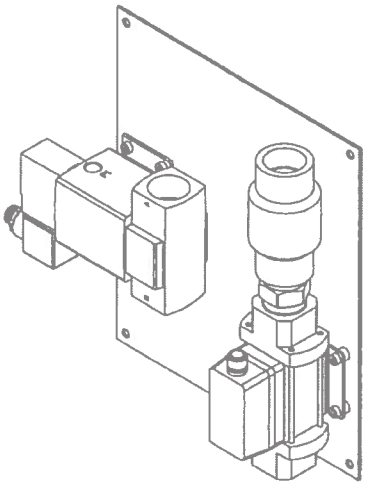
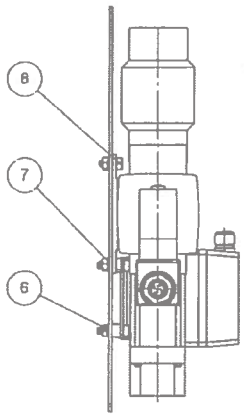
REV.	ECN	DESCRIPTION	DATE	BY	APP
1	US77173-A	CHANGED PLATE SIZE, ADDED M12 CONNECTOR TO VALVE, UPDATED FLOW SWITCH PIN, ADDED SPACERS TO FLOW SWITCH	5/7/2009	SH	PM
2	US77172-B	ADDED LOCKING MANUAL OVERRIDE (SLOTTED) OPTION TO VALVE	6/22/2009	SH	PM

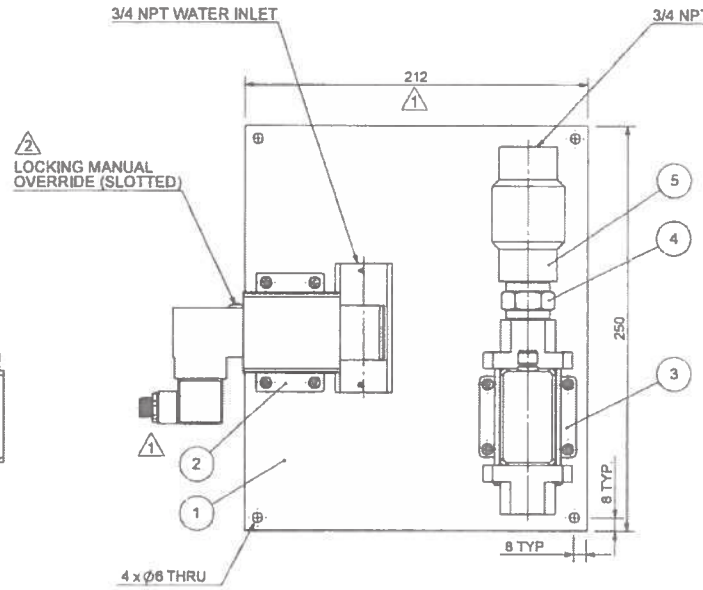
VNB3 VALVE SPECIFICATIONS		
VALVE SPECIFICATIONS		
FLUID		WATER / OIL / AIR / VACUUM
FLUID TEMPERATURE		-5 TO 60° C (NO FREEZING)
AMBIENT TEMPERATURE		-5 TO 50° C (NO FREEZING)
PROOF PRESSURE		1.6 Mpa
APPLICABLE PRESSURE RANGE		LOW VACUUM TO 0.5 Mpa
EXTERNAL PILOT AIR	PRESSURE	0.35 TO 0.7 Mpa
	LUBRICATION	NOT REQUIRED
	TEMPERATURE	-5 TO 50° C
PILOT SOLENOID VALVE SPECIFICATIONS		
ELECTRICAL ENTRY		DIN TERMINAL WITH LIGHT / SURGE SUPPRESSOR
COIL RATED VOLTAGE (V)		24 VDC
ALLOWABLE VOLTAGE FLUCTUATION		-15% TO +10% OF RATED VOLTAGE
COIL INSULATION TYPE		CLASS B OR EQUIVALENT (130° C)
TEMPERATURE RISE		35° C OR LESS (WHEN RATED VOLTAGE IS APPLIED)
POWER CONSUMPTION		1.8 W
MANUAL OVERRIDE		NON-LOCKING PUSH TYPE

INA-14-85-N08 SPECIFICATIONS	
PROOF PRESSURE	1.5MPa
WORKING PRESSURE	0.05 - 1.0MPa
AMBIENT AND FLUID TEMP	-5 to 60° C (NO FREEZING)
WORKING FLUID	AIR, WATER
PORT SIZE	3/4 NPT

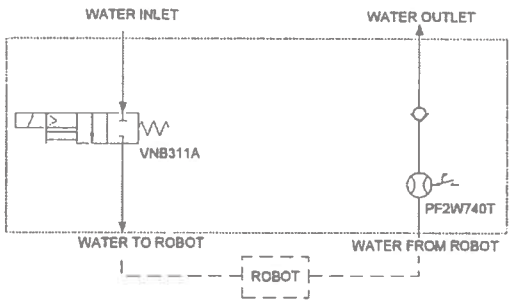
PF2W740T FLOW SWITCH SPECIFICATIONS		
MEASURED FLUID		WATER
FLOW RATE MEASUREMENT RANGE		3.5 TO 45 L/min
SET FLOW RATE RANGE		3.5 TO 45 L/min
FLOW RATE INDICATION RANGE		3.5 TO 45 L/min
MINIMUM SET UNIT		0.1 L/min
OPERATING WITH 0.1 MPa FLOW AT PRESSURE VALVE (PRESSURE WHERE 50mm)		0.6 L/min
OPERATING FLUID TEMPERATURE		0 TO 80°C (WITH NO CAVITATION)
LINE LOSS		+/- 5% OR LESS
REPEATABILITY		+/- 2% OR LESS
TEMPERATURE CHARACTERISTICS		+/- 5% OR LESS (0 TO 80° C, REFERENCE 25° C)
CURRENT CONSUMPTION (NO LOAD)		70 mA or less
WEIGHT		210 g
PORT SIZE		Rc3/4
CONNECTION TYPE		SCREWED TYPE
DISPLAY		5 DIGIT 7 SEGMENT LED
DISPLAY UNIT	PRESS. UNIT FLOW RATE	0.01 MPa, 0.1 kgf/cm²
	FLOW RATE	L, PM, 0.01
OPERATING PRESSURE RANGE		0 TO 1.0 Mpa
PROOF PRESSURE		1.5 Mpa
ACCUMULATED FLOW RANGE		0 TO 999999 L
OUTPUT	SWITCH OUTPUT	NPN OPEN COLLECTOR, MAXIMUM LOAD CURRENT 80mA, INTERNAL VOLTAGE DROP 1.5 V OR LESS, 2 OUTPUTS
SWITCH CAPACITY	ACCUMULATED PULSE OUTPUT	NPN OPEN COLLECTOR, MAXIMUM SINK CURRENT 80mA
RESPONSE TIME		5 MSEC OR LESS
HYSTERESIS		1 SECOND OR LESS
SET POINT		0.1 TO 45.0 L/MIN, VARIABLE (CAN BE SET FROM 1), WINDOW COMPARATOR MODE, 1 POINT REQ
POWER SUPPLY VOLTAGE		12 TO 24 VDC (90% TO -10% OF 24 V)
CURRENT CONSUMPTION		40 mA
SWITCH INPUT		2 TO 10 V, 1 POINT, 25 TO 85° C (NO CONCENTRATION OF FREEZING)
RESET		HOLD KEY FOR 1 SEC OR MORE, DEFAULT IS NORMAL (5 MINUTE) AND CLEAR
DISPLAY ACCURACY		10 TO 55 Hz AT 1.5 mm AMPLITUDE FOR 30 MIN IN EACH OF X, Y, Z DIRECTIONS (WHEN PACKAGED)
VIBRATION RESISTANCE		10 TO 150 Hz AT 9.8 m/s² (1 G) IN X, Y AND Z FOR 1 HOUR EACH (WHEN PACKAGED)
IMPACT RESISTANCE		490 m/s² (50 G) 3 TIMES EACH IN +/- X, Y, Z DIRECTIONS (WHEN PACKAGED)
WIRE RESISTANCE		150 Ω or less

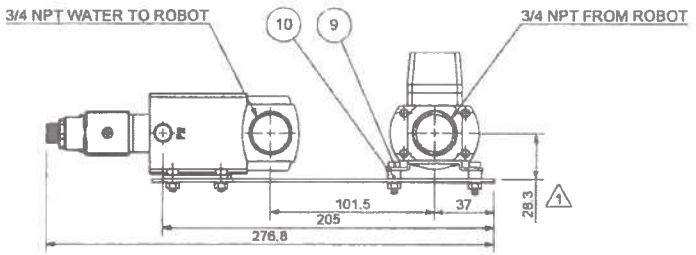






SCHEMATIC





ITEM NO	PART NUMBER	DESCRIPTION	QTY
10	VNB3-C02-DUN01198	5.3mm SPACER	4
9	M4X0.7X16 (BLACK SHCS)	SOCKET HEAD CAP SCREW, BLACK	4
8	91290A144	M4X0.7X10L SHCS	4
7	M4-LOCKWASHER	LOCKWASHER, M4	8
6	90591A141	M4 HEX NUT - ZINC PLT	8
5	INA-14-85-N08	CHECK VALVE	1
4	KV-122-E	HEX NIPPLE	1
1 3	PF2W740T-N08-67N	DIGITAL FLOW SW, INTEG SENSOR	1
1 2	VNB311A-N20A-5DZB-B-X164US	PROCESS VALVE	1
1	VNB3-C01-DUN01198	MOUNTING PANEL	1

UNLESS OTHERWISE SPECIFIED: mm	SCALE 1:2	SMC Corporation of America	
DRAWN S. HUNT	DATE 4/24/2009		
CHECKED	DATE	WELD WATER PLATE ASSEMBLY	
APPROVED P. MURIDE	DATE 4/24/2009		
CAD FILE VNB3-DUN01198	SIZE C	VNB3-DUN01198	2
		REFERENCE NUMBER: US77172	

VNB311A-N20A-5DZB-B-X164US PIN OUT
PIN #1 - NOT USED
PIN #2 - NOT USED
PIN #3 - (-)
PIN #4 - (+)

PF2W740T-N06-67N PIN OUT
PIN #1 - DC (+)
PIN #2 - OUT 2
PIN #3 - DC (-)
PIN #4 - OUT 1

NOTES. (UNLESS OTHERWISE SPECIFIED)
1. ALL DIMENSIONS ARE MILLIMETERS.
2. ALL DIMENSIONS ARE FOR REFERENCE ONLY