Ordering Bulletin 836T Pressure Controls

When ordering Bulletin 836T Pressure Controls, consider the following:

- Device style
- Adjustable operating range
- Adjustable differential
- Maximum line pressure
- Occasional surge pressure
- Pressure media
- Enclosure type
- Pressure connection

How to Order

Step 1: Basic Device
Select a catalog number for the basic device.....**See pages 13-34…13-39.**

Step 2: Modifications
If required, add the appropriate modification suffix code(s) to the catalog number of the basic device.....**See page 13-40.**

Step 3: Accessories
If required, order accessories.....**See page 13-41.**

Step 4: Factory Options
Factory-set pressure controls.....**See page 13-43 .**

Catalog Number Explanation

Note: Catalog number must not include blank spaces.

836T – T (a) 25 (b) 1 (c) J (d) X40 (e) X15 (f)

a

Style of Device	
Code	**Description**
T	Pressure control
D	Pressure difference control

b

Operator Type		
Code	**Style**	**Description**
25	T	Copper alloy bellows
26	T	Type 316 stainless steel bellows
30	T	Piston without seal
35	T	Piston with seal
40	T	Piston with seal (independent trip and reset adjustment)
45	D	Copper alloy bellows
46	D	Type 316 stainless steel bellows

c

Pressure Specifications
See “Pressure Specifications” on pages 13-34…13-39

d

Enclosure Type	
Code	**Description**
J	1, 4 & 13 Industrial use
E	7 & 9 and 4 & 13 Combined hazardous locations

e

Contact Block Type	
Code	**Description**
None	2-circuit contact block - standard
X40	4-circuit contact block

f

Modification 1
Add suffix codes in descending order whenever possible. (Optional. See page 13-40.)

Style T — Type 1, 4 & 13 with Pilot Light Option

Style T — Type 1, 4 & 13 with Pilot Light, Range Locking Cap, and 5-Pin Mini-Receptacle

Style T Pressure Controls with Copper Alloy Bellows* — S.P.D.T. 2-Circuit Contact Block

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications				Enclosure Type	
Adjustable Operating Range [psi]	Adjustable Differential [psi] (Approximate Mid-Range Values)	Maximum psi		Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
		Line Pressure	Occasional Surge Pressure❄	Cat. No.	Cat. No.
30 in. Hg vacuum…35	2…7	80	90	**836T-T251J**	836T-T251E
6…75	3…15	200	220	**836T-T252J**	836T-T252E
12…150	6…30	350	450	**836T-T253J**	836T-T253E
20…300	10…55	600	750	**836T-T254J**	836T-T254E
40…450	20…90	900	1200	**836T-T255J**	836T-T255E
60…650	30…125	1300	1600	**836T-T256J**	836T-T256E

Style T Pressure Controls with Copper Alloy Bellows* — D.P.D.T. 4-Circuit Contact Block

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications				Enclosure Type	
Adjustable Operating Range [psi]	Adjustable Differential [psi] (Approximate Mid-Range Values)	Maximum psi		Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
		Line Pressure	Occasional Surge Pressure❄	Cat. No.	Cat. No.
30 in. Hg vacuum…35	2.2…7	80	90	836T-T251JX40	836T-T251EX40
6…75	4.5…15	200	220	**836T-T252JX40**	836T-T252EX40
12…150	9…30	350	450	**836T-T253JX40**	836T-T253EX40
20…300	15…55	600	750	836T-T254JX40	836T-T254EX40
40…450	30…90	900	1200	836T-T255JX40	836T-T255EX40
60…650	45…125	1300	1600	836T-T256JX40	836T-T256EX40

* Copper alloy bellows may be used on water or air, and other liquids or gases not corrosive to this alloy.

❄ Transients (pulses) can occur in a system prior to reaching a steady-state condition. Surge pressures within published values generated during startup or shutdown of a machine or system, not exceeding eight times in a 24-hour period, are negligible.

‡ The combined Type 7 & 9 and 4 & 13 hazardous gas and dust service enclosure is supplied with special gasket and O-ring seal to diminish/exclude moisture, fluids, and dust from entering the enclosure. Enclosure is rated for the following environments:
CLASS I Groups C,D
CLASS II Groups E,F,G
CLASS III

Style T — Type 1, 4 & 13 with Pilot Light Option

Style T — Type 7 & 9 and 4 & 13

Style T Pressure Controls with Type 316 Stainless Steel Bellows* — S.P.D.T. 2-Circuit Contact Block

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications				Enclosure Type	
Adjustable Operating Range [psi]	Adjustable Differential [psi] (Approximate Mid-Range Values)	Maximum psi		Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
		Line Pressure	Occasional Surge Pressure❄	Cat. No.	Cat. No.
30 in. Hg vacuum…35	2…7	65	65	**836T-T260J**	836T-T260E
8…100	4…20	200	200	**836T-T261J**	836T-T261E
24…250	12…50	500	500	**836T-T262J**	836T-T262E
40…375	20…90	600	600	**836T-T263J**	836T-T263E

Style T Pressure Controls with Type 316 Stainless Steel Bellows* — D.P.D.T. 4-Circuit Contact Block

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications				Enclosure Type	
Adjustable Operating Range [psi]	Adjustable Differential [psi] (Approximate Mid-Range Values)	Maximum psi		Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
		Line Pressure	Occasional Surge Pressure❄	Cat. No.	Cat. No.
30 in. Hg vacuum…35	2.2…7	65	65	836T-T260JX40	836T-T260EX40
8…100	6…20	200	200	836T-T261JX40	836T-T261EX40
24…250	18…50	500	500	836T-T262JX40	836T-T262EX40
40…375	30…90	600	600	836T-T263JX40	836T-T263EX40

* Type 316 stainless steel bellows are available for more corrosive liquids or gases.

❄ Transients (pulses) can occur in a system prior to reaching a steady-state condition. Surge pressures within published values generated during startup or shutdown of a machine or system, not exceeding eight times in a 24-hour period, are negligible.

‡ The combined Type 7 & 9 and 4 & 13 hazardous gas and dust service enclosure is supplied with special gasket and O-ring seal to diminish/exclude moisture, fluids, and dust from entering the enclosure. Enclosure is rated for the following environments:
CLASS I Groups C,D
CLASS II Groups E,F,G
CLASS III

Style T — Type 1, 4 & 13

Style T —
Type 1, 4 & 13 with Pilot Light,
Mini-Receptacle, SAE Thread

Important Application Information

Piston-type controls are designed for use with oil and high water-based hydraulic fluids containing high-lubricity substances which will not attack alloy steel. Piston-type controls are available without seals to reduce piston friction. Reduced friction results in narrower switch differentials required for some applications.

All piston-type controls are equipped with a diaphragm assembly that conveys the motion of the piston to the mechanism, and prevents any fluid from entering the enclosure. Controls without seals are provided with a drain that should be connected to a line returning the piston by-pass fluid to a reservoir for reuse. The reservoir **must** be vented to the atmosphere. Manifold-type return lines that are fed by other equipment and/or contain a back-up check valve are not satisfactory. Extreme transient pulses can develop from hydraulic inertia in the line and rupture the diaphragm located on the secondary side of the piston, forcing fluid into the enclosure. For systems of this type, pressure controls with seals are recommended as return lines are not required if a slight amount of leakage, over time, can be tolerated. **Drains should never be plugged.** It is not recommended that a back pressure of more than the head pressure be applied to the diaphragm. This can occur if the reservoir is located above the machine. Variable back pressure may cause setting instability.

Listed differentials may vary due to piston and cylinder tolerance, and characteristics of the fluid and application. *Do not use piston-type controls on air, gases, or other liquids that will corrode stainless steel.*

Style T Pressure Controls Piston without Seal∗ — S.P.D.T. 2-Circuit Contact Block
(Hydraulic fluid return line to reservoir is recommended)

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications				Enclosure Type	
Adjustable Operating Range [psi]	Adjustable Differential [psi] (Approximate Mid-Range Values)	Maximum psi		Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
		Line Pressure	Occasional Surge Pressure❄	Cat. No.	Cat. No.
40…550	20…75	—	5000	**836T-T300J**	836T-T300E
70…1000	50…175	—	10000	**836T-T301J**	836T-T301E
200…3000	125…400	—	15000	**836T-T302J**	836T-T302E
350…5000	175…650	—	15000	**836T-T303J**	836T-T303E

Style T Pressure Controls Piston without Seal∗ — D.P.D.T. 4-Circuit Contact Block
(Hydraulic fluid return line to reservoir is recommended)

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications				Enclosure Type	
Adjustable Operating Range [psi]	Adjustable Differential [psi] (Approximate Mid-Range Values)	Maximum psi		Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
		Line Pressure	Occasional Surge Pressure❄	Cat. No.	Cat. No.
40…550	30…75	—	5000	836T-T300JX40	836T-T300EX40
70…1000	60…175	—	10000	836T-T301JX40	836T-T301EX40
200…3000	150…400	—	15000	836T-T302JX40	836T-T302EX40
350…5000	260…650	—	15000	836T-T303JX40	836T-T303EX40

∗ When phosphate ester base hydraulic fluid is present, a special diaphragm assembly is required. See Modifications, [T-9864960].

❄ Transients (pulses) can occur in a system prior to reaching a steady-state condition. Surge pressures within published values generated during startup or shutdown of a machine or system, not exceeding eight times in a 24-hour period, are negligible.

‡ The combined Type 7 & 9 and 4 & 13 hazardous gas and dust service enclosure is supplied with special gasket and O-ring seal to diminish/exclude moisture, fluids, and dust from entering the enclosure. Enclosure is rated for the following environments:
CLASS I Groups C,D
CLASS II Groups E,F,G
CLASS III

Style T — Type 1, 4 & 13

Style T — Type 1, 4 & 13 with Pilot Light, Mini-Receptacle, SAE Thread

Important Application Information

Piston-type controls are designed for use with oil and high water-based hydraulic fluids containing high-lubricity substances which will not attack alloy steel. Piston-type controls with seals are designed for applications where a fluid return line is not applicable.

All piston-type controls are equipped with a diaphragm assembly that conveys the motion of the piston to the mechanism, and prevents any fluid that may have by-passed the piston seal over time from entering the enclosure. Controls with seals generally do not require a return line as leakage is minimal. Seals are field replaceable (see page 13-42); however, pistons with seals are provided with a drain to specifically safeguard applications that require returning fluid back to the reservoir. The reservoir **must** be vented to the atmosphere. Manifold-type return lines that are fed by other equipment and/or contain a back-up check valve are not satisfactory. Extreme transient pulses can develop from hydraulic inertia in the line and rupture the diaphragm located on the secondary side of the piston, forcing fluid into the enclosure. **Drains should never be plugged.** It is not recommended that a back pressure greater than the head pressure be applied to the diaphragm. This can occur if the reservoir is located above the machine. Variable back pressure may cause setting instability.

Listed differentials may vary due to piston and cylinder tolerance, and characteristics of the fluid and application. *Do not use piston-type controls on air, gases, or other liquids that will corrode stainless steel.*

Style T Pressure Controls Piston with Seal∗ — S.P.D.T. 2-Circuit Contact Block
(Hydraulic fluid return line to reservoir is not required)

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications				Enclosure Type	
Adjustable Operating Range [psi]	Adjustable Differential [psi] (Approximate Mid-Range Values)	Maximum psi		Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
		Line Pressure	Occasional Surge Pressure❄	Cat. No.	Cat. No.
80…550	40…75	—	5000	**836T-T350J**	836T-T350E
140…1000	70…175	—	10 000	**836T-T351J**	836T-T351E
400…3000	200…400	—	15 000	**836T-T352J**	836T-T352E
700…5000	350…650	—	15 000	**836T-T353J**	836T-T353E

Style T Pressure Controls Piston with Seal∗ — D.P.D.T. 4-Circuit Contact Block
(Hydraulic fluid return line to reservoir is not required)

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications				Enclosure Type	
Adjustable Operating Range [psi]	Adjustable Differential [psi] (Approximate Mid-Range Values)	Maximum psi		Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
		Line Pressure	Occasional Surge Pressure❄	Cat. No.	Cat. No.
80…550	60…75	—	5000	836T-T350JX40	836T-T350EX40
140…1000	100…175	—	10 000	836T-T351JX40	836T-T351EX40
400…3000	300…400	—	10 000	836T-T352JX40	836T-T352EX40
700…5000	525…650	—	15 000	836T-T353JX40	836T-T353EX40

Independent Trip and Reset Adjustment for Wide Differential Applications∗ — Piston with Seal, S.P.D.T. 2-Circuit Contact Block
(Hydraulic fluid return line to reservoir is not required)

Standard Pressure Controls shipped from the factory are set at the maximum operating range and minimum differential.

Pressure Specifications			Enclosure Type	
Adjustable High Trip Setting [psi]	Adjustable Low Reset Setting [psi]	Occasional Surge Pressure [psi]❄	Type 1, 4 & 13	Type 7 & 9 and 4 & 13 ‡
			Cat. No.	Cat. No.
500…3000	0…250	15000	**836T-T400J**	836T-T400E

∗ When phosphate ester base hydraulic fluid is present, a special diaphragm and seal assembly is required. See Modifications, page 13-40.

❄ Transients (pulses) can occur in a system prior to reaching a steady-state condition. Surge pressures within published values generated during startup or shutdown of a machine or system, not exceeding eight times in a 24-hour period, are negligible.

‡ The combined Type 7 & 9 and 4 & 13 hazardous gas and dust service enclosure is supplied with special gasket and O-ring seal to diminish/exclude moisture, fluids, and dust from entering the enclosure. Enclosure is rated for the following environments:
CLASS I Groups C,D
CLASS II Groups E,F,G
CLASS III