STFSM DRIVE DIMENSIONS AND MOUNTING

FLOW ADJUSTMENT MECHANISM (SEE SHEET 5)

OPTICAL SENSOR
FMI P/N 110569

INLET PORT*

OUTLET PORT*

JST CONNECTOR
HOUSING PHR-4,
CRIMP TERMINAL
SPH-002T-P0.5S
(FOR 30-24 AWG)

FLOW
ADJUSTMENT
MECHANISM
(SEE SHEET 5)

INLET PORT* OUTLET PORT* FMI SERIAL TAG

OPTICAL SENSOR
FMI P/N 110569

NOTE: PUMP HEAD NOT INCLUDED.
SHOWN FOR REFERENCE.

FMI P/N STFSM

Fluid Metering Inc.
5 Aerial Way, Suite 500
Syosset, NY 11791

NOTE: PUMP HEAD NOT INCLUDED.
SHOWN FOR REFERENCE.

STFSM DRIVE DIMENSIONS AND MOUNTING

FMI SERIAL TAG

OPTICAL SENSOR
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INLET PORT* OUTLET PORT*

FLOW ADJUSTMENT MECHANISM (SEE SHEET 5)

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STFSM DRIVE DIMENSIONS AND MOUNTING

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DIMENSIONS ARE IN INCHES [MILLIMETERS]
TOLERANCES UNLESS OTHERWISE SPECIFIED:
.X = ±0.06 [1.5] .XX = ±0.02 [0.5] .XXX = ±0.01 [0.25]
PUMP PERFORMANCE AND SPECIFICATIONS

STROKE VOLUME: UP TO 0.025 mL/REV FOR THE 1/4" AND UP TO 0.005 mL/REV FOR THE 1/8"
REPEATABILITY: SEE CHART
MAX PRIME SPEED: 500 RPM
PUMP CALIBRATED AND TESTED IN CLOCKWISE DIRECTION WITH HIGH PURITY WATER.
1.5' INLET AND 2' OUTLET TUBING LENGTH USED.
PUMP CAN WORK IN REVERSE FLOW CONDITION. PRECISION AND ACCURACY MAY NOT BE THE SAME AS IN THE CLOCKWISE DIRECTION.

TUBING RECOMMENDATIONS:
INLET - 1/32" ID FOR < 0.005 mL/REV
OUTLET - 1/32" ID
TUBING LENGTH < 3'

PRIMING RECOMMENDATIONS:
PERFORM AN ALCOHOL FLUSH PRIOR TO WORKING FLUID.
START AT 300RPM AND INCREASE SPEED UP TO 500RPM.
MAY NEED TO PERFORM START/STOP AND CW/CCW OPERATION TO CLEAR AIR.

MAX OPERATING PRESSURE: NOT SUITED FOR DISPENSING INTO PRESSURE.
MAX FLUID TEMPERATURE: 100°C

LIFE EXPECTANCY AND PUMP MAINTENANCE:
DEPENDENT ON APPLICATION. CONSULT FACTORY.

NOTE:
SUCTION LIFT OF PUMP DECREASES WITH SMALLER DISPENSE/STROKE.
PUMP HEIGHT ABOVE SUPPLY: 1' @ 0.001 mL/REV WITH 1/32" ID TUBING.

CERTIFICATIONS:
REACH AND RoHS
STROKE VOLUME ADJUSTMENTS MAY BE NEEDED WHEN INTEGRATING PUMP INTO CUSTOMER SYSTEM.

<table>
<thead>
<tr>
<th>FMI P/N</th>
<th>FLUID PATH MATERIALS</th>
<th>SEAL MATERIALS</th>
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<tr>
<td>H1CKCSM</td>
<td>CERAMIC (ALUMINA) PVDF</td>
<td>UHMWPE FKM</td>
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<tr>
<td>H00ZKCSM</td>
<td>ZIRCONIA PVDF</td>
<td>UHMWPE FKM</td>
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<td>H1CTCSM</td>
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Fluid Metering Inc.
5 Aerial Way, Suite 500
Syosset, NY 11791
FOR DISPENSE VOLUMES GREATER THAN 0.005mL/REV IS ≤ 0.5% CV.

CHART DATA IS TAKEN WITH AN 1/8" PUMP HEAD.
### ELECTRICAL SPECIFICATIONS

#### MOTOR SPECIFICATIONS

<table>
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<tr>
<th>Specification</th>
<th>Value</th>
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<tr>
<td>DUTY</td>
<td>CONTINUOUS</td>
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<tr>
<td>MOTOR FRAME SIZE</td>
<td>NEMA SIZE 17</td>
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<tr>
<td>STEP ANGLE</td>
<td>1.8° FULL STEP</td>
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<tr>
<td>NUMBER OF PHASES</td>
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<td>RATED CURRENT</td>
<td>2.0 AMPS/PHASE</td>
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<tr>
<td>INDUCTANCE</td>
<td>2.26mH ± 20% PER PHASE</td>
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<tr>
<td>RESISTANCE</td>
<td>1.10 OHMS ± 10%</td>
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<td>AMBIENT OPERATING TEMP</td>
<td>-20°C TO 50°C</td>
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<td>RELATIVE HUMIDITY RANGE</td>
<td>15 TO 85% RH, NON CONDENSING</td>
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<td>ATMOSPHERIC RANGE</td>
<td>700 TO 1060 hPA</td>
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<td>MAGNET WIRE CLASS</td>
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<tr>
<td>DI-ELECTRIC STRENGTH</td>
<td>500V</td>
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<tr>
<td>PLASTIC INSULATORS</td>
<td>CLASS &quot;B&quot;</td>
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<tr>
<td>MOTOR NOISE AT 50cm</td>
<td>&lt; 50 dBA</td>
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#### SWITCHING SEQUENCE

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#### SENSOR WIRING

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#### MOTOR WIRING (CW ROTATION)

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FLOW RATE ADJUSTMENT INSTRUCTIONS

BUSHINGS CAN BE ROTATED IN CW OR CCW DIRECTION TO MODIFY FLOW RATE. UPON RECEIPT, PUMP WILL BE CALIBRATED PER SHEET 2 DETAILS. THE NOTCHES IN THE BUSHING ARE FOR IDENTIFYING ORIENTATION. THE "TOP" BUSHING IS FOR COARSE ADJUSTMENT. THE "BOTTOM" BUSHING IS FOR FINE ADJUSTMENT. WHEN BOTH NOTCHES FACE AWAY FROM EACH OTHER, THE FLOW RATE IS AT ITS GREATEST. WHEN THE NOTCHES ARE FACING INWARDS, THE FLOW RATE IS AT A MINIMUM. A HALF ROTATION OF THE BUSHINGS WILL ALTER THE FLOW FROM MINIMUM TO MAXIMUM; A FULL ROTATION IS NOT NECESSARY.

NOTE: MANUFACTURING TOLERANCES OF THE VARIOUS PUMP COMPONENTS MEANS THAT BUSHING NOTCH WILL NOT ALWAYS BE IN EXACTLY THE SAME POSITION WHEN FACTORY CALIBRATED.