



Series 1211

# Flanged Chamber

External Mount, Pressure to 450 psig (31 bar) and Temperature to 500°F (260°C), Minimum Specific Gravity 0.40, Hermetically Sealed Switches



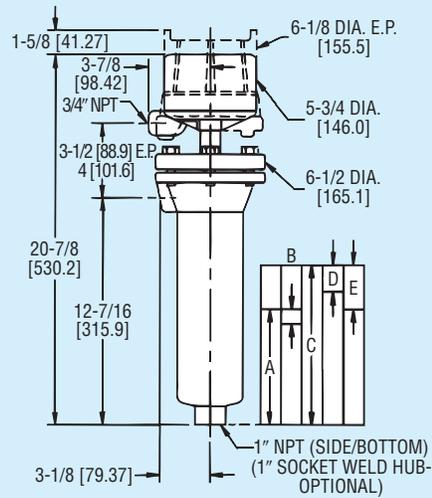
Series 1213 has one vertical and one horizontal flanged connection (1" RF forged steel – ANSI specifications). Flange centerline 14 1/4" (362 mm). Other centerlines available.



Series 1211 is installed with one horizontal and one vertical 1" NPT combination hub. 1" socket weld optional.

"A" is the level at which single (or lower stage) operates on level rise.  
 "B" is the operating differential single (or lower stage) — drop in level to restore switch to original position.  
 "C" is the level at which the upper stage operates on level rise.  
 "D" is the operating differential of upper stage — drop in level to restore switch to position.  
 "E" — the increase in level above "A" to operate upper stage.

Repeatability ±1/4" (6.4 mm)



Series 1214 provides two vertical flanged connections (1" RF forged steel – ANSI specifications). Flange centerline 15 1/4" (403 mm). Other centerlines available.

### Switch Level Change Single Stage Operation

### Switch Level Change Two Stage Operation

	SP GR	A*	B	A*	B	C	D	E	ORDRING CODE
MIN SP GR 0.40 450 psi (31 bar) @ 100°F (38°C) 300 psi (21 bar) @ 500°F (260°C)	0.40	6 1/2" (165 mm)	5/8" (16 mm)	6 1/2" (165 mm)	5/8" (16 mm)	7 3/4" (197 mm)	1 1/2" (38 mm)	1 1/4" (32 mm)	C1-40

\*\*A" is not adjustable.

Level

**Low minimum specific gravity** of 0.40 and rugged flanged chamber for inspection purposes helps insure superior long term performance. Control can be used at maximum process pressure of 450 psig (31 bar) at 100°F (38°C), and 300 psig (21 bar) at 500°F (260°C). Standard 1" NPT connections are provided for mounting. 1" socket weld hubs or 1" flanges are available as options. Hermetically sealed snap switch or mercury switches are provided in a variety of circuit configurations such as (SPST) (SPDT) or (DPDT). High or low DC applications can also be accommodated. General purpose, (weatherproof) (explosion-proof) (explosion-proof – vapor proof) enclosures are provided.

### APPLICATIONS

Oil refineries, chemical plants, power generating stations, pumping stations, heat transfer systems, sanitary/waste water facilities, drip legs, hydraulic systems, boilers.

### SPECIFICATIONS

**C1-40:** Minimum specific gravity 0.40. Process pressure 450 psig (31 bar) at 100°F (38°C), 300 psig (21 bar) at 500°F (260°C).

**Temperature Limits:** Ambient Temperature: 212°F (100°C); Process Temperature: up to 500°F (260°C).

**Switch Type:** Snap action or mercury: See charts A and B.

**Electrical Rating:** See charts A and B.

**Wiring Connections:** G, WT or E enclosure, terminal block. EV enclosure, 18" (460 mm) leads.

**Process Connections:** 1" NPT or flanges. See model chart. (1" socket weld-hubs optional).

**Enclosures:** G, painted steel and aluminum. WT, painted steel, aluminum and neoprene. E, aluminum. EV, aluminum, neoprene.

**Wetted Parts:** C1 construction. Chamber, carbon steel. Trim 303SS, 304SS, and 430SS (316SS and 430SS optional).

**Weight:** 1211, 34 lb (15.5 kg); 1213, 44 lb (20 kg); 1214, 47 lb (21.4 kg).

### Suggested Specifications

Liquid level control shall be 1211 (1213) (1214) Series with flanged carbon steel chamber. Process connections shall be 1" NPT (socket weld hub) (flanged). Unit shall be suitable for operation at 450 psi (31 bar) and 100°F (38°C), 300 psi (21 bar) and 500°F (260°C) with a minimum specific gravity of 0.40. Switch mechanism shall be gravity return and shall be activated by a stainless steel float. Circuit shall be (hermetically sealed) snap action (mercury) switch, (SPST) (SPDT) (DPDT). Enclosure shall be general purpose (weatherproof) (explosion-proof) (explosion-proof – vapor proof).

**MODEL CHART – SERIES 1211**

EXAMPLE	1211	WT	7810	GLD	10	GLD	HF	C1	40		1211-WT-7810-C1-40. Liquid level control. Flanged carbon steel chamber. Weather proof enclosure. SPDT snap action switch, fixed deadband, automatic reset. Operating pressure 450 psi (31 bar) at 100°F (38°C), 300 psi (21 bar) at 500°F (260°C). Side/bottom process connections, 1" NPT. minimum specific gravity 0.40.		
ENCLOSURE		G WT E EV									General purpose, NEMA-1. Weather proof, NEMA-3R, 4, 4X. Explosion proof, NEMA-7, 9. Class I Groups B, C, D. Class II Groups E, F, G. (CSA approved Groups C, D, E, F, G only). Explosion proof, vapor proof, NEMA-7, 9. Class I Groups B, C, D. Class II Groups E, F, G. (CSA approved groups C, D, E, F, G only).	UL UL UL	CSA CSA CSA
CIRCUITS  (For Electrical Circuits see charts A & B below.)			48XX 48XX 78XX 78XX 78XXHM 98XX		XX  XX						Single stage. Mercury switch. See Chart A. Two stage. Mercury switch. See Chart A. Single stage. Snap switch. See Chart B. Two stage. Snap switch. See Chart B. Hermetically sealed snap switch. See Chart B. Single stage. High capacity DC snap switch. Use heat fins (HF) if process temperature exceeds 350°F (177°C). Do not exceed 450°F (232°C). See Chart B. Two stage. High capacity DC snap switch. Use heat fins (HF) if process temperature exceeds 350°F (177°C). Do not exceed 450°F (232°C). See Chart B.		
FLANGED CHAMBER CONSTRUCTION 1" NPT/HUBS	1211							C1 C1	40		Carbon steel body. Minimum specific gravity 0.40. Side/bottom process connections. 1" NPT hub. Pressure rating 450 psi (31 bar) at 100°F (38°C), 300 psi (21 bar) at 500°F (260°C).	UL UL	CSA CSA
FLANGED CHAMBER CONSTRUCTION WITH FLANGED PROCESS CONNECTIONS	1213							C1	140		1" 150# flanges side/bottom process connection. Pressure rating 275 psi (19 bar) at 100°F (38°C), 150 psi (10 bar) at 500°F (260°C). Minimum specific gravity 0.40.	UL	CSA
	1213							C1	340		1" 300# flanges side/bottom process connection. Pressure rating 450 psi (31 bar) at 100°F (38°C), 300 psi (21 bar) at 500°F (260°C). Minimum specific gravity 0.40.	UL	CSA
	1213							C1	640		1" 600# flanges side/bottom process connection. Pressure rating 450 psi (31 bar) at 100°F (38°C), 300 psi (21 bar) at 500°F (260°C). Minimum specific gravity 0.40.	UL	CSA
	1214							C1	140		1" 150*# flanges side/side process connection. Pressure rating 275 psi (19 bar) at 100°F (38°C), 150 psi (10 bar) at 500°F (260°C). Minimum specific gravity 0.40.	UL	CSA
	1214							C1	340		1" 300# flanges side/side process connection. Pressure rating 450 psi (31 bar) at 100°F (38°C), 300 psi (21 bar) at 500°F (260°C). Minimum specific gravity 0.40.	UL	CSA
	1214							C1	640		1" 600# flanges side/side process connection. Pressure rating 450 psi (31 bar) at 100°F (38°C), 300 psi (21 bar) at 500°F (260°C). Minimum specific gravity 0.40.	UL	CSA
OPTIONS				GLD		GLD		HF	C216	H2 12	Gold alloy contact for low current service rated at 1 amp resistive, 0.5 amp inductive 28 VDC. Circuit 7810 or 7806 only. High temperature fins should be considered if temperature exceeds 350°F (177°C) for 98XX circuits. 316SS chamber and trim. 430SS armature. 1" socket weld hub instead of 1" NPT. Breather and drain for E type enclosure. Recommended for high humidity or outdoor service.	UL	CSA



**CHARTS A & B - ELECTRICAL CIRCUITS AND RATINGS**

SWITCH TYPE	SWITCH ACTION	ELECTRICAL RATINGS IN AMPS						ORDERING CODE			UL	CSA
		AC			DC			SINGLE STAGE	TWO STAGE			
		120V	240V	440V	30V	125V	250V		LOWER	UPPER		
CHART A Mercury Contacts	SP-ST Open on level FALL	10	5	3†		10	5	-4820	-4820	-21		
	SP-ST Open on level RISE	10	5	3†		10	5	-4821	-4821	-20		
	SP-DT One Switch	4	2	1†		4	2	-4810	-4810	-10		
	SP-DT Two switches E.I.*	10	5	3†		10	5	-4815	-4815	-15		
	DP-ST Two switches E.I.* Open on level FALL	10	5	3†		10	5	-4814	-4814	-13		
	DP-ST Two switches E.I.* Open on level RISE	10	5	3†		10	5	-4813	-4813	-14		
	DP-DT Two SP-DT switches	4	2	1†		4	2	-4806	-4806	-06		
CHART B Snap Action Contacts	SP-DT One switch	12	5	3†		0.5**	0.25**	-7810	-7810	-10		
	DP-DT Two SP-DT switches	12	5	3†		0.5**	0.25**	-7806	-7806	-06		
	SP-DT One hermetically sealed switch	5	5		5**			-7810HM	-7810HM	-10HM		
	DP-DT Two hermetically sealed SP-DT switches	5	5		5**			-7806HM	-7806HM	-06HM		
	DP-DT Two SP-DT switches	10	3			10‡	3‡	-9806	-9806	-06		
	SP-DT One switch	10	3			10‡	3‡	-9810	-9810	-10		

\*Electrically Independent †Available on special order. Change 1st digit in Ordering Code from 4 to 5 or 7 to 8  
‡10 Amp inductive (Polarized) at 125 VDC i.e. -4820 becomes -5820, -7810 becomes -8810, etc.  
\*\*Resistive