



# Certificate of Compliance

**Certificate:** 1447020

**Master Contract:** 179783

**Project:** 2320889

**Date Issued:** October 4, 2010

**Issued to:** Flowserve US Inc.

**Flowserve Springville Operations  
1350 North Mountain Springs Pky  
Springville, UT 84663  
USA  
Attention: Justin Jackson**

*The products listed below are eligible to bear the CSA Mark shown*



*Amy Pura E.I.T.*

**Issued by:** Amy Pura E.I.T.

**PRODUCTS**

**CLASS 2258 03** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non - Incendive Systems - For Hazardous Locations

**CLASS 2258 04** - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

**2258 04** – PROCESS CONTROL EQUIPMENT – Intrinsically Safe, Entity - For Hazardous Locations

**Class I, Groups A, B, C and D**

Logix 500si Digital Positioners, Models: 505, 510, 520si/SD, and 52xMD; rated 30Vmax, 4-20mA; Intrinsically Safe with entity parameters listed in first table below and when connected as per Flowserve installation Drawing number: 198733; T-Code as listed in second table below, max ambient 85°C.

Entity Parameters	Model 505, 510	Model 520si/SD	Model 52xMD
	Terminal 11-12	Terminal 11 & 12	Terminal 11 & 12
Vmax	30V	30V	30V
I <sub>max</sub>	100mA	100mA	100mA
P <sub>max</sub>	800mW	800mW	800mW
Ci	30nF	30nF	30nF



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Max. Ambient Temp. (Ta)	Model 505, 510	Model 520si/SD	Model 52xMD
-40°C < Ta < +85°C	T4	T4	T5
-40°C < Ta < +55°C	T5	T5	N/A
-40°C < Ta < +40°C	T6	T6	T6

Optional Switch Selections are Intrinsically Safe when connected per the switch manufactures control drawings, or Entity Parameters listed below.

(T1, 3, 4, 6) Mechanical Switch Normally Open	(T2, 3, 5, 6) Mechanical Switch Normally Closed	(T1, 3, 4, 6) Proximity Switch	(T1, 2, 3, 4) Namur Switch	(T1, 2, 3, 4) Slotted Namur Switch
Ui = 28V	Ui = 28V	Ui = 10.6V	Ui = 16V	Ui = 16V
Ii = 45mA	Ii = 45mA	Ii = 29.7mA	Ii = 52mA	Ii = 25mA
Pi = 315mW	Pi = 315mW	Pi = 79mW	Pi = 169mW	Pi = 64mW
Ci = 1nF	Ci = 1nF	Ci = 1nF	Ci = 40nF	Ci = 30nF
Li = 1uH	Li = 1uH	Li = 1uH	Li = 50uH	Li = 100uH

**2258 03 – PROCESS CONTROL EQUIPMENT – Intrinsically Safe and Non-Incendive Systems – For Hazardous Locations**

**Class I, Division 2, Groups A, B, C and D**

Logix 500si Digital Positioners, Models: 505, 510, 520si/SD and 52xMD; rated 30Vmax, 4-20mA; when connected as per Flowserve Control Drawing Number: 198733; T-Codes as listed in table below.

Max. Ambient Temp. (Ta)	Model 505, 510	Model 520si/SD	Model 52xMD
-40°C < Ta < +85°C	T4	T4	T5
-40°C < Ta < +55°C	T5	T5	N/A
-40°C < Ta < +40°C	T6	T6	T6



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Optional Switch Selections are Intrinsically Safe when connected per the switch manufactures control drawings, or Entity Parameters listed below.

(T1, 3, 4, 6) Mechanical Switch Normally Open	(T2, 3, 5, 6) Mechanical Switch Normally Closed	(T1, 3, 4, 6) Proximity Switch	(T1, 2, 3, 4) Namur Switch	(T1, 2, 3, 4) Slotted Namur Switch
U <sub>i</sub> = 28V	U <sub>i</sub> = 28V	U <sub>i</sub> = 10.6V	U <sub>i</sub> = 16V	U <sub>i</sub> = 16V
I <sub>i</sub> = 45mA	I <sub>i</sub> = 45mA	I <sub>i</sub> = 29.7mA	I <sub>i</sub> = 52mA	I <sub>i</sub> = 25mA
P <sub>i</sub> = 315mW	P <sub>i</sub> = 315mW	P <sub>i</sub> = 79mW	P <sub>i</sub> = 169mW	P <sub>i</sub> = 64mW
C <sub>i</sub> = 1nF	C <sub>i</sub> = 1nF	C <sub>i</sub> = 1nF	C <sub>i</sub> = 40nF	C <sub>i</sub> = 30nF
L <sub>i</sub> = 1uH	L <sub>i</sub> = 1uH	L <sub>i</sub> = 1uH	L <sub>i</sub> = 50uH	L <sub>i</sub> = 100uH

**APPLICABLE REQUIREMENTS**

CSA Standard C22.2 No. 0-M1991 - General Requirements - Canadian Electrical Code Part II.

CSA Standard C22.2 No. 0.4-M2004 - Bonding and Grounding of Electrical Equipment (Protective Grounding).

CSA Standard C22.2 No. 0.5-M1982 - Threaded Conduit Entries

CSA Standard C22.2 No. 25-M1966 - Enclosures for Use in Class II Groups E, F and G Hazardous Locations.

CSA Standard C22.2 No. 94-M1991 - Special Purpose Enclosures

CSA Standard C22.2 No. 142-M1987 - Process Control Equipment. CSA Standard C22.2 No. 157-M1992 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

CSA Standard C22.2 No. 157-M1992 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

CSA Standard C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

**MARKINGS**

- (1) Submitter's name, trademark, or the CSA file number (adjacent the CSA Mark).



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- (2) Catalogue / Model designation.
- (3) Complete electrical rating or Entity Parameters.
- (4) Date code / Serial number traceable to month and year of manufacture.
- (5) Hazardous Location designations (Class, Division, Groups).
- (6) The words "Intrinsically Safe"
- (7) The symbol "Exia"
- (8) Install per Control Drawing 198733"
- (9) Maximum working pressure 150PSI.
- (10) Temperature Code T4
- (11) Maximum Ambient 85°C
- (12) The CSA Mark.
- (13) The following bilingual cautions:

WARNING: SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY: and,  
AVERTISSEMENT: LA SUBSTITUTION DE COMPOSANTS PEUT COMPROMETTRE LA SECURITE  
INTRINSEQUE".

**REQUIRED METHOD OF MARKING:**

Adhesive Metallized Polyester Nameplates manufactured by Zebra Technologies Corporation affixed to the main housing with all markings as noted above.