



CFD Specifications

Pump Specifications

	CFD-IT-B	CFD-8T-B
Max. discharge per shot* oz (ml)	0.03 oz (1 ml)	.33 oz (10 ml)
Max. pressure PSI (kgf/cm ²)	7.11 psi (0.5 kgf/cm ²)	7.11 psi (0.5 kgf/cm ²)
Max. stroke spm	30 spm	30 spm
Supply air pressure PSI (kgf/cm ²)	21-43 psi (1.5-3.0 kgf/cm ²)	21-43 psi (1.5-3.0 kgf/cm ²)
Temperature range of liquid	68-140°F (20-60°C)	68-140°F (20-60°C)
Air consumption Ft ³ /shot (NI/shot)	.083 Ft ³ /shot (2.5 NI/shot)	.006 Ft ³ /shot (0.18 NI/shot)
Wet end material	PTFE, PFA	PTFE, PFA
Pump connection port diameter	1/4" OD tube (N6.35 x N4.35mm)	1/4" OD tube (N6.35 x N4.35mm)
Input voltage (sensors)	5 VDC	5 VDC
Output voltage (sensors)	5-24 VDC	0-5 VDC
Supply air connection port diameter	NPN transistor	1/4" NPTF
Weight lbs (kg)	2.4 lbs (1.1 kg)	3.3 lbs (1.5 kg)

* Nominally set at 7.5ml prior to shipment.

Sensor Specifications

Input	Parameter		Symbol	Min	Typ	Max	Unit	Conditions	
		Forward voltage		V_F	--	1.1	1.4	V	$I_F = 5\text{mA}$
	Reverse current		I_R	--	--	10.0	μA	$V_R = 3\text{V}$	
	Operating supply voltage range		V_{CC}	4.5	--	17.0	V		
Output	Low level output voltage		V_{OL}	--	0.15	0.4	V	$V_{CC} = 5\text{V}$ $I_F = 0\text{mA}$ $I_{OL} = 16\text{mA}$	
	High level output current		V_{OH}	4.9	--	--	V	$V_{CC} = 5\text{V}$ $I_F = 5\text{mA}$	
	Low level supply current		I_{CCL}	--	1.7	3.8	mA	$V_{CC} = 5\text{V}$ $I_F = 0\text{mA}$	
	High level supply current		I_{CCH}	--	0.7	2.2	mA	$V_{CC} = 5\text{V}$ $I_F = 5\text{mA}$	
Transfer Characteristics	*1	"L-H" threshold input current	I_{FLH}	--	1.0	5.0	mA	$V_{CC} = 5\text{V}$	
	*2	Hysteresis	I_{FHL}/I_{FLH}	0.55	0.75	0.95		$V_{CC} = 5\text{V}$	
	*3 Response Time	"L-H" propagation time		t_{PLH}	--	3.0	9.0	μS	$V_{CC} = 5\text{V}$ $I_F = 5\text{mA}$ $R_L = 280\Omega$
		"H-L" propagation time		t_{PHL}	--	5.0	15.0		
		Rise Time		t_r	--	0.1	0.5		
Fall Time		t_f	--	0.05	0.5				

*1 I_{FHL} represents forward current when output goes from "H" to "L"

*2 I_{FLH} represents forward current when output goes from "L" to "H"

*3 Test circuit for response time is shown below

Note: In case of interruption of light between emitter and detector, output becomes "Low Level"

