



6 Tubing: RAYCHEM DR-25



43 187 357 - 001

TECHNICAL DATA

SENSING CHARACTERISTICS

Nominal sensing distance [mm]	5		
Effective sensing distance [mm]	4,5 to 5,5	5,3,2,1,8	a,b,c
Differential travel [%]	3 to 20	5,3,2,7	a,b,c
Stability of sensing distance [%]	+10/-5 within -25°C to +70°C +30/-5 within -40°C to +100°C	5,3,2,4 5,3,2,4	b,c b,c
Reproduceability [%]	≤1	5,3,2,5,1	c
Repetition rate of sensing [Hz]	≥2000	5,3,2,12	c
Swing-on delay [ms]	≤10	5,3,2,13	c

POWER SUPPLY

Supply voltage range	[V]	20 to 33	5.3.1.4	a,b,c
Ripple	[V _{ss}]	≤ 7	MIL-STD-1275 A (AT)	c
Surge voltage	[V]	100V , 50ms	MIL-STD-1275 A (AT)	c
Transients	[V]	250V , 50μs	MIL-STD-1275 A (AT)	c
Burden current	[mA]	≤ 10	5.3.1.7	a,c

OUTPUT CHARACTERISTICS

Voltage drop	[V]	≤3	5.3.2.17	a,b,c
Residual current	[μA]	≤100	5.3.2.18.6	a,b,c
Load current	[mA]	≤200 to +85°C lin falling to 100e+100°C	5.3.2.18.1	a,b,c

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range [°C]	-40 to +100	IEC 68-2-1 / IEC 68-2-2	b,c
Storage temperature [°C]	-55 to +100	IEC 68-2-8 / IEC 68-2-2	c
Damp heat , steady	56 days	IEC 68-2-3, Ca	c
Damp heat , cyclic	+55°C , 6 Cycles	IEC 68-2-30, Db	c
Rapid change of temperature	-55°C/+85°C , 5 Cycles	IEC 68-2-14, Na	a
Vibration	10 to 500Hz , 0.75/100ms ⁻²	IEC 68-2-6, Fc	c
Bump	400ms ⁻² , 6x4000 bumps	IEC 68-2-29, Eb	c
Shock	1000ms ⁻² / 6ms	IEC 68-2-27, Ea	c
Salt mist	pH 6.5-7.2 @ +35°C	IEC 68-2-11, Ka	c
Contamination resistance	Engine and gearbox oil, Aviation fuel Sea water , Water , Ethanol , Methanol	clause 14.3 DEF 133	c
Icing / freezing rain	Sensing characteristics not affected	5210 MIL-STD-810D	c
Leakage (Immersion)	98 kPa for 2 hours	512.2 MIL-STD-810D	c
Robustness of terminations			
Tensile [N]	40	IEC 68-2-21, Ua1	c
Insulation resistance [MOHM]	≥ 50 @ 500Vdc	5.3.1.8	a,c
Insulation voltage [Veff]	≥ 1000 @ 1min	5.3.1.10	c

SPECIAL FEATURES

Reverse polarity, supply leads	yes	5.3.6.1	c
Short circuit protection	yes	5.3.6.4	a,b,c
EMI	Class A3, A4	MIL-STD-461B	d
EMP	Category B	DEF 07-55,T2,S5	d
MTBF Prediction	144000h @+20°C, NU/GM application	MIL-HDKB 217D	—

1 = to ZS-60000 if not otherwise specified

 $\alpha = 100\%$ test at $+20^{\circ}\text{C}$

b = test within specified temperature range, test level II, AQL=4

c = type approval test

d = Specification by similarity

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