TLFC

MASS FLOW CONTROLLER

Approvals:

CONNECTION	FLOW RANGE (N_2)	MEDIUM
1/4"NPT Female Thread	0...10 sccm ~ 0...50 SLM	Non Corrosive Dry Gas

SPECIFICATION

MODEL	TLFC
APPLICATION	Non Corrosive Dry Gas
PROCESS CONNECTION	1/4"NPT Female Thread
ACCURACY	< 1% F.S.
REPEATABILITY	< 0.15% F.S.
RESPONSE TIME	< 1 Second
WETTED MATERIALS	Body : 316SS (Std.) Tapcon Plastic O-Ring : Viton (Std.) FFKM
OUTPUT SIGNAL	DC 0~5V DC 4-20mA
CONTROL SIGNAL	Integral (manual operating by set point) DC 0~5V (from a remote source)
CONTROL VALVE	Electromagnetic N.C. (Normally Closed)
PRESSURE LIMIT	316SS : 34.4 Bar Tapcon : 17.2 Bar
GAS TEMPERATURE	0 ... 50℃
POWER	24VDC (Std.) 15VDC (0~10 sccm … 0~20 SLM)
ELECTRIC CONNECTOR	9 Pin D-Sub
MOUNTING	Horizontal Installation

Display Option

Type ①

Type ②

Type ③

Type ④

Type	*Option*
①	Rate Only with LCD
②	Rate Only with Blue Back-Lighted LCD
③	Rate & Total with Blue Back-Lighted LCD
④	Without Display (Output Signal Only)

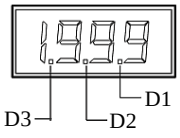
Flow Range (N_2)

* Flow rates are stated for Nitrogen
* For other gases use the K factor as a multiplier from gas factor table

0 ~ 10 sccm	0 ~ 200 sccm	0 ~ 5 SLM	0 ~ 35 SLM
0 ~ 20 sccm	0 ~ 300 sccm	0 ~ 10 SLM	0 ~ 40 SLM
0 ~ 30 sccm	0 ~ 500 sccm	0 ~ 15 SLM	0 ~ 45 SLM
0 ~ 50 sccm	0 ~ 1 SLM	0 ~ 20 SLM	0 ~ 50 SLM
0 ~ 80 sccm	0 ~ 2 SLM	0 ~ 25 SLM	
0 ~ 100 sccm	0 ~ 3 SLM	0 ~ 30 SLM	

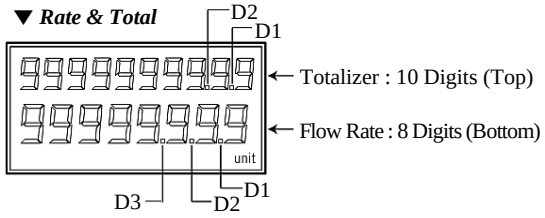
Decimal Point

▼ ***Rate Only***



Range	*Decimal Point*
0 ~ 1.999	D3
2.00 ~ 19.99	D2
20.0 ~ 199.9	D1
200 ~ 1999	None

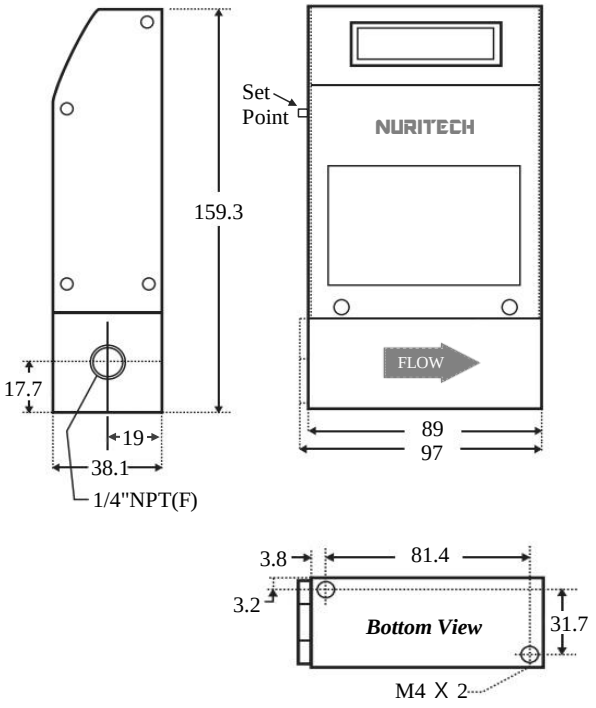
▼ ***Rate & Total***



DIMENSION

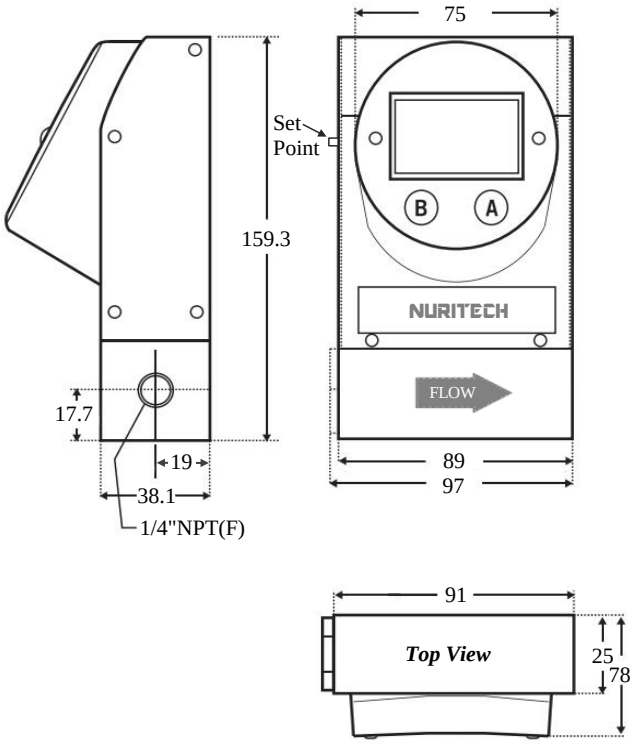
Rate only with LCD & Without LCD

Unit = mm



Rate & Total with LCD

Unit = mm



GAS FACTOR TABLE

ACTUAL GAS	SYMBOL	K FACTOR RELATIVE TO N_2	ACTUAL GAS	SYMBOL	K FACTOR RELATIVE TO N_2
Acetylene	C_2H_2	0.58	Hydrogen Bromide	HBr	1.00
Air	-	1.00	Hydrogen Chloride	HCl	1.00
Ammonia	NH_3	0.74	Hydrogen Selenide	H_2Se	0.79
Argon	Ar	1.42	Hydrogen Sulfide	H_2S	0.80
Bromine	Br_2	0.81	Isobutane	$CH(CH_3)_3$	0.20
Butane	C_4H_{10}	0.26	Isobutylene	C_4H_8	0.30
1-Butane	C_4H_8	0.30	Methane	CH_4	0.72
Carbon Dioxide	CO_2	0.74	Methanol	CH_3OH	0.58
Carbon Monoxide	CO	1.00	Methyl Acetylene	C_3H_4	0.43
Carbonyl Sulfide	COS	0.66	Methyl Bromide	CH_3Br	0.58
Chlorine	Cl_2	0.86	Methyl Chloride	CH_3Cl	0.63
Dimethyl Ether	$(CH_3)_2O$	0.39	Nitric Oxide	NO	1.00
Ethane	C_2H_6	0.50	Nitrogen Dioxide	NO_2	0.74
Ethanol	C_2H_6O	0.39	Nitrous Oxide	N_2O	0.71
Ethyl Acetylene	C_4H_6	0.32	Oxygen	O_2	0.99
Ethyl Chloride	C_2H_5Cl	0.39	Propane	C_3H_8	0.36
Ethylene	C_2H_4	0.60	Propylene	C_3H_6	0.41
Helium	He	1.43	Silane	SiH_4	0.60
Hexane	C_6H_{14}	0.18	Sulfur Dioxide	SO_2	0.69
Hydrogen	H_2	1.01	Sulfur Hexafluoride	SF_6	0.26

* Please contact us the K Factor value of other gases.