

TLFC

MASS FLOW CONTROLLER

Approvals:



CONNECTION

1/4"NPT
Female Thread

FLOW RANGE (N₂)

0 ~ 10 sccm
↓
0 ~ 50 SLM

FLUID

Non-Corrosive
Dry Gases

SPECIFICATION

MODEL	TLFC
APPLICATION	Non-Corrosive Dry Gases
FLOW RANGE	0 ~ 10 sccm ... 0 ~ 50 SLM
PROCESS CONNECTION	1/4"NPT Female Thread
ACCURACY	< 1% F.S.
REPEATABILITY	< 0.15% F.S.
RESPONSE TIME	< 1 Second
MATERIAL	Body : SS316 / Tapcon Plastic O-Ring : Viton / FFKM
OUTPUT SIGNAL	DC4-20mA / DC0-5V
CONTROL SIGNAL	Integral (manual operating by set point) DC0-5V (from a remote source)
MAX. PRESSURE	SS316 : 34.4 Bar / Tapcon : 17.2 Bar
GAS TEMPERATURE	0 ... 50°C
POWER SUPPLY	24VDC / 15VDC
ELECTRIC CONNECTOR	9 Pin D-Sub
FLOW DIRECTION	Left to Right



| FLOW | | PRESSURE | | TEMPERATURE | | AC | | DC | | BATTERY | | CONTACT | | OUTPUT | | DISPLAY |

DISPLAY

Code B



Code T



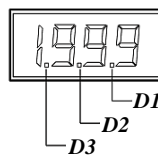
Code O



Code	Display
B	Flow Rate with Blue Back-Lighted LCD
T	Flow Rate & Totalizer with Blue Back-Lighted LCD
O	Without LCD

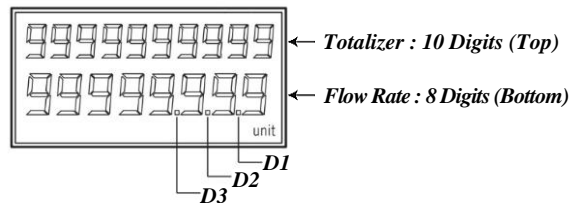
DECIMAL POINT

Flow Rate with LCD

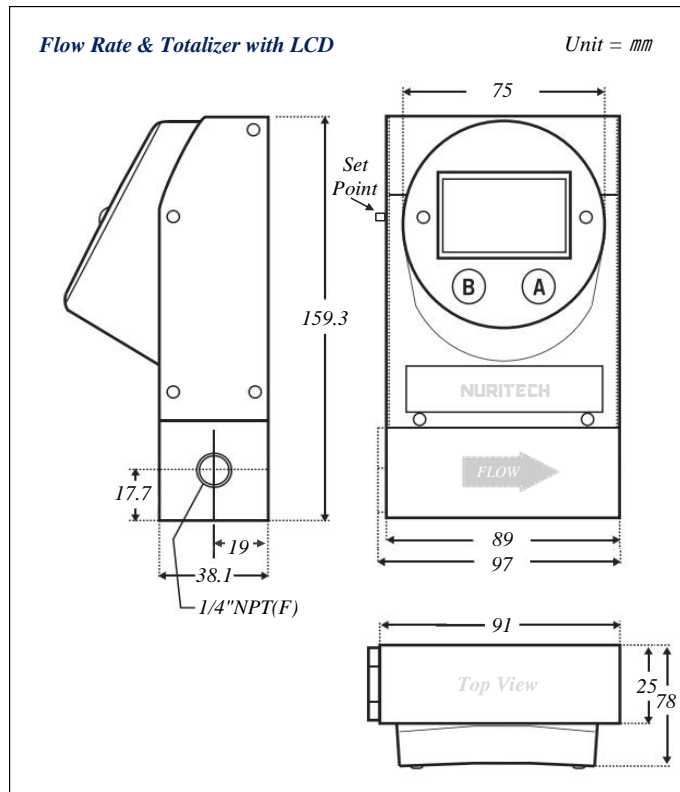
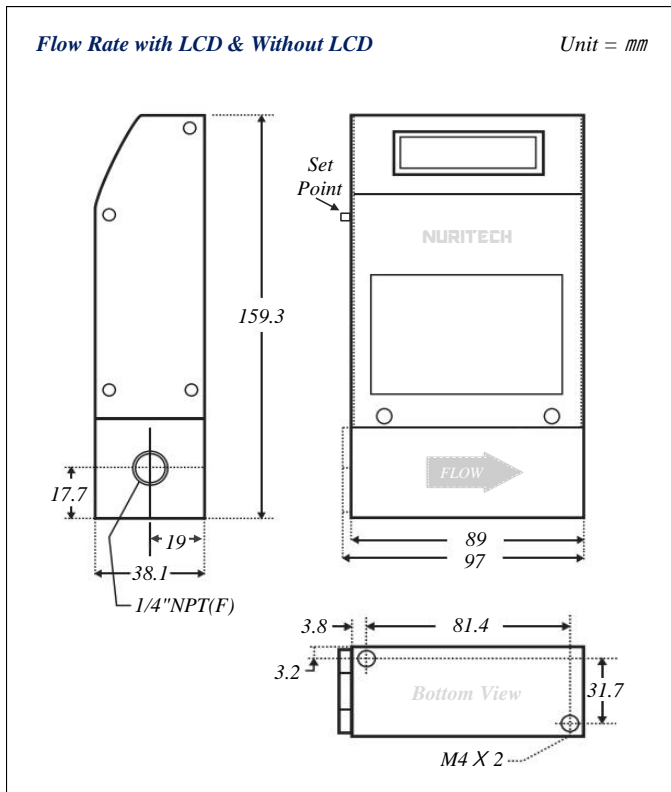


Range	Decimal Point
0 ~ 1.999	D3
2.00 ~ 19.99	D2
20.0 ~ 199.9	D1
200 ~ 1999	None

Flow Rate & Totalizer with LCD



DIMENSION





GAS FACTOR TABLE

* Please contact us the K Factor value of other gases

Actual Gas	Symbol	K Factor Relative to N ₂	Actual Gas	Symbol	K Factor Relative to N ₂	Actual Gas	Symbol	K Factor Relative to N ₂
Acetylene	C ₂ H ₂	0.58	Ethanol	C ₂ H ₆ O	0.39	Methyl Acetylene	C ₃ H ₄	0.43
Air	-	1.00	Ethyl Acetylene	C ₄ H ₆	0.32	Methyl Bromide	CH ₃ Br	0.58
Ammonia	NH ₃	0.74	Ethyl Chloride	C ₂ H ₅ Cl	0.39	Methyl Chloride	CH ₃ Cl	0.63
Argon	Ar	1.42	Ethylene	C ₂ H ₄	0.60	Nitric Oxide	NO	1.00
Bromine	Br ₂	0.81	Helium	He	1.43	Nitrogen	N ₂	1.00
Butane	C ₄ H ₁₀	0.26	Hexane	C ₆ H ₁₄	0.18	Nitrogen Dioxide	NO ₂	0.74
1-Butane	C ₄ H ₈	0.30	Hydrogen	H ₂	1.01	Nitrous Oxide	N ₂ O	0.71
Carbon Dioxide	CO ₂	0.74	Hydrogen Bromide	HBr	1.00	Oxygen	O ₂	0.99
Carbon Monoxide	CO	1.00	Hydrogen Chloride	HCl	1.00	Propane	C ₃ H ₈	0.36
Carbonyl Sulfide	COS	0.66	Hydrogen Sulfide	H ₂ S	0.80	Propylene	C ₃ H ₆	0.41
Chlorine	Cl ₂	0.86	Isobutane	CH(CH ₃) ₃	0.20	Silane	SiH ₄	0.60
Dimethyl Ether	(CH ₃) ₂ O	0.39	Isobutylene	C ₄ H ₈	0.30	Sulfur Dioxide	SO ₂	0.69
Ethane	C ₂ H ₆	0.50	Methane	CH ₄	0.72	Sulfur Hexafluoride	SF ₆	0.26

RELATED PRODUCTS

Model	Display	Input	Output	Power Supply
 <p>FCS Flow Indicator</p>	2 Lines Back-Lighted LCD Flow Rate & Totalizer	DC4-20mA	DC4-20mA Pulse RS485	24VDC
 <p>FDI Flow Indicator</p>	4-Digit Red LED Flow Rate only	DC4-20mA	DC4-20mA 2-Relay DC1~5V RS485	24VDC AC110/220V

FLOW RANGE (N₂)

* Flow rates are stated for Nitrogen

* For other gases use the K factor as a multiplier from gas factor table

Code	Range	Code	Range	Code	Range	Code	Range
00	0 ~ 10 sccm	06	0 ~ 1 SLM	12	0 ~ 25 SLM	18	Custom Flow Rate (≤ 50 SLM)
01	0 ~ 20 sccm	07	0 ~ 2 SLM	13	0 ~ 30 SLM		
02	0 ~ 50 sccm	08	0 ~ 5 SLM	14	0 ~ 35 SLM		
03	0 ~ 100 sccm	09	0 ~ 10 SLM	15	0 ~ 40 SLM		
04	0 ~ 200 sccm	10	0 ~ 15 SLM	16	0 ~ 45 SLM		
05	0 ~ 500 sccm	11	0 ~ 20 SLM	17	0 ~ 50 SLM		

ORDERING INFORMATION

TLFC	Model								
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TLFC	_____ Complete Ordering Code								

* Operating Differential Pressure / Full Scale (F.S.) ≤ 5 SLM (0.5 ~ 3 kg/cm²)
 5 SLM < F.S. ≤ 20 SLM (1 ~ 3 kg/cm²) / 20 SLM < F.S. ≤ 50 SLM (2 ~ 3 kg/cm²)

* Gas Name _____ Temperature _____ °C (Normal)

| FLOW | | PRESSURE | | TEMPERATURE | | AC | | DC | | BATTERY | | OUTPUT | | CONTACT | | DISPLAY |