 E,F,G
ATEX/IECEx
G ZONE 1 IIB+H2
D ZONE 21 IIIC



**SERIES 63
SOLENOID**
NEC
CLASS I DIV 1 A,B,C,D
CLASS II DIV 1 E,F,G

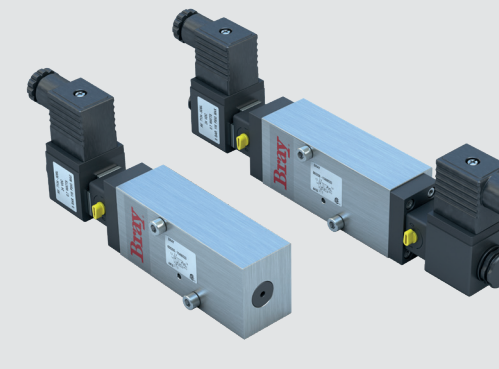
INTRINSICALLY SAFE PRODUCTS^{1,2} Energy Limited (Ex ia)



**SERIES 6A
POSITIONER**
NEC
CLASS I DIV 1 A,B,C,D
ATEX/IECEx
G ZONE 1 IIC
D ZONE 21 IIIC



**SERIES 5A / 5B
VALVE STATUS MONITOR**
NEC
CLASS I DIV 1 A,B,C,D
CLASS II/III DIV 1 E,F,G
ATEX/IECEx
G ZONE 0 IIC



**SERIES 60
SOLENOID**
NEC
CLASS I DIV 1 A,B,C,D
CLASS II DIV 1 E,F,G



**SERIES 54
PROXIMITY SENSOR**
NEC
CLASS I DIV 1 A,B,C,D
CLASS II DIV 1 E,F,G
ATEX/IECEx
G ZONE 0 IIC

NON-SPARKING PRODUCTS¹ No Arcs/Sparks (Ex nA)



**SERIES 54
PROXIMITY SENSOR**
ATEX/IECEx
G ZONE 2 IIC
D ZONE 22 IIIC

NOTES:
1 For full rating specifications, see product literature.
2 Order with appropriate intrinsically safe barrier.