## STP-MTRD-17038E Cut Sheet





SureStep DC integrated stepper motor/drive, microstepping, NEMA 17 frame, IP20, 2A, 12-48 VDC, bipolar, 68 oz-in holding torque, 1.8-degree step angle, 200 to 25000 steps per revolution, external (field-wireable) encoder.

For complete product information, please see this item on our store at the following link:



https://www.automationdirect.com/pn/STP-MTRD-17038E

## Technical Specifications

BrandSureStepItemIntegrated stepper motor/driveVoltage TypeDCController TypeMicrosteppingAmperage Rating2ANumber of Output Phases2Voltage Rating12-48 VDCWinding Type ControlBipolarOutput TypeMOSFET, dual H-bridge and 4-quadrant outputCurrent Control4-state PWM at 16 kHzStep Angle1.8-degreeSteps per Revolution200 to 25000Encoder PositionExternal (field-wireable)Feedback TypeIncremental (quadrature)Encoder Resolution1000 pprEncoder Resolution1000 pprEncoder Resolution0 to 40 deg CEnclosure TypeEnclosed			
Voltage TypeDCController TypeMicrosteppingAmperage Rating2ANumber of Output Phases2Voltage Rating12-48 VDCWinding Type ControlBipolarOutput TypeMOSFET, dual H-bridge and 4-quadrant outputCurrent Control4-state PWM at 16 kHzStep Angle1.8-degreeSteps per Revolution200 to 25000Encoder PositionExternal (field-wireable)Feedback TypeIncremental (quadrature)Encoder Resolution1000 pprEncoder Output TypeLine driver (differential)Temperature Rating0 to 40 deg C	Brand	SureStep	
Controller TypeMicrosteppingAmperage Rating2ANumber of Output Phases2Voltage Rating12-48 VDCWinding Type ControlBipolarOutput TypeMOSFET, dual H-bridge and 4-quadrant outputCurrent Control4-state PWM at 16 kHzStep Angle1.8-degreeSteps per Revolution200 to 25000Encoder PositionExternal (field-wireable)Feedback TypeIncremental (quadrature)Encoder Resolution1000 pprEncoder Resolution0 to 40 deg C	Item	Integrated stepper motor/drive	
Amperage Rating2ANumber of Output Phases2Voltage Rating12-48 VDCWinding Type ControlBipolarOutput TypeMOSFET, dual H-bridge and 4-quadrant outputCurrent Control4-state PWM at 16 kHzStep Angle1.8-degreeSteps per Revolution200 to 25000Encoder PositionExternal (field-wireable)Feedback TypeIncremental (quadrature)Encoder Resolution1000 pprEncoder Resolution0 to 40 deg C	Voltage Type	DC	
Number of Output Phases       2         Voltage Rating       12-48 VDC         Winding Type Control       Bipolar         Output Type       MOSFET, dual H-bridge and 4-quadrant output         Current Control       4-state PWM at 16 kHz         Step Angle       1.8-degree         Steps per Revolution       200 to 25000         Encoder Position       External (field-wireable)         Feedback Type       Incremental (quadrature)         Encoder Resolution       1000 ppr         Encoder Output Type       Line driver (differential)         Temperature Rating       0 to 40 deg C	Controller Type	Microstepping	
Voltage Rating       12-48 VDC         Winding Type Control       Bipolar         Output Type       MOSFET, dual H-bridge and 4-quadrant output         Current Control       4-state PWM at 16 kHz         Step Angle       1.8-degree         Steps per Revolution       200 to 25000         Encoder Position       External (field-wireable)         Feedback Type       Incremental (quadrature)         Encoder Resolution       1000 ppr         Encoder Output Type       Line driver (differential)         Temperature Rating       0 to 40 deg C	Amperage Rating	2A	
Winding Type Control       Bipolar         Output Type       MOSFET, dual H-bridge and 4-quadrant output         Current Control       4-state PWM at 16 kHz         Step Angle       1.8-degree         Steps per Revolution       200 to 25000         Encoder Position       External (field-wireable)         Feedback Type       Incremental (quadrature)         Encoder Resolution       1000 ppr         Encoder Output Type       Line driver (differential)         Temperature Rating       0 to 40 deg C	Number of Output Phases	2	
Output Type         MOSFET, dual H-bridge and 4-quadrant output           Current Control         4-state PWM at 16 kHz           Step Angle         1.8-degree           Steps per Revolution         200 to 25000           Encoder Position         External (field-wireable)           Feedback Type         Incremental (quadrature)           Encoder Resolution         1000 ppr           Encoder Output Type         Line driver (differential)           Temperature Rating         0 to 40 deg C	Voltage Rating	12-48 VDC	
Current Control       4-state PWM at 16 kHz         Step Angle       1.8-degree         Steps per Revolution       200 to 25000         Encoder Position       External (field-wireable)         Feedback Type       Incremental (quadrature)         Encoder Resolution       1000 ppr         Encoder Output Type       Line driver (differential)         Temperature Rating       0 to 40 deg C	Winding Type Control	Bipolar	
Step Angle       1.8-degree         Steps per Revolution       200 to 25000         Encoder Position       External (field-wireable)         Feedback Type       Incremental (quadrature)         Encoder Type       Rotary         Encoder Resolution       1000 ppr         Encoder Output Type       Line driver (differential)         Temperature Rating       0 to 40 deg C	Output Type	MOSFET, dual H-bridge and 4-quadrant output	
Steps per Revolution       200 to 25000         Encoder Position       External (field-wireable)         Feedback Type       Incremental (quadrature)         Encoder Type       Rotary         Encoder Resolution       1000 ppr         Encoder Output Type       Line driver (differential)         Temperature Rating       0 to 40 deg C	Current Control	4-state PWM at 16 kHz	
Encoder Position       External (field-wireable)         Feedback Type       Incremental (quadrature)         Encoder Type       Rotary         Encoder Resolution       1000 ppr         Encoder Output Type       Line driver (differential)         Temperature Rating       0 to 40 deg C	Step Angle	1.8-degree	
Feedback Type     Incremental (quadrature)       Encoder Type     Rotary       Encoder Resolution     1000 ppr       Encoder Output Type     Line driver (differential)       Temperature Rating     0 to 40 deg C	Steps per Revolution	200 to 25000	
Encoder Type     Rotary       Encoder Resolution     1000 ppr       Encoder Output Type     Line driver (differential)       Temperature Rating     0 to 40 deg C	Encoder Position	External (field-wireable)	
Encoder Resolution       1000 ppr         Encoder Output Type       Line driver (differential)         Temperature Rating       0 to 40 deg C	Feedback Type	Incremental (quadrature)	
Encoder Output Type         Line driver (differential)           Temperature Rating         0 to 40 deg C	Encoder Type	Rotary	
Temperature Rating 0 to 40 deg C	Encoder Resolution	1000 ppr	
	Encoder Output Type	Line driver (differential)	
Enclosure Type Enclosed	Temperature Rating	0 to 40 deg C	
	Enclosure Type	Enclosed	
Integrated Brake No	Integrated Brake	No	
Motor Frame NEMA 17	Motor Frame	NEMA 17	
IP Rating IP20	IP Rating	IP20	
Shaft Type Single	Shaft Type	Single	

Shoft Diamatar	Cara Cara Cara Cara Cara Cara Cara Cara
Shaft Diameter	5mm
Holding Torque Rating	68 oz-in
Control Mode	Position
Command Signal(s)	<ul><li>step and direction</li><li>CW/CCW</li></ul>
Number of Discrete Input Points	3
Nominal Input Voltage	5-24 VDC
Discrete Input Type	Sinking/sourcing
Number of Discrete Output Points	1
Nominal Output Voltage	5-24 VDC
Discrete Output Type	Sinking/sourcing
Tuning Mode	Pre-tuned
Idle Current Reduction	Yes
Drive Features	Self-test, anti-resonance (electronic damping), torque ripple smoothing and command signal filtering
Protection Type(s)	<ul> <li>overvoltage</li> <li>undervoltage</li> <li>overcurrent</li> <li>over-temperature</li> </ul>
Configuration	Dipswitch
Includes	(1) 3ft encoder cable, (1) 1ft control cable and (1) STP-MTRA-ENC1 modular encoder

## Agency Approvals

UL Listed File #	None
UL Recognized File #	None
UL Hazardous File #	None
CE	View CE declarations
CSA File #	None
RoHS Status	Yes (See CE Doc)
EU REACH	View EU REACH document

## **Dimensional Drawings**



2D Drawing PDF Link: https://cdn.automationdirect.com /static/drawings/STP-MTRD-17038E.pdf See store item page for other formats.