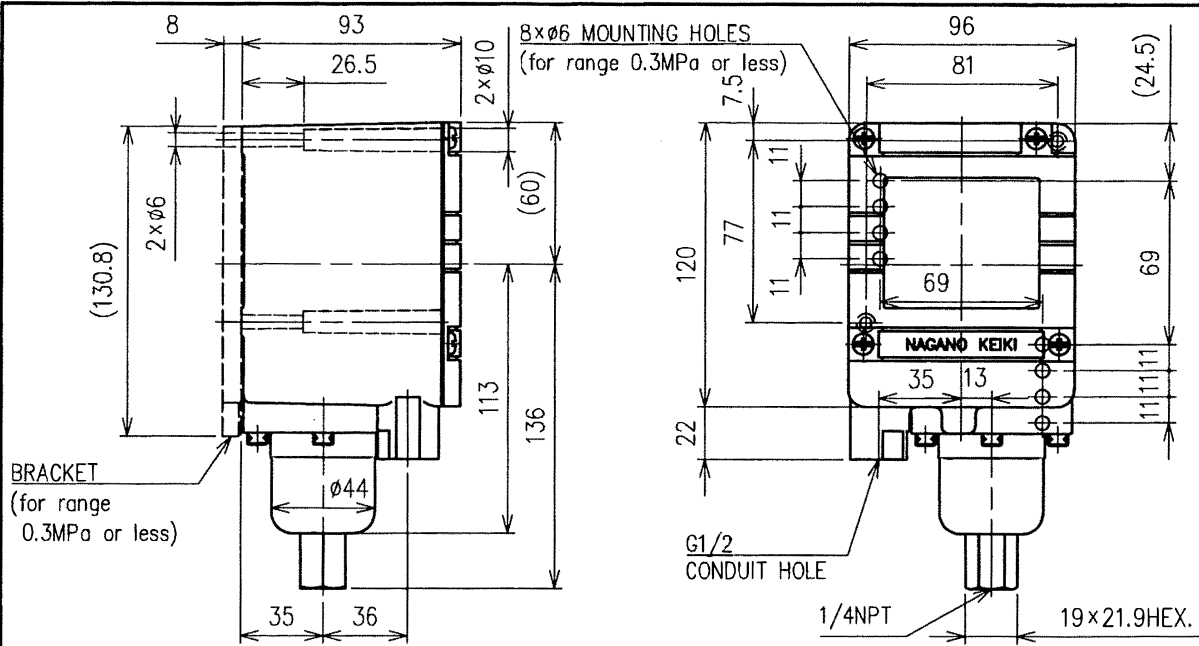


3. Instrument List (Pressure Switch 1/3)

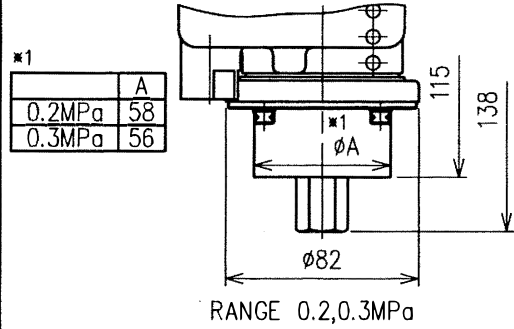
SPC-GIH-XIT05-0028 Rev.4

No	INSTR TAG NO.	SERVICE DESCRIPTION	P&ID DRAWING			OPERATION CONDITIONS				CALIBRATED RING			INSTRUMENT TYPE	Process connection size	Electrical Conduit Size	MANUFACTURER DETAILS			REFERENCES			REMARKS	
			LOCA TON	REV	Line No.	Fluid	Flow (bbl)	Press (bar/g)	Temp (°C)	Upper	Lower	EU				Model	Make	Location Drawing No.	Data Sheet Drawing No.	Hook up Drawing No.	RSI SION		
1	50LAV31 CP305	BPFT A LUBE OIL PRESSURE LOW 1	E-3	3	50LAV31 BR030	LOIL	N/A	N/A	4.8	79	0.2	2	2	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
2	50LAV31 CP310	BPFT A LUBE OIL PRESSURE LOW 2	E-3	3	50LAV31 BR030	LOIL	N/A	N/A	4.8	79	0.2	2	2	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
3	50LAV31 CP315	BPFT A LUBE OIL PRESSURE LOW 3	E-3	3	50LAV31 BR030	LOIL	N/A	N/A	4.8	79	0.2	2	2	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
4	50LAV32 CP305	BPFT B LUBE OIL PRESSURE LOW 1	E-3	3	50LAV32 BR030	LOIL	N/A	N/A	4.8	79	0.2	2	2	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
5	50LAV32 CP310	BPFT B LUBE OIL PRESSURE LOW 2	E-3	3	50LAV32 BR030	LOIL	N/A	N/A	4.8	79	0.2	2	2	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
6	50LAV32 CP315	BPFT B LUBE OIL PRESSURE LOW 3	E-3	3	50LAV32 BR030	LOIL	N/A	N/A	4.8	79	0.2	2	2	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
7	50LAX11 CP305	BPFT A LUBE OIL PRESSURE LOW (EMERGENCY OIL PUMP START)	E-4	3	50LAX11 BR005	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
8	50LAX11 CP310	BPFT A LUBE OIL PRESSURE LOW (SECONDARY MAIN OIL PUMP START)	E-4	3	50LAX11 BR020	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
9	50LAX11 CP315	BPFT A EHC OIL PRESSURE LOW	E-6	3	50LAX11 BR035	EO	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
10	50LAX11 CP320	BPFT A EMERGENCY OIL PRESSURE LOW 1	E-6	3	50LAX11 BR005	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
11	50LAX11 CP325	BPFT A EMERGENCY OIL PRESSURE LOW 2	E-6	3	50LAX11 BR015	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
12	50LAX11 CP330	BPFT A EMERGENCY OIL PRESSURE RESET	E-5	3	50LAX11 BR015	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
13	50LAX12 CP305	BPFT B LUBE OIL PRESSURE LOW (EMERGENCY OIL PUMP START)	E-4	3	50LAX12 BR020	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
14	50LAX12 CP310	BPFT B LUBE OIL PRESSURE LOW (SECONDARY MAIN OIL PUMP START)	E-4	3	50LAX12 BR020	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
15	50LAX12 CP315	BPFT B EHC OIL PRESSURE LOW	E-6	3	50LAX12 BR035	EO	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
16	50LAX12 CP320	BPFT B EMERGENCY OIL PRESSURE LOW 1	E-6	3	50LAX12 BR005	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
17	50LAX12 CP325	BPFT B EMERGENCY OIL PRESSURE LOW 2	E-6	3	50LAX12 BR005	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A
18	50LAX12 CP330	BPFT B EMERGENCY OIL PRESSURE RESET	E-5	3	50LAX12 BR015	LOIL	N/A	N/A	16.4	79	2	20	20	PS	NPT1/4(F)	G1/2(F)	MAGANO KEIKI	CEB3-2X3	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	TUB95-L1-OFF-C-XAV-M-PID-2126(2)	4	N/A

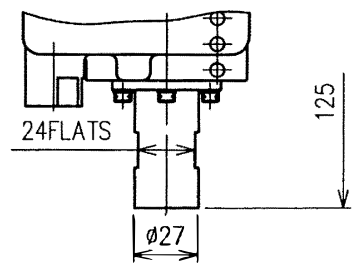
②



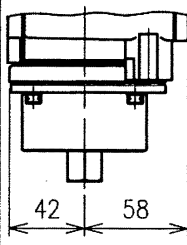
RANGE 0.4,0.6,1,1.5,2,3MPa



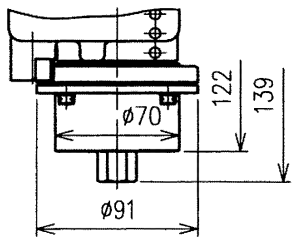
RANGE 0.2,0.3MPa



RANGE 5,7,10,13MPa



RANGE -0.1MPa



RANGE 0.1MPa

STANDARD ELECTRICAL RATING								
Dwg.No. : CB33-0X3			Dwg.No. : CB33-1X3			Dwg.No. : CB33-2X3		
SWITCH: SPDT (N)			SWITCH: SPDT (DC)			SWITCH: DPDT		
	RESISTANCE LOAD	INDUCTIVE LOAD		RESISTANCE LOAD	INDUCTIVE LOAD		RESISTANCE LOAD	INDUCTIVE LOAD
125V AC	20A	20A	125V AC	10A	6A	125V AC	10A	6A
250V AC	20A	20A	250V AC	3A	1.5A	250V AC	10A	4A
125V DC	0.5A	0.05A	125V DC	10A	6A	125V DC	0.5A	0.05A
250V DC	0.25A	0.03A	250V DC	3A	1.5A	250V DC	0.25A	0.03A
ELECTRICAL RATING WHICH CONFORMS TO "EN60947-5-1"								
INDUCTIVE LOAD	250V AC 3A (AC-15)		INDUCTIVE LOAD	125V DC 6A (DC-13)		RESISTANCE LOAD	125V DC 0.1A (DC-12)	
	125V DC 0.5A (DC-13)					INDUCTIVE LOAD	60V DC 0.1A (DC-13)	

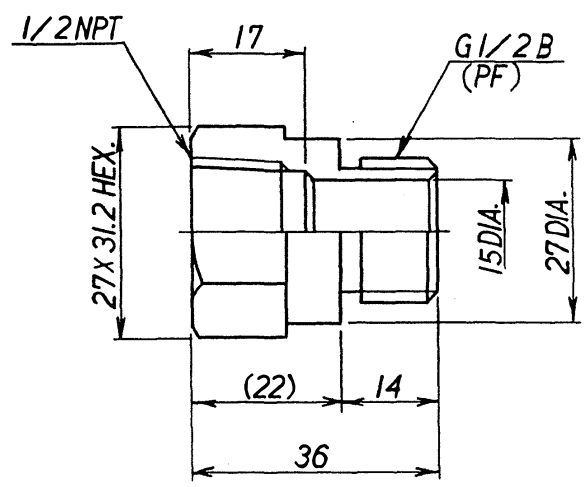
APPD.	T. Ishina	SCALE	TITLE	PRESSURE SWITCH	SHEET NO.
CHKD.	M. Kunita	FREE			
REWRITE	2016.3.9	K. Shimazaki	T. Ishina	DRAWN	DRAWING NO.
REVISION	DATE	DRAWN	APPD.		
				②	CB33-0X3,1X3,2X3

DWG. SIZE A4

Ⓝ NAGANO KEIKI



A  
B  
C  
D



APPD.	<i>S. Horinoki</i>	SCALE	JOINT	SHEET NO. A/A		
CHKD.	<i>T. Takahashi</i>	1/1				
	<i>N. Saichō</i>					
REVISION	DATE	DRAWN	APPD.	DATE	DWG. NO.	
REW. (SI)	Sep. 7 '94	<i>M. Wada</i>	<i>S. Horinoki</i>	Jun. 12 '85	1429-9249-00	

## Specification 2

### Electric characteristics:

Switch	Switching capacity			Safety standard compliance rating	Withstand voltage	Insulation resistance
		Resistance load	Inductive load			
1 contact standard	125V AC	20 A	20 A	AC-15 250V AC 3 A	2000V AC	500V DC 100MΩ or higher
	250V AC	20 A	20 A			
	125V DC	0.5 A	0.05 A	DC-13 125V DC 0.5 A		
	250V DC	0.25 A	0.03 A			
1 contact direct current	125V AC	10 A	6 A	DC-13 125V DC 6 A		
	250V AC	3 A	1.5 A			
	125V DC	10 A	6 A			
	250V DC	3 A	1.5 A			
2 contacts simultaneous operation	125V AC	10 A	6 A	DC-12 125V DC 0.1 A		
	250V AC	10 A	4 A			
	125V DC	0.5 A	0.05 A	DC-13 60V DC 0.1 A		
	250V DC	0.25 A	0.03 A			

·Inductive load: Power factor 0.4 or higher (AC)  
 Time constant 7ms and under (DC)  
 \* 1 contact direct current: Direct current rating is bigger than standard.

### Pressure range, deadband, withstand pressure and wetted parts material:

Pressure range MPa	Deadband MPa (Adjustable range)	Withstand pressure MPa	Wetted parts material		
			Tank	Bellows	Connecting part
-0.1 to 0	0.003 to 0.02	0.15	SUS316	SUS316L	SUS316
0.01 to 0.1	0.003 to 0.02	0.15			
0.02 to 0.2	0.006 to 0.04	0.3			
0.03 to 0.3	0.009 to 0.06	0.45			
0.04 to 0.4	0.012 to 0.08	0.6			
0.06 to 0.6	0.018 to 0.12	0.9			
0.1 to 1	0.03 to 0.2	1.5			
0.15 to 1.5	0.045 to 0.3	2.25			
0.2 to 2	0.06 to 0.4	3			
0.3 to 3	0.09 to 0.6	4.5			
0.5 to 5	0.15 to 1	7.5			
0.7 to 7	0.21 to 1.4	10.5			
1 to 10	0.3 to 2	15	SUS316		
1.5 to 13	0.75 to 3	21			
1.5 to 15*	0.75 to 3	21			

#### How to choose suitable pressure range

- Suitable pressure range for accurate and stable set value operation: 30% of max.P. or greater
- Pressure range for long life use: Approx. 65% of max.P. or less
- Accurate and long life operation (ideal): Approx. 30 to 65% of max.P.

In the right figure

- Range 1: Selection of both accuracy and longevity
- Range 2: Selection of valuing accuracy
- Range 3: Selection of valuing longevity

#### Recommended switch set point range

- Upper limit type: (10%max.P.+Deadband) to 90%max.P.
- Lower limit type: 10%max.P. to (90%max.P.-Deadband)

\* 1.5 to 15MPa rated pressure range can be made by non-CE compliant specification only.

