

### Digital Product



### Digital Mass Flow Controller Specifications

| MODEL   | Full Scale<br>N2 (slpm) | Accuracy<br>(%FS) | Repeatability<br>(%) | Response<br>Time(sec) | Digital<br>Communication | IN/Out Signal<br>(Vdc/mA) | Supply Power<br>(Vdc) | Max<br>Operating<br>Pressure | Max<br>Operating<br>Temp(° C ) |
|---------|-------------------------|-------------------|----------------------|-----------------------|--------------------------|---------------------------|-----------------------|------------------------------|--------------------------------|
| HA30C   | 0.01~30                 | ± 0.25            | ± 0.25               | < 1                   | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |
| HA100C  | 30~100                  | ± 0.25            | ± 0.25               | < 1                   | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |
| HA300C  | 100~300                 | ± 1.0             | ± 0.25               | < 1                   | RS 485                   | 0~5 or 4~20               | ±15~24                | < 13 bar                     | 0~50                           |
| HA1000C | 300~1000                | ± 1.0             | ± 0.25               | < 1                   | RS 485                   | 0~5 or 4~20               | ±15~24                | < 13 bar                     | 0~50                           |
| HA1500C | 1000~1500               | ± 1.0             | ± 0.25               | < 1                   | RS 485                   | 0~5 or 4~20               | ±15~24                | < 13 bar                     | 0~50                           |
| HA2500C | 1500~2500               | ± 1.0             | ± 0.25               | < 1                   | RS 485                   | 0~5 or 4~20               | ±15~24                | < 13 bar                     | 0~50                           |
| HA5000C | 2500~5000               | ± 1.0             | ± 0.25               | < 1                   | RS 485                   | 0~5 or 4~20               | ±15~24                | < 13 bar                     | 0~50                           |

\*Please contact us directly for range above 5,000 SLPM

### Digital Mass Flow Meter Specifications

| MODEL   | Full Scale<br>N2 (slpm) | Accuracy<br>(%FS) | Repeatability<br>(%) | Digital<br>Communication | IN/Out Signal<br>(Vdc/mA) | Supply Power<br>(Vdc) | Max<br>Operating<br>Pressure | Max<br>Operating<br>Temp(° C ) |
|---------|-------------------------|-------------------|----------------------|--------------------------|---------------------------|-----------------------|------------------------------|--------------------------------|
| HA30M   | 0.01~30                 | ± 0.25            | ± 0.25               | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |
| HA100M  | 30~100                  | ± 0.25            | ± 0.25               | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |
| HA300M  | 100~300                 | ± 1.0             | ± 0.25               | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |
| HA1000M | 300~1000                | ± 1.0             | ± 0.25               | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |
| HA1500M | 1000~1500               | ± 1.0             | ± 0.25               | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |
| HA2500M | 1500~2500               | ± 1.0             | ± 0.25               | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |
| HA5000M | 2500~5000               | ± 1.0             | ± 0.25               | RS 485                   | 0~5 or 4~20               | ±15~24                | < 90 bar                     | 0~50                           |

# HA-30M Mass Flow Meter



## Digital Mass Flow Meter

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

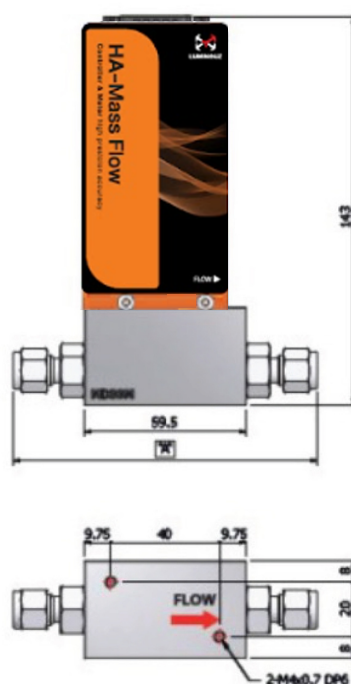
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Data : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-30M                        |
|------------------------|-------------------------------|
| Range(N2)              | 0.01slpm~30slpm               |
| Accuracy               | ± 0.25% of FS                 |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 1/8" SWG   | 106.2             |
| 1/4" SWG   | 110.8             |
| 3/8" SWG   | 113.8             |
| 1/4" VCR   | 107.5             |



# HA-100M Mass Flow Meter



## Digital Mass Flow Meter

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

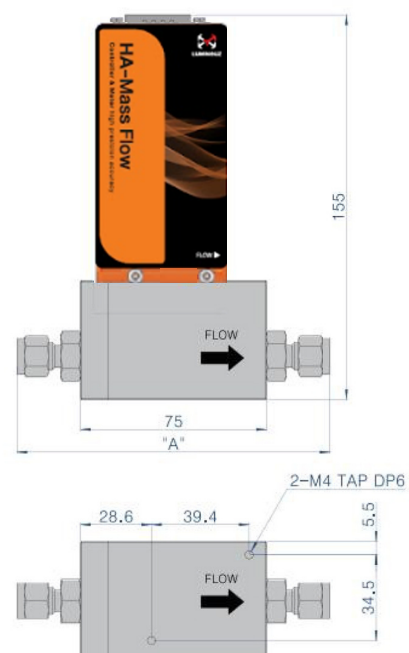
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Data : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-100M                       |
|------------------------|-------------------------------|
| Range(N2)              | 30slpm~100slpm                |
| Accuracy               | ± 0.25% of FS                 |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 1/4" SWG   | 126.3             |
| 3/8" SWG   | 129.3             |
| 1/2" SWG   | 133.4             |
| 1/4" VCR   | 123               |
| 1/2" VCR   | 130.5             |



# HA-300M Mass Flow Meter



## Digital Mass Flow Meter

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

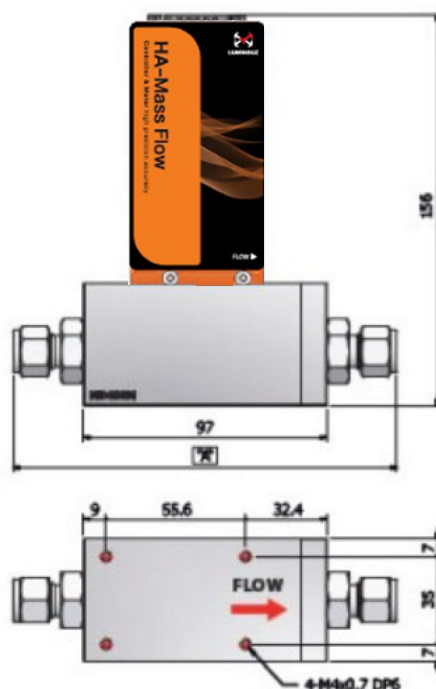
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Date : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-300M                       |
|------------------------|-------------------------------|
| Range(N2)              | 100slpm~300slpm               |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 3/8" SWG   | 152.8             |
| 1/2" SWG   | 158.4             |
| 3/4" SWG   | 166.6             |
| 1/2" VCR   | 152.5             |



# HA-1000M Mass Flow Meter



## Digital Mass Flow Meter

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

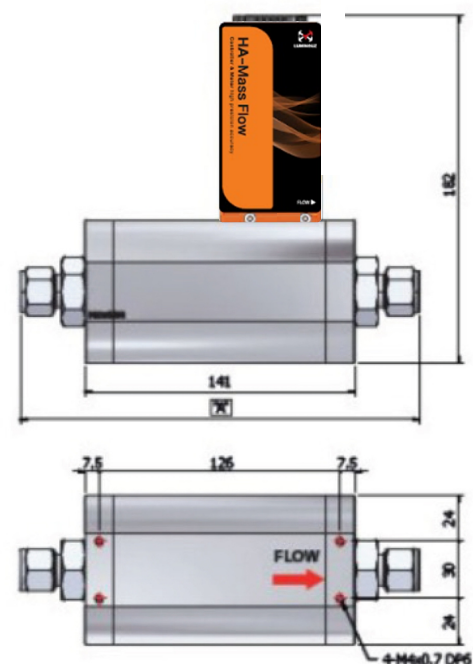
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Date : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-1000M                      |
|------------------------|-------------------------------|
| Range(N2)              | 300slpm~1000slpm              |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 1/2" SWG   | 209.7             |
| 3/4" SWG   | 209.7             |
| 1" SWG     | 217.6             |



# HA-1500M Mass Flow Meter



## Digital Mass Flow Meter

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

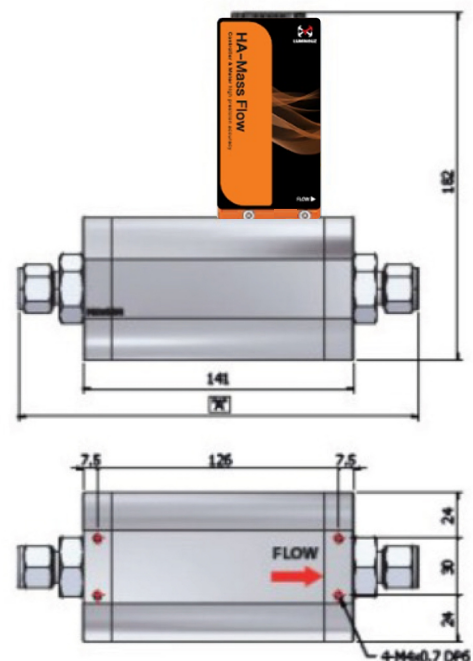
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Date : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-1500M                      |
|------------------------|-------------------------------|
| Range(N2)              | 1000slpm~1500slpm             |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 1/2" SWG   | 209               |
| 3/4" SWG   | 210.6             |
| 1" SWG     | 217.6             |



# HA-2500M Mass Flow Meter



## Digital Mass Flow Meter

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

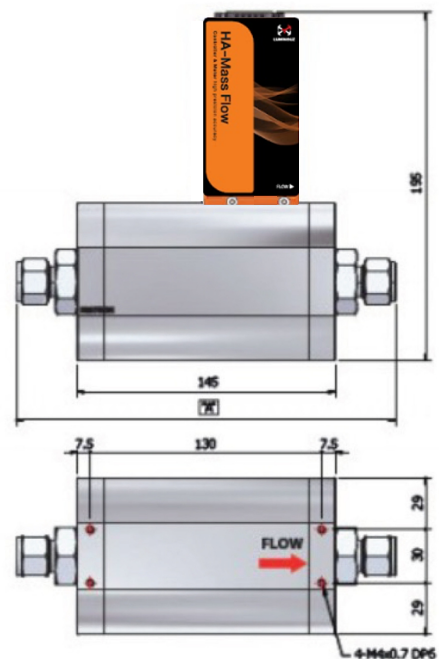
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Date : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-2500M                      |
|------------------------|-------------------------------|
| Range(N2)              | 1500slpm~2500slpm             |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 3/4" SWG   | 213               |
| 1" SWG     | 221.6             |



# HA-5000M Mass Flow Meter



## Digital Mass Flow Meter

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

### Digital Communication : [PIN14,15]

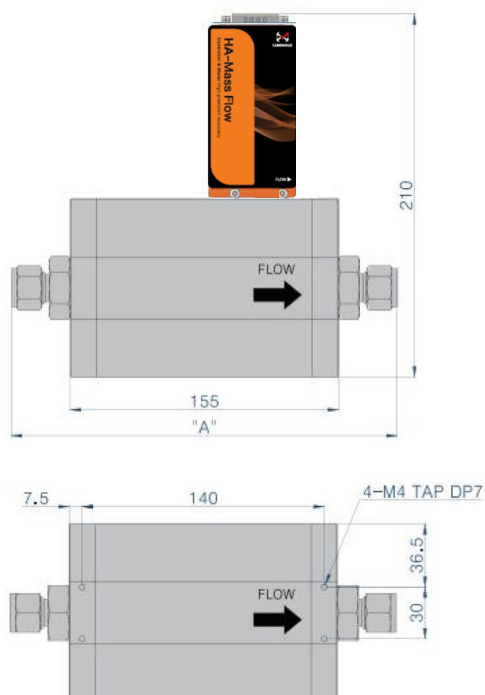
RS - 485 Communication  
Baud rate : 38400bps  
Date : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-5000M                      |
|------------------------|-------------------------------|
| Range(N2)              | 2500slpm~5000slpm             |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 3/4" SWG   | 223               |
| 1" SWG     | 231.7             |

\*Please contact us directly for range above 5,000 slpm



# HA-30C Mass Flow Controller



## Digital Mass Flow Controller

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

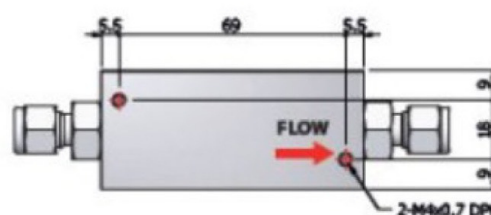
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Data : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-30C                        |
|------------------------|-------------------------------|
| Range(N2)              | 0.01slpm~30slpm               |
| Response Time          | < 1 sec                       |
| Accuracy               | ± 0.25% of FS                 |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 1/8" SWG   | 126.7             |
| 1/4" SWG   | 131.3             |
| 3/8" SWG   | 134.3             |
| 1/4" VCR   | 127.8             |



# HA100C Mass Flow Controller



## Digital Mass Flow Controller

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

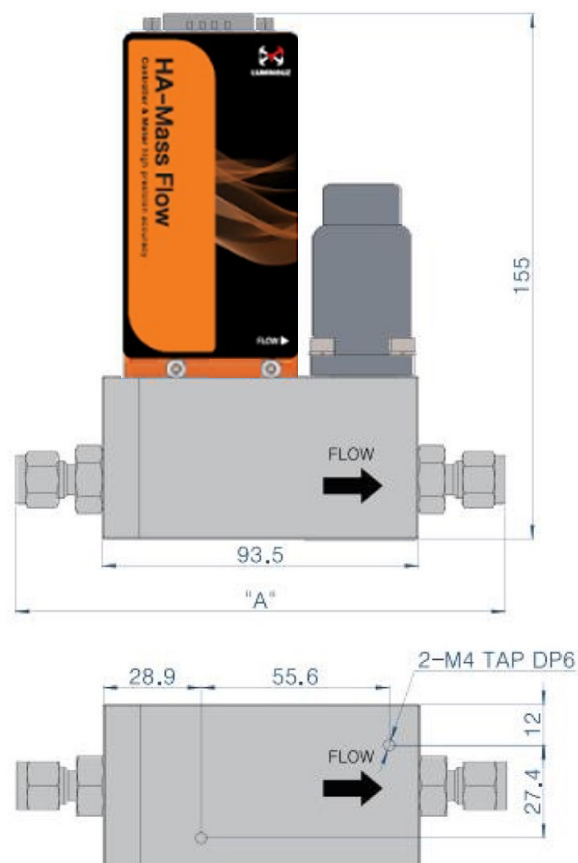
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Data : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-100C                       |
|------------------------|-------------------------------|
| Range(N2)              | 30slpm~100slpm                |
| Response Time          | < 1 sec                       |
| Accuracy               | ± 0.25% of FS                 |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 90 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 1/4" SWG   | 144.8             |
| 3/8" SWG   | 147.8             |
| 1/2" SWG   | 151.9             |
| 1/4" VCR   | 141.5             |
| 1/2" VCR   | 149               |



# HA-300C Mass Flow Controller



## Digital Mass Flow Controller

### Features

- Accurate at Low Flow
- Fast Response
- Wide Pressure Range Compatibility
- Excellent Linearity
- Long - Term Stability
- High Corrosion Resistance
- Highly Stable Removable Sensor
- Compact Connection

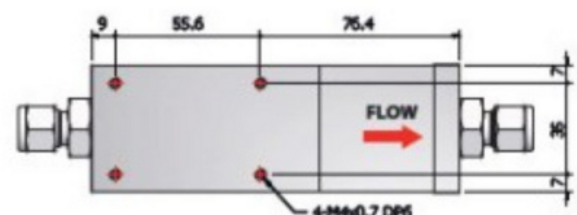
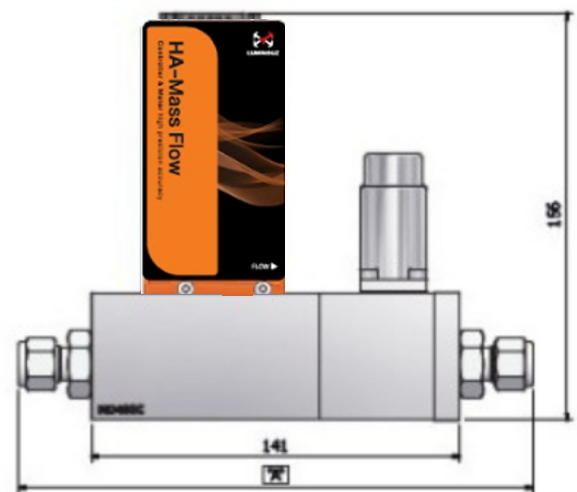
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Data : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-300C                       |
|------------------------|-------------------------------|
| Range(N2)              | 100slpm~300slpm               |
| Response Time          | < 1 sec                       |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 13 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 3/8" SWG   | 196.8             |
| 1/2" SWG   | 202.4             |
| 3/4" SWG   | 210.6             |
| 1/2" VCR   | 196.5             |



# HA-1000C Mass Flow Controller



## Digital Mass Flow Controller

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

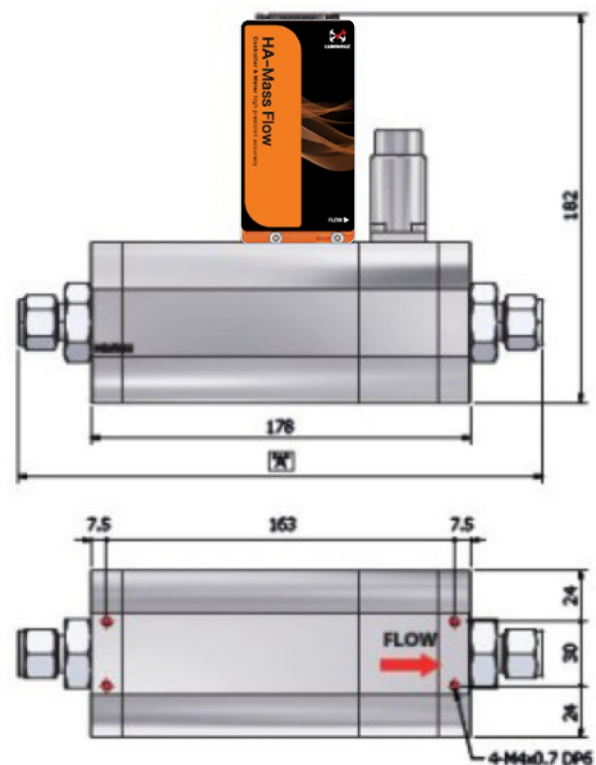
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Data : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-1000C                      |
|------------------------|-------------------------------|
| Range(N2)              | 300slpm~1000slpm              |
| Response Time          | < 1 sec                       |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 13 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 1/2" SWG   | 246               |
| 3/4" SWG   | 246               |
| 1" SWG     | 254.6             |



# HA-1500C Mass Flow Controller



## Digital Mass Flow Controller

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

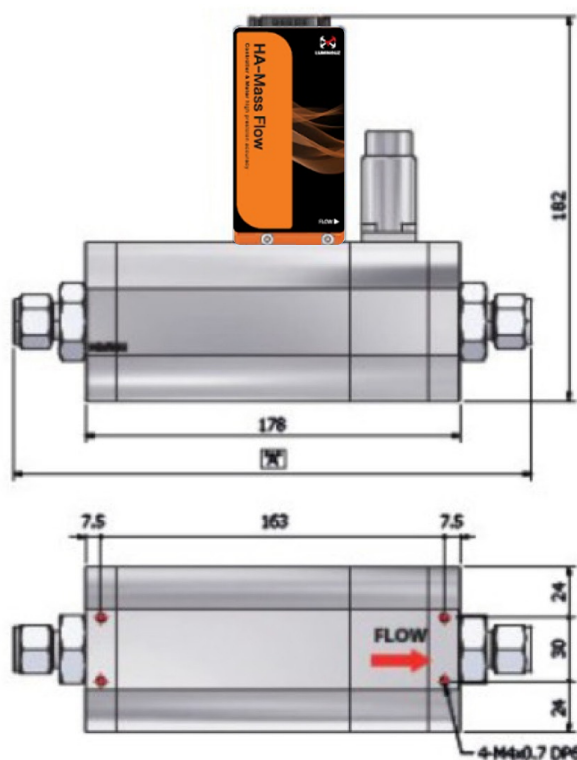
### Digital Communication : [PIN14,15]

RS - 485 Communication  
Baud rate : 38400bps  
Data : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-1500C                      |
|------------------------|-------------------------------|
| Range(N2)              | 1000slpm~1500slpm             |
| Response Time          | < 1 sec                       |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 13 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 1/2" SWG   | 209.7             |
| 3/4" SWG   | 246               |
| 1" SWG     | 254.6             |



# HA-2500C Mass Flow Controller



## Digital Mass Flow Controller

### Features

- Accurate at Low Flow
- Fast Response
- Wide Pressure Range Compatibility
- Excellent Linearity
- Long - Term Stability
- High Corrosion Resistance
- Highly Stable Removable Sensor
- Compact Connection

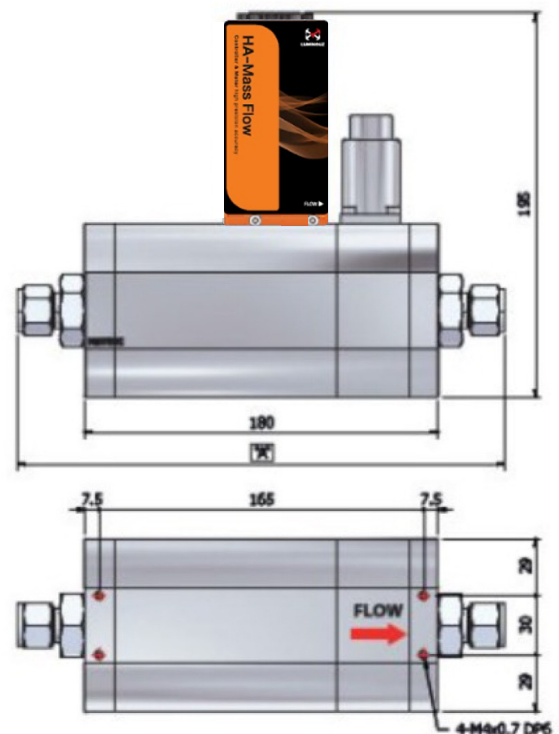
### Digital Communication : [PIN14,15]

- RS - 485 Communication
- Baud rate : 38400bps
- Data : 8 Bit
- Stop Bite : 1 Bit
- Parity : None

### Specifications

| Model                  | HA-2500C                      |
|------------------------|-------------------------------|
| Range(N2)              | 1500slpm~2500slpm             |
| Response Time          | < 1 sec                       |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 13 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 3/4" SWG   | 248               |
| 1" SWG     | 256.6             |



# HA-5000C Mass Flow Controller



## Digital Mass Flow Controller

### Features

Accurate at Low Flow  
Fast Response  
Wide Pressure Range Compatibility  
Excellent Linearity  
Long - Term Stability  
High Corrosion Resistance  
Highly Stable Removable Sensor  
Compact Connection

### Digital Communication : [PIN14,15]

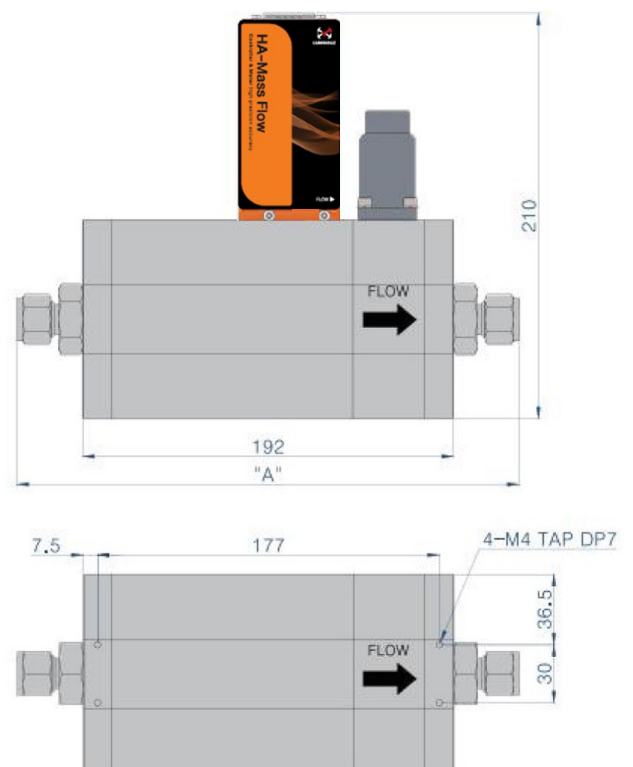
RS - 485 Communication  
Baud rate : 38400bps  
Data : 8 Bit  
Stop Bite : 1 Bit  
Parity : None

### Specifications

| Model                  | HA-5000C                      |
|------------------------|-------------------------------|
| Range(N2)              | 2500slpm~5000slpm             |
| Response Time          | < 1 sec                       |
| Accuracy               | ± 1% of FS                    |
| Repeatability          | ± 0.25%                       |
| In/Out Signal          | 0~5Vdc or 4~20mA              |
| Supply Power           | +15~ +24Vdc, 350mA            |
| Max Operating Pressure | < 13 bar                      |
| Max Operating Temp     | 0~50° C                       |
| Leak Rate              | 1x10 <sup>-9</sup> atm.cc/sec |
| Control Range          | 3~100%                        |

| Connection | "A" Dimension(mm) |
|------------|-------------------|
| 3/4" SWG   | 223               |
| 1" SWG     | 231.7             |

\*Please contact us directly for range above 5,000 slpm



## Model chart

### Model AN-2-30C-A-14-E-N

