

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
GROUP A Acetylene	
GROUP B Hydrogen	
GROUP C Ethylene	
GROUP D Propane	

CLASS II – DUST

DIVISION 1	DIVISION 2
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
IIC Acetylene & Hydrogen		
IIB+H2 Hydrogen		
IIB Ethylene		
IIA Propane		

D – DUST

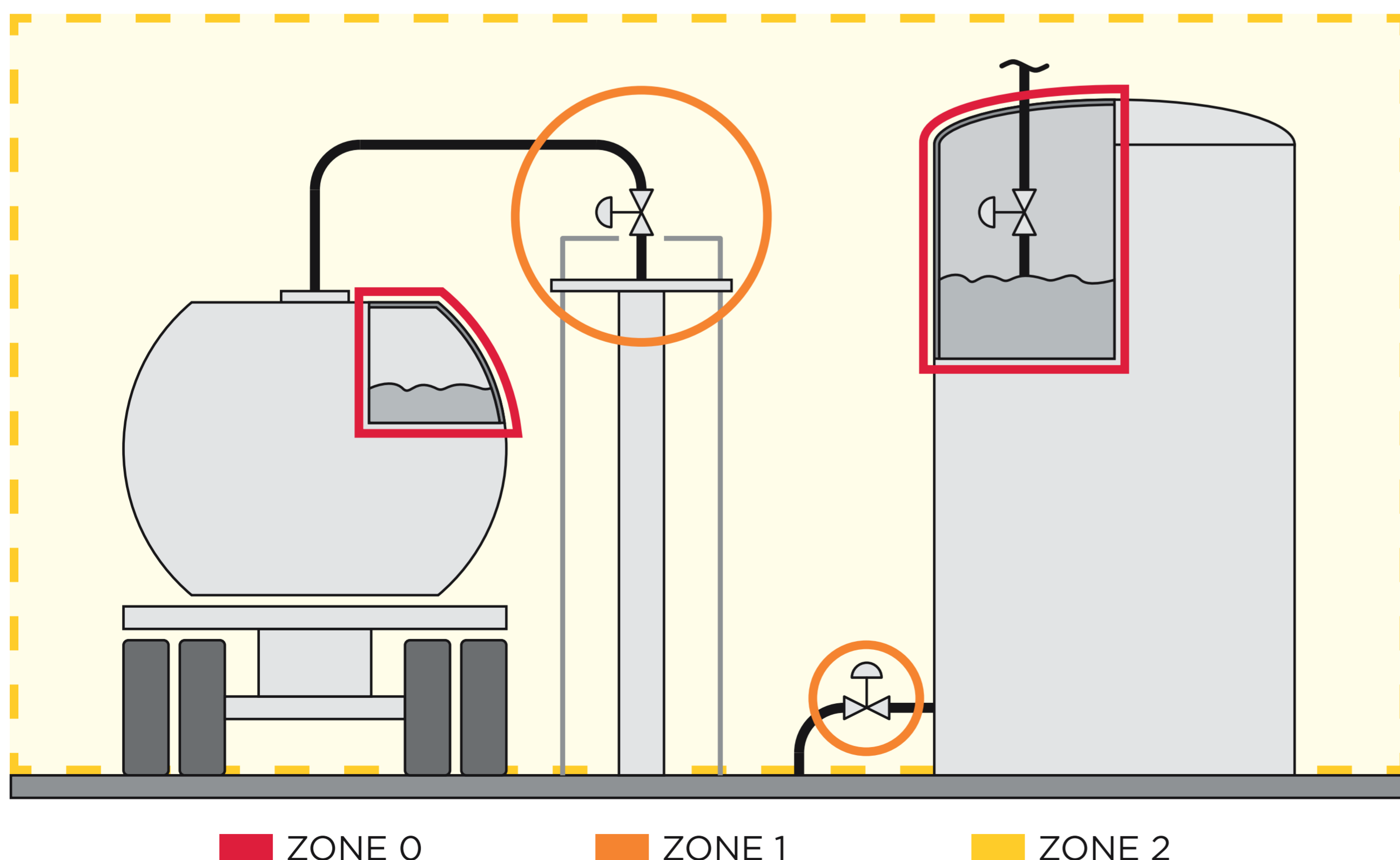
ZONE 20	ZONE 21	ZONE 22
IIIC Conductive Dusts		
IIIB Non-conductive Dusts		
IIIA Fibers		

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



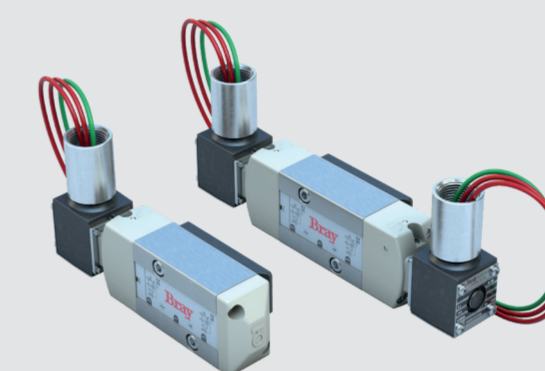
SERIES 6A POSITIONER

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)



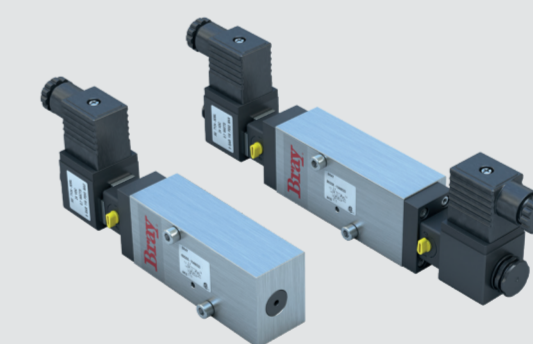
SERIES 6A POSITIONER

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.