RS232485T

RS232485T is a non-isolated RS-232 to RS-485 communications adapter. It requires no drivers because it is hardware based only. The DB-9 connector can be plugged directly into a standard PC Serial port allowing the user to easily connect to and communicate with RS-485 devices.

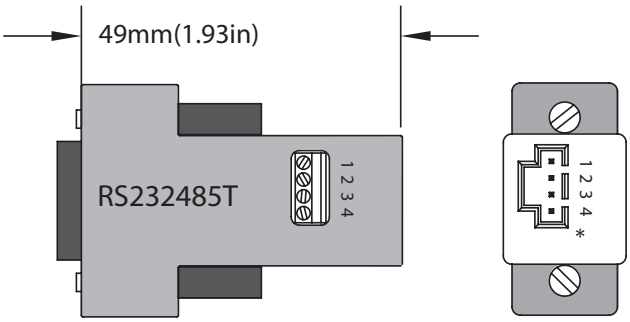
NOTE: The 4-pin Molex connector is designed to match the RS485-ISO adapters on page 83.

The connector can be removed to allow direct screw terminal connection as well.

Includes two KITDC3.

(Proper RS-485 biasing must be used.)

PIN#	FUNCTION:
1	5VDC
2	GND
3	RS485 A
4	RS485 B



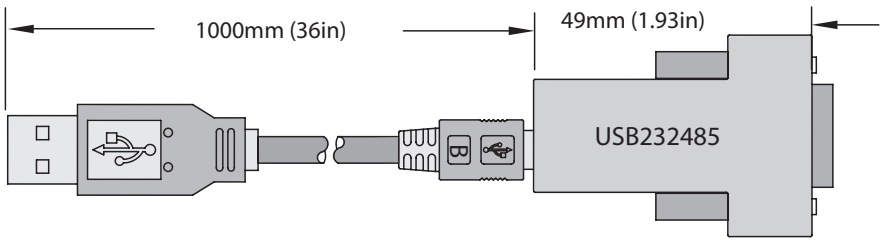
KITUSB232485

USB232485 is a non-isolated USB to RS-232 and RS-485 adapter. Available with Windows 98/2K/XP/Vista/Win 7&8 drivers.

This adapter plugs into standard USB port and provides either RS-232 or RS-485 communications. It is provided with ~1 meter standard USB cable.

NOTE: This is a single port device, it does not facilitate the use of both RS-232 AND RS-485 at the same time.

(Proper RS-485 biasing must be used.)



PIN#	FUNCTION:
1	RS485 A
2	RS232 Rx
3	RS232 Tx
4	+5Vdc
5	GND
9	RS485 B

SMDEVPACK-D

SMDEVPACK-D is the introductory development package for the Moog Animatics SmartMotor™. It is highly recommended for first time users and developers alike.

SMDEVPACK-D includes:

- UG-SM: Moog Animatics SmartMotor User's Guide
- CD-SMI: SMI (SmartMotor Interface) software CD
- CBLSM1-3M: Power-Communications Cable
- KITSMDC3: D-Sub Connector kit
- KITDC1: DC power supply connector kit

NOTE: Connector kits above include all parts below on this page with the exception of KITDC3.

Description	Qty.
Connector, Male, 15-Pin D-sub NOTE: for I/O Connector	1
Pin Contact Contact Size 20 Crimp Type, 24-20 AWG	20
Connector, 7W2 Combination 7-Pin DB-15 Shell Size 2	1
Socket Contact Solder Cup 14 AWG for 7W2 Combo Connector	2
Connector Hood For DB-15 Shell Size, EMI/Magnetic Shielded	1
Pin Contact, Female Contact Size 20 Crimp Type, 24-20 AWG	20
Connector, Female 9-Pin D-Sub	1
Connector Hood For DB-9 Shell Size EMI/Magnetic Shielded	2

Description	Qty.
Connector Shroud/Hood	1
4-Pin Connector NOTE: For enclosed Power Supplies & Shunts	1
Pin, Crimp Type, Male 16-18AWG	4

Description	Qty.
4-Pin Molex Communication Connector Kit NOTE: Includes 4 female crimp pins	1

WARNING: Pins 15 and 14 are intended for use with DE series motors for powering the controller only. Attempts to power a non-DE motor through those pins for use as the main servo drive power could result in immediate damage to the electronics and will void the warranty.

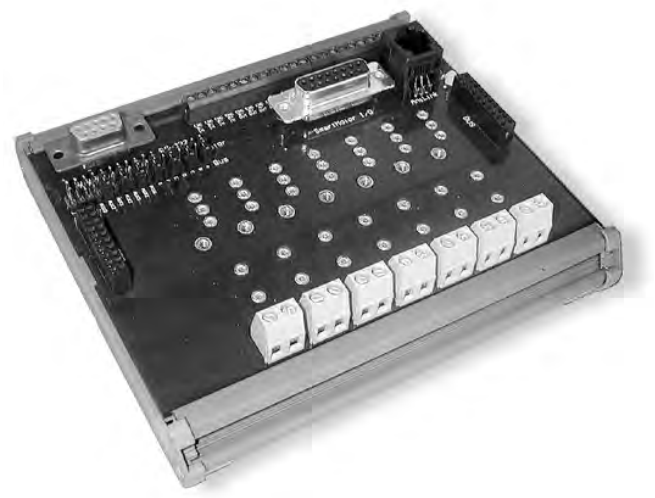
DINIO7

The **DINIO7** is a DIN rail mount adapter that allows the Moog Animatics SmartMotor™ to easily interface with popular Input/Output blocks like those produced by Gordos, Grayhill, OPTO-22™ and other manufacturers.

The DINIO7 has slots for seven industry standard OPTO Modules and can be used with either input or output modules.

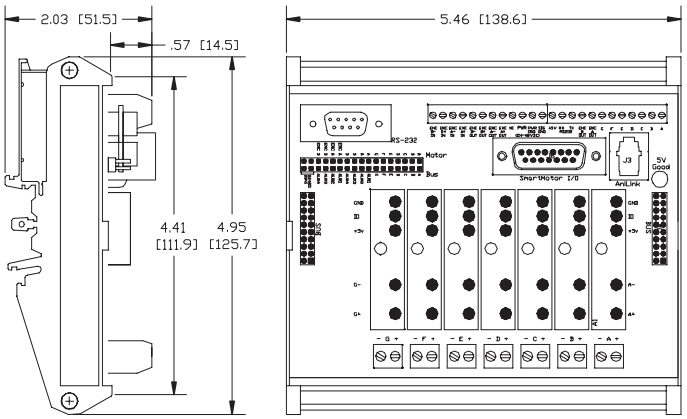
The DINIO7 has a 9-pin connector for direct connection to a personal computer serial RS-232 communications port and an AniLink™ network connector. It is also equipped with an expansion bus to allow it to interface with other Moog Animatics DIN rail mount adapters. Wiring Input/Output up to your Moog Animatics SmartMotor™ is made simple with the DINIO7 breakout board.

* Please consult with appropriate manufacturer for details



Cross Reference to Compatible Opto Modules

Mfg.*	DC Input	DC Output	AC Input	AC Output
Opto-22	G4-IDC5	G4-ODC5	G4-IAC5	G4-OAC5A
Grayhill	70G-IDC5	70G-ODC5A	70G-IAC5A	70G-OAC5A
Crydom	X4IDC5	X4ODC5	X4IAC5	X4OAC5
Gordos/ Crouzet	C4-IDC5	C4-ODC5	C4-IAC5	C4-OAC5
	(3-32VDC high side)		(120VAC high side)	



** All sizes are given in inches, sizes in brackets are in mm*

Features	Benefits
DB-15 or screw terminal access to your SmartMotor	Easy connection for panel environment
AniLink port for expansion to other AniLink devices	Cascadable
7 main I/O buses to cross connect I/O to other motors	Flexible use
Aux buses to interconnect encoders between motors	Simplifies encoder connections
Jump-in RS-485 terminal resistors	No added parts necessary for RS-485 termination
Onboard DB-9 for fast RS-232 access	May be used with standard RS-232 extension cables

WARNING: Pins 15 and 14 are intended for use with DE series motors for powering the controller only. Attempts to power a non-DE motor through those pins for use as the main servo drive power could result in immediate damage to the electronics and will void the warranty.

This product is no longer available.
Please see the latest product catalog at:
www.animatics.com/support/moog-animatics-catalog.html

Moog Animatics OPTO2 — 16 Channel Opto-isolator Board

Optically isolates and converts signals between:

5VTTL logic and 24VDC Control Logic Systems

- 8 Input Channels
- 8 Output Channels
- Red Fail-Safe LED Indications
- Plug-in connectors
- DIN Rail Mount
- Only 0.84 Inches of rail space
- Shunt Diode protection for Inductive loads

5VDC Logic Side:

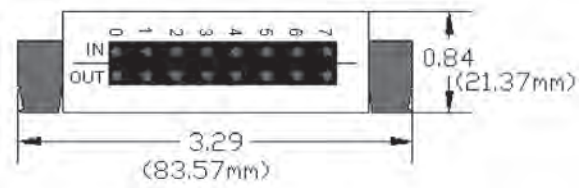
- Darlington Output Sinking
- 6.8VDC max input
- 120mAmp Max. 5VDC Load

24VDC Control Side:

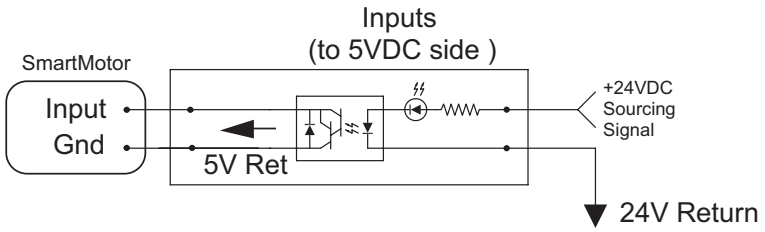
- Darlington Output Sourcing
- 12 to 32VDC Working Range
- 120mAmp Max. Load @24VDC

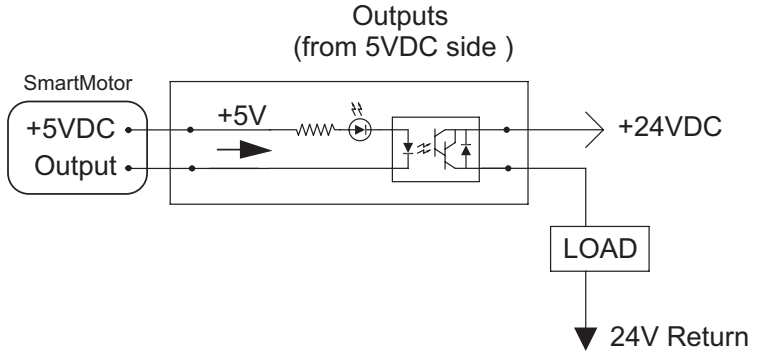
Timing:

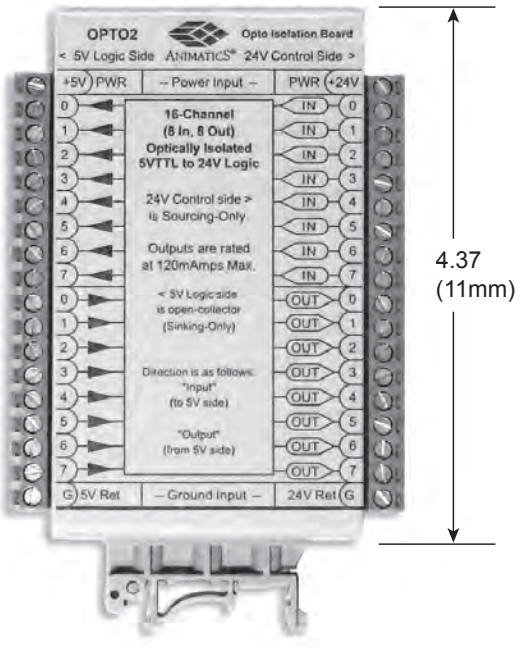
- 100 µSecond On/Off max.
- Max. continuous throughput:
  250KHz @50% duty cycle square wave.



Sample Schematic of Inputs and Outputs:







SmartBox™: This handheld diagnostics and testing interface is designed as an aid in test and development of Moog Animatics SmartMotor™ applications. The SmartBox™ is small and compact in size but it offers big returns in convenience and time savings. Its portability and simple operation make it ideal for use at remote locations to run SmartMotor™ functions and for onsite testing.

The SmartBox hardware consists of:

- Two-Color LED connected to Port C output can be programmed for three states: OFF, ON (Green), or ON (Red)
- Three position toggle switch (Go)-Off-(Sel.) spring return to center
- Analog input potentiometer connected to Port D
- External encoder input with1000 line encoder
- Four red LEDs, in two sets wired reverse parallel to Ports E and F to allow for any or all to be turned on or off.
- Cable with 15-pin D-sub I/O connector
- Power input jack on side (2.1x5mm)

Sample SmartMotor™ program available:

Select from a variety of pre-programmed modes using the Selector switch with LED indication of mode corresponding to the label on the side of the unit. This program allows simulation of the following:

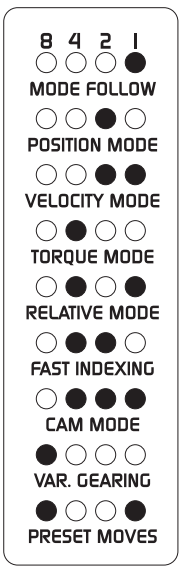
- Mode Follow at 1:1 counts following encoder knob
- Position Mode (Adjustable absolute commanded position)
- Velocity Mode (Continuously variable, bidirectional)
- Torque Mode (Continuously variable, bidirectional)
- Relative Mode (Adjustable distance)
- Fast Indexing (Self triggered with adjustable distance and dwell)
- Cam Mode
- Variable Gearing (Continuously adjustable gear ratio)
- Preset Moves (Pre-programmed multi-move profiles)

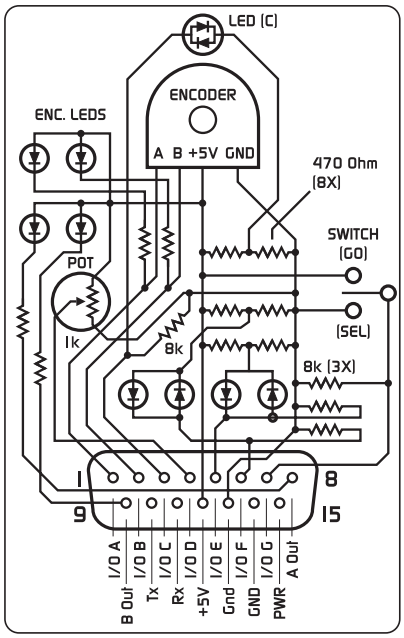
The SmartBox can test and demonstrate the following hardware connections including:

- Analog input
- Digital I/O
- Step and direction input
- Encoder I/O

NOTE: Demonstration programs available for download at www.animatics.com.

Side and Back Cover Labels:





Mode Indicator Legend and schematic are printed on the SmartBox for easy reference

SmartBoxBCD™: Designed for use with SmartSelect™ Software, the Handheld Diagnostics and Testing Interface is similar to standard Moog Animatics SmartBox, but is geared towards PLC I/O handshake simulation. It is intended for use as a means to simulate five inputs from a PLC and two outputs back to the PLC to aid in development of applications where only On/Off I/O triggering is used to control the SmartMotor™.

The SmartBoxBCD Hardware consists of:

- Two bi-color LEDs; one each connected to Ports E and F. Each can be set one of three states: OFF, ON (Green), or ON (Red)
- Five three-position toggle switches (on)-off-(Momentary-On.) where center position is off. Connected to Ports A, B, C, D, and G
- Cable with 15-pin D-sub I/O connector
- Power input jack on side (2.1x5mm)

When Used with SmartSelect™ Software:

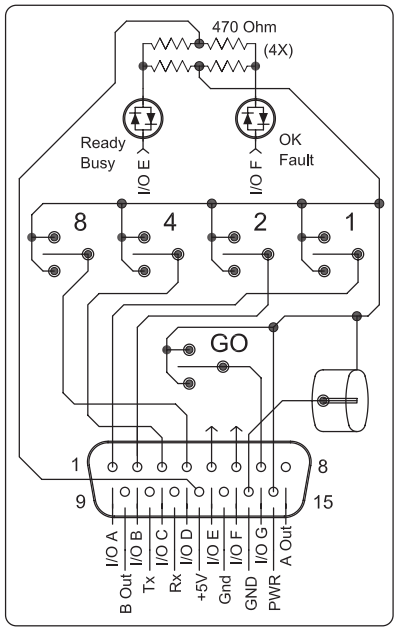
The SmartBoxBCD interface simulates:

4-bit binary Input from a PLC	on ports A, B, C, and D
"Go" input from a PLC	on Port G
Busy Output to PLC	on Port E
Fault Output to PLC	on Port F

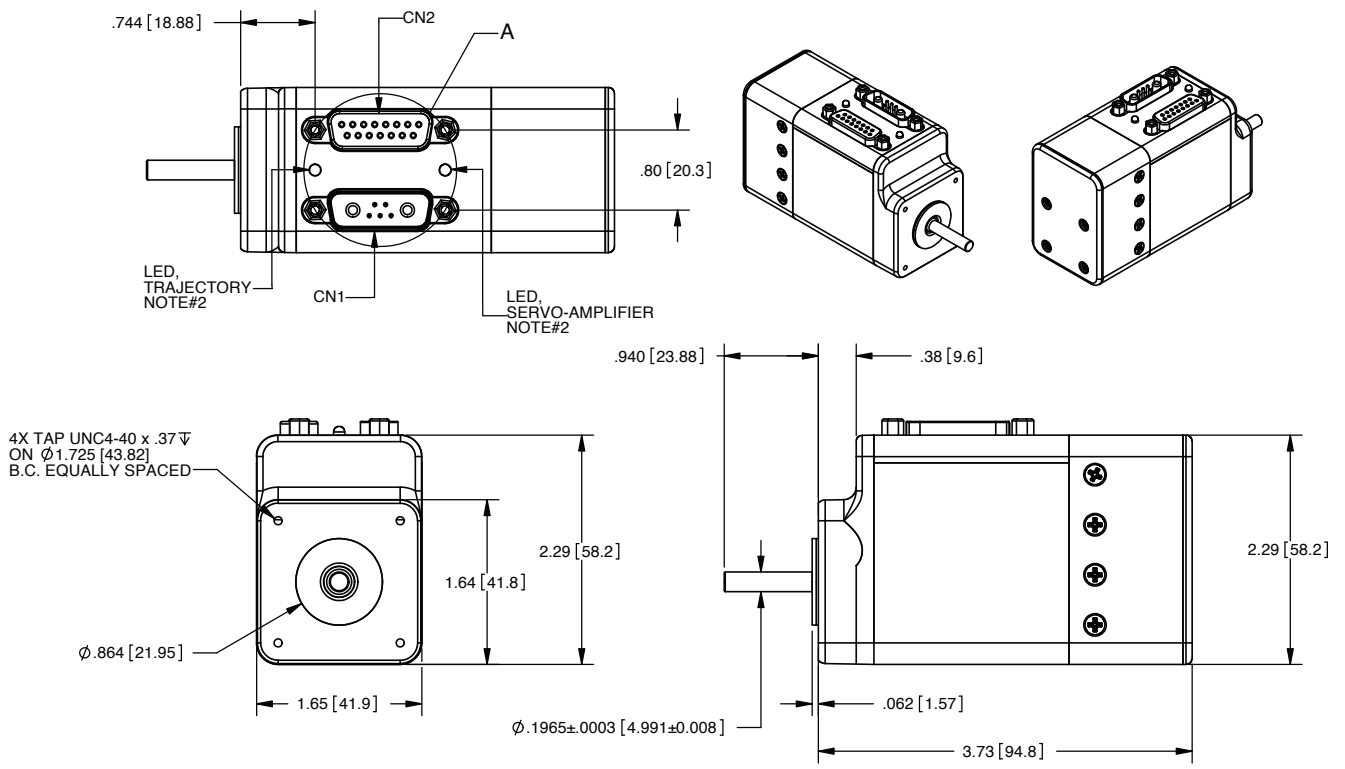
When the Motor receives a "Go" signal, the program responds to 1 of 16 preset move profiles as determined by the 4-bit binary input state of Ports A, B, C, and D. While moving, the "Busy" LED is red, once done, it switches to green. If a fault occurs, the fault LED switches from green to red.

The SmartBoxBCD allows complete set-up and test of a SmartMotor™ in conjunction with the point-And-click SmartSelect™ programming tool. In doing so, the entire servo control of a system can be set up and tested prior to PLC programming or I/O connections. As a result, machine development time is reduced to a minimum.

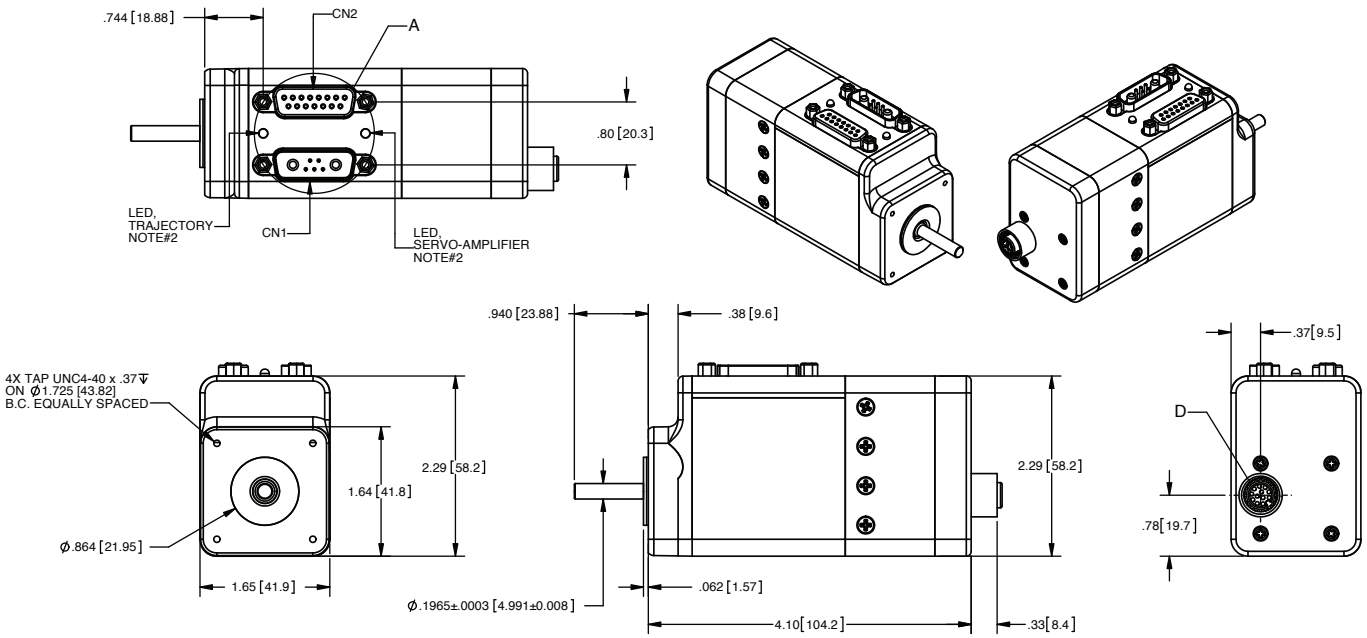
Back Cover Label Shows internal Schematic:



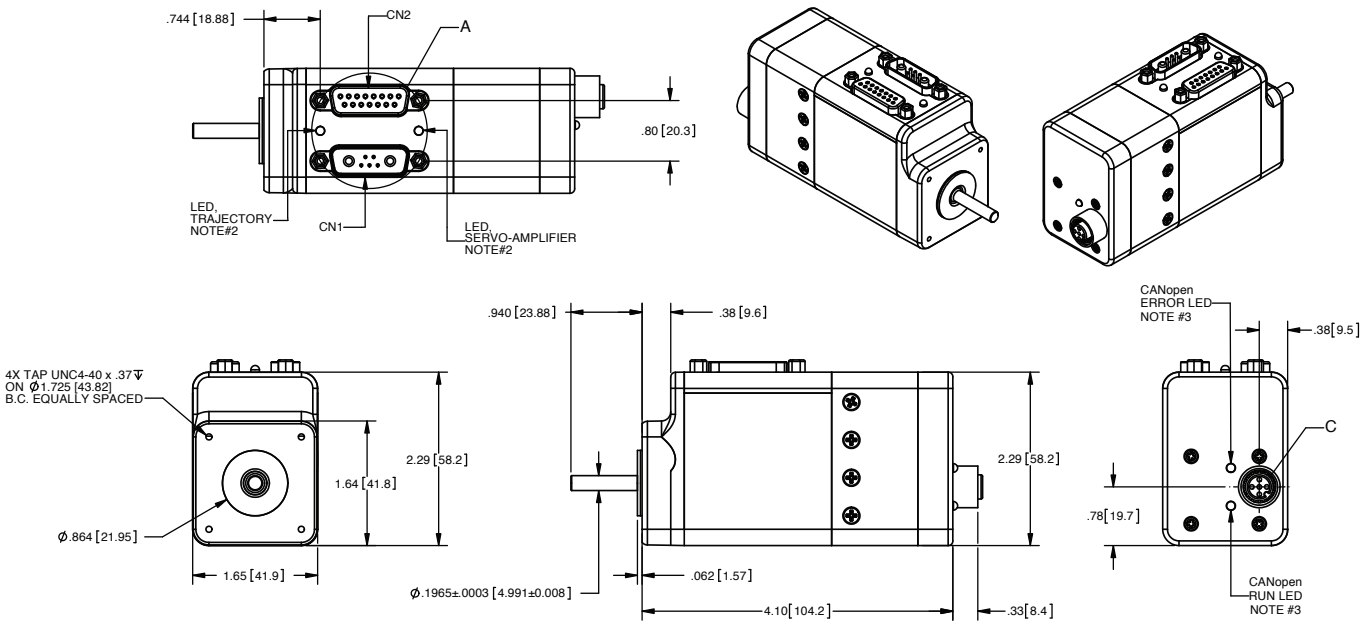
Moog Animatics SmartMotor™ SM17205D



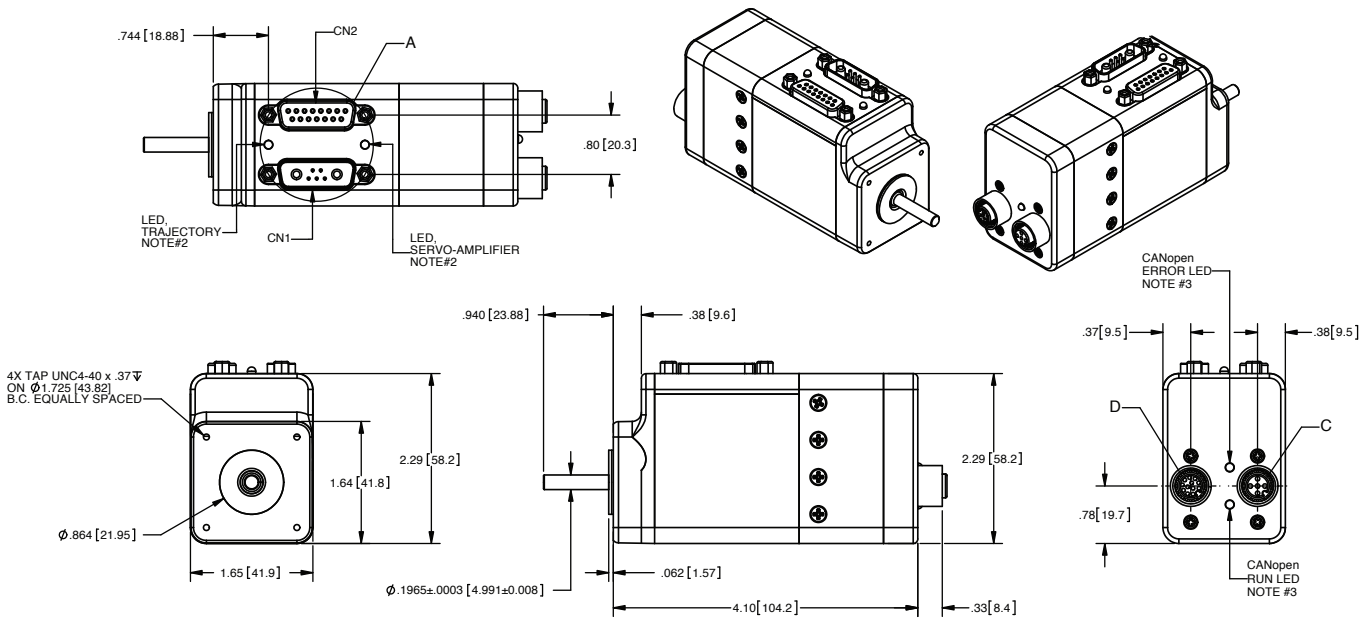
Moog Animatics SmartMotor™ SM17205D-AD1



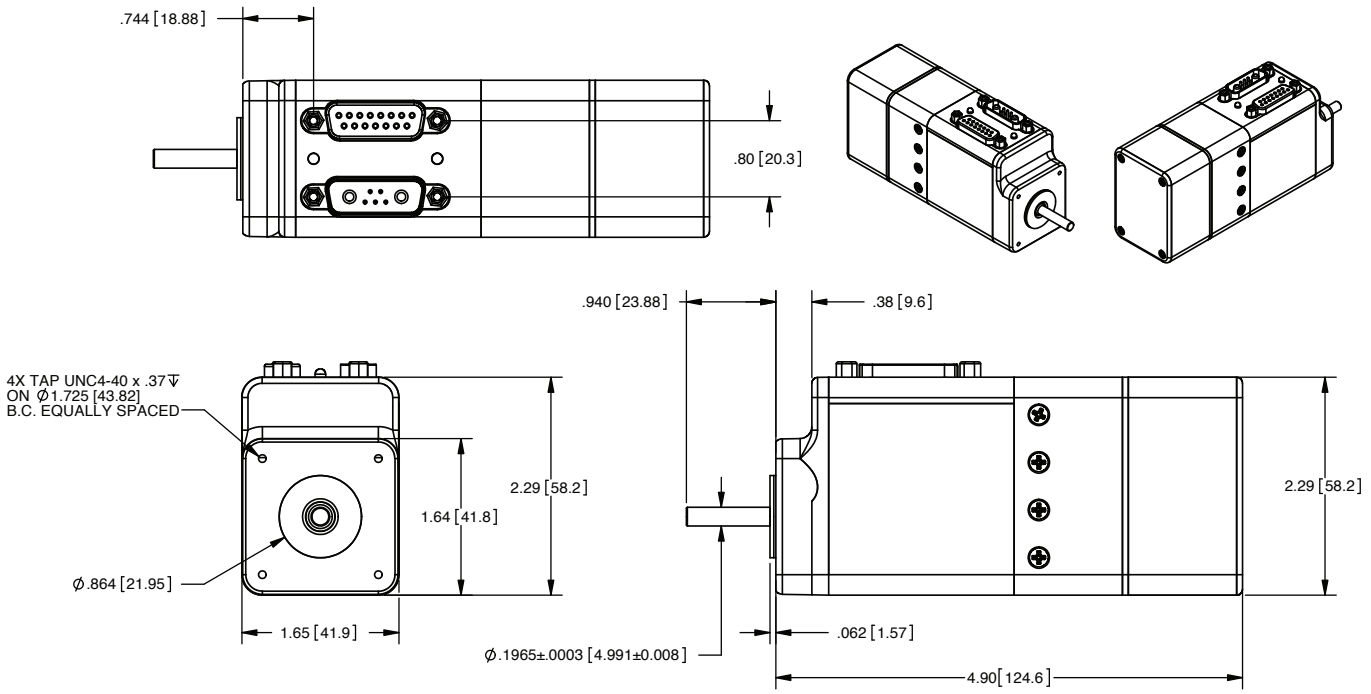
Moog Animatics SmartMotor™ SM17205D-C



Moog Animatics SmartMotor™ SM17205D-C-AD1

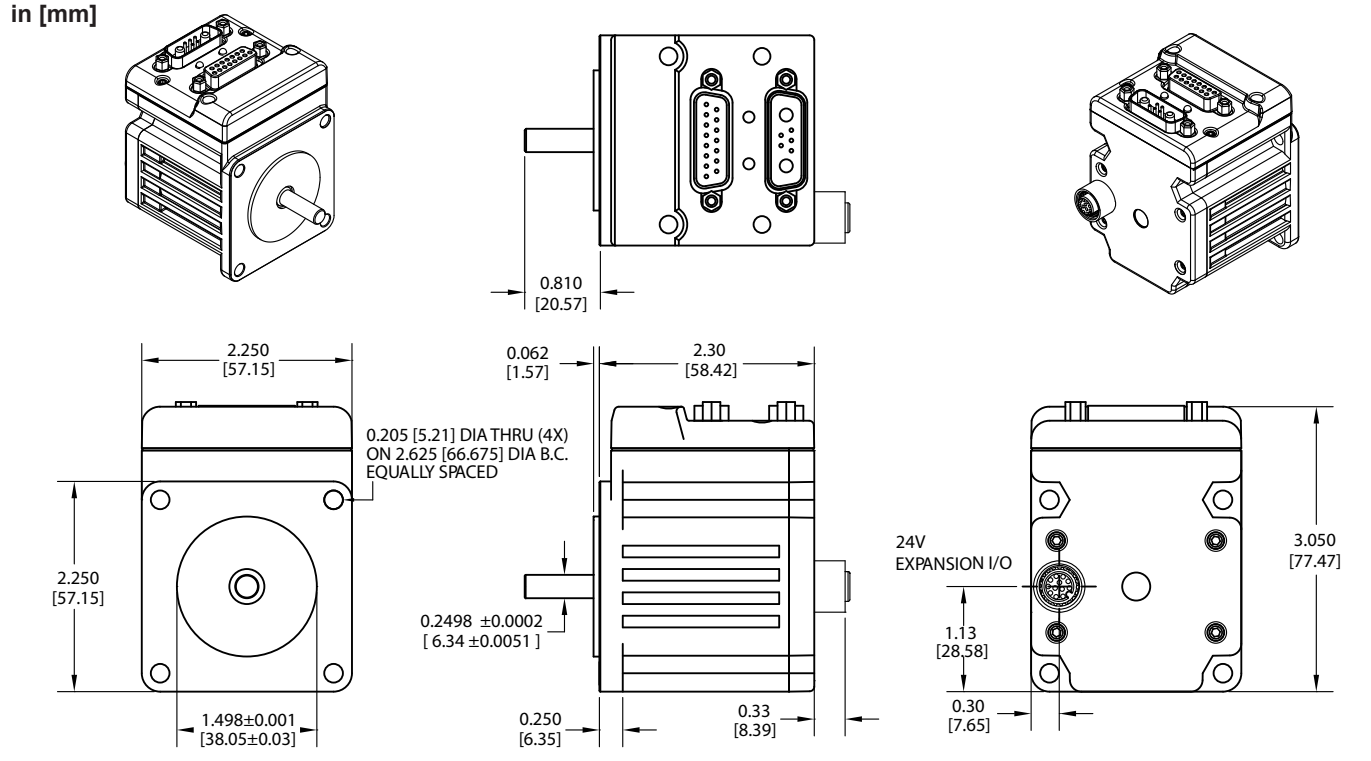


Moog Animatics SmartMotor™ SM17205D-BRK



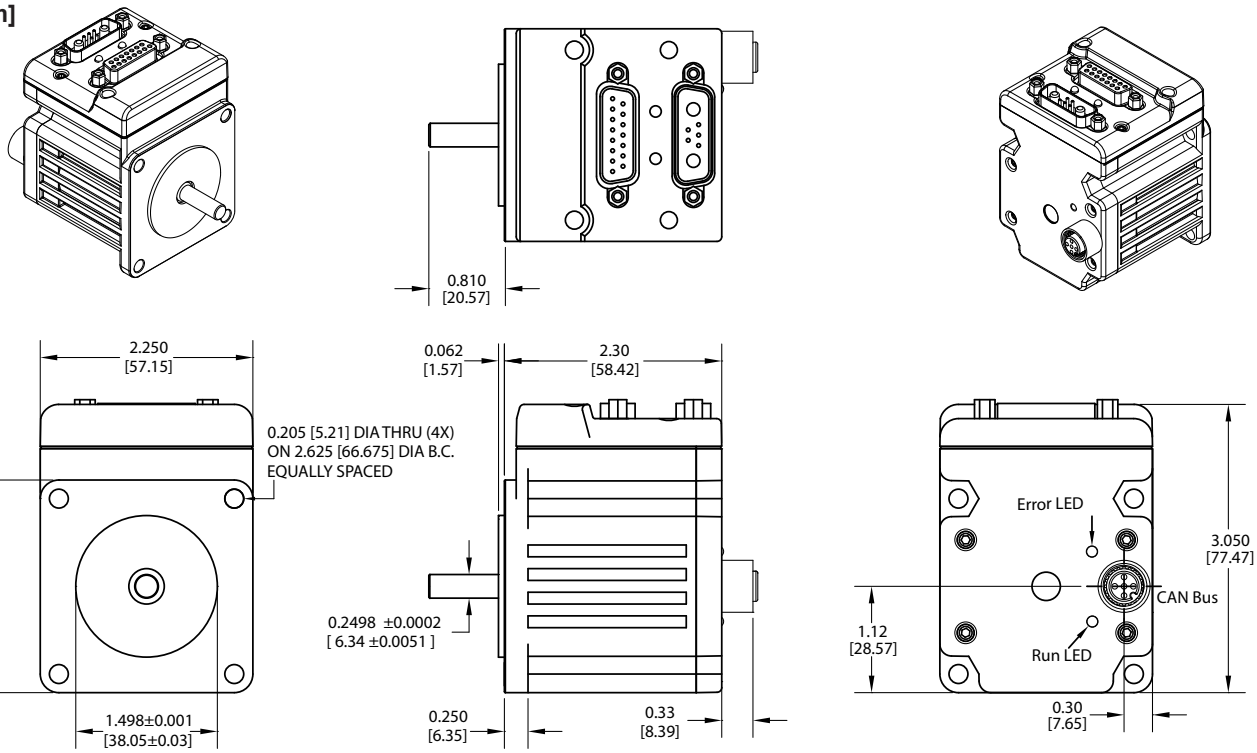
Moog Animatics SmartMotor™ SM23165D/DT-AD1

in [mm]



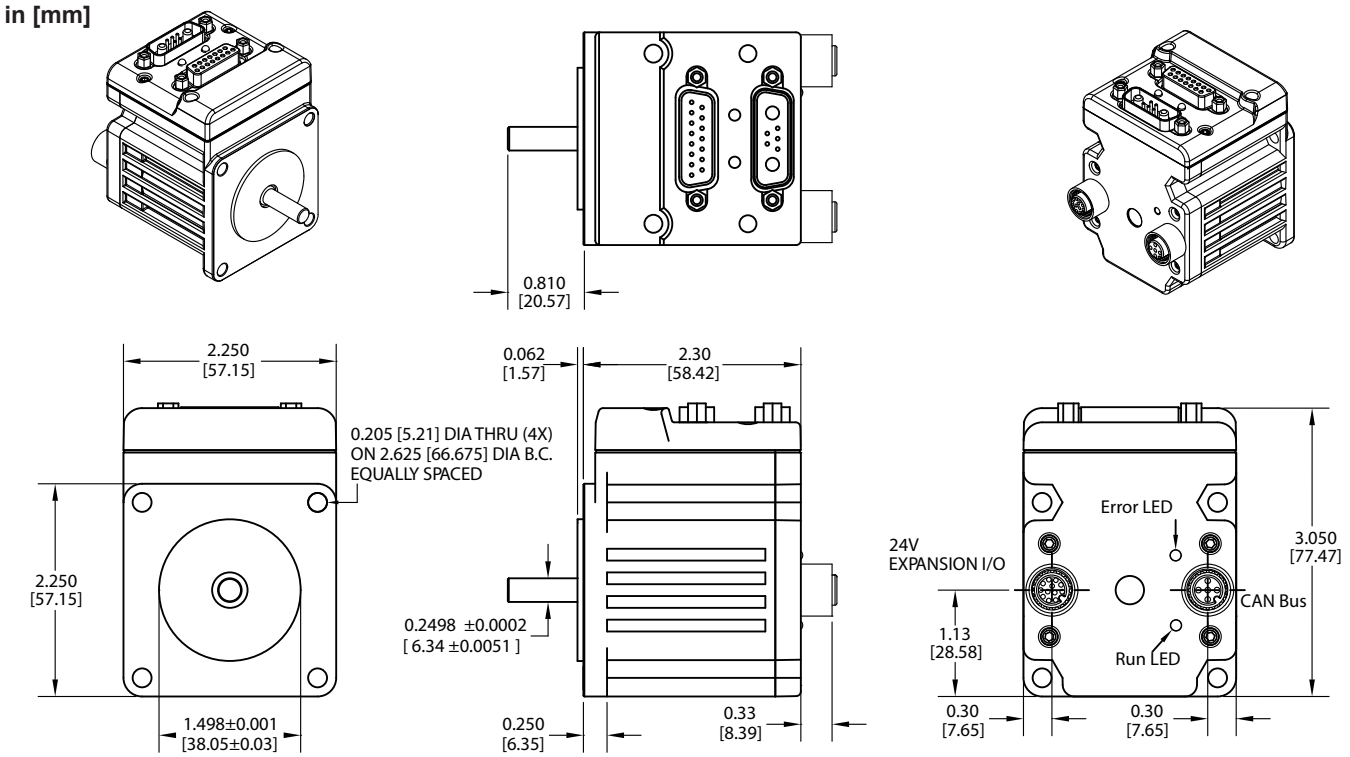
Moog Animatics SmartMotor™ SM23165D/DT-C

in [mm]



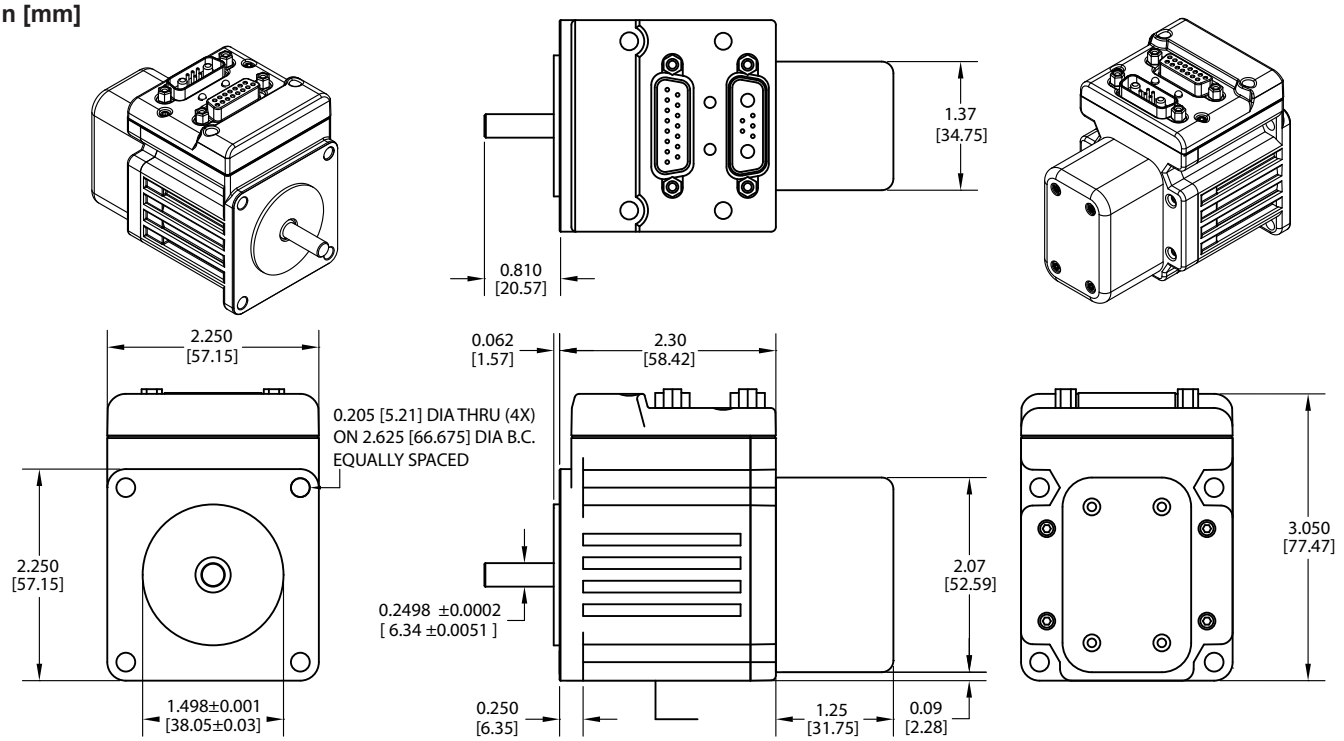
Moog Animatics SmartMotor™ SM23165D/DT-C-AD1

in [mm]



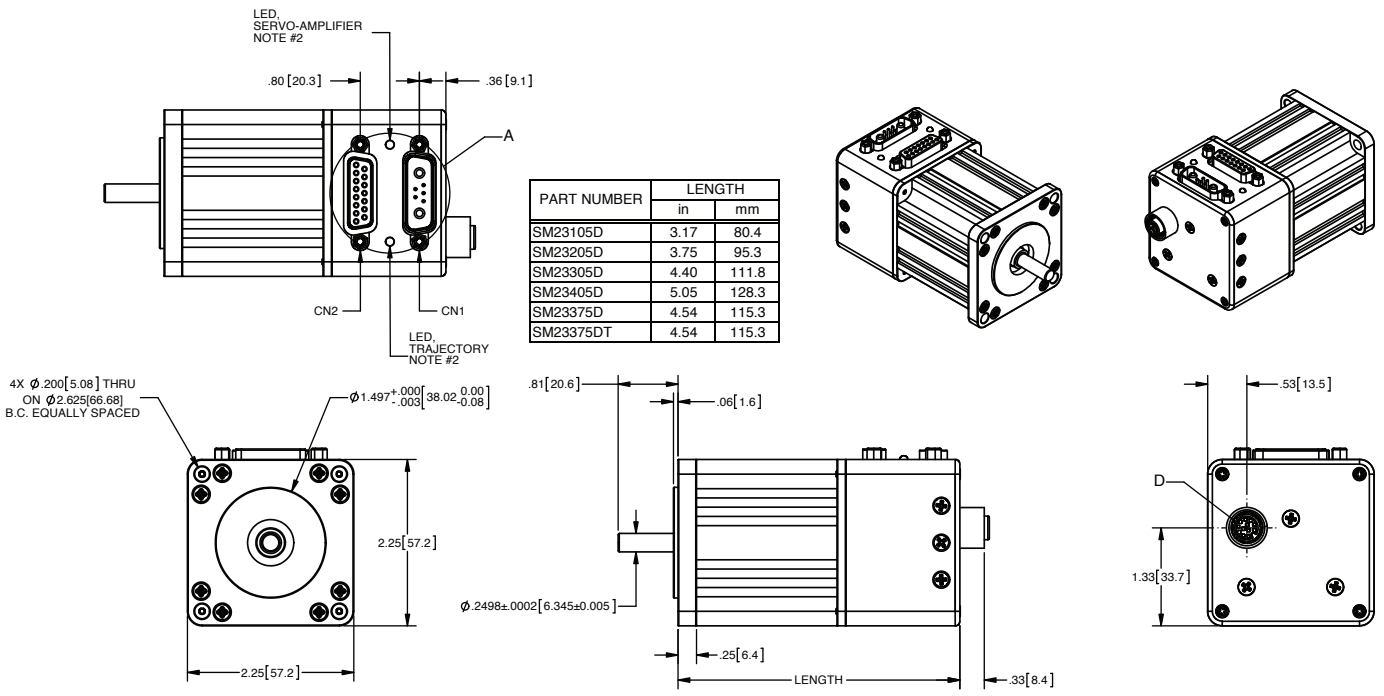
Moog Animatics SmartMotor™ SM23165D/DT-BRK & CDS Option

in [mm]



Moog Animatics SmartMotor™ SM23x05D-AD1

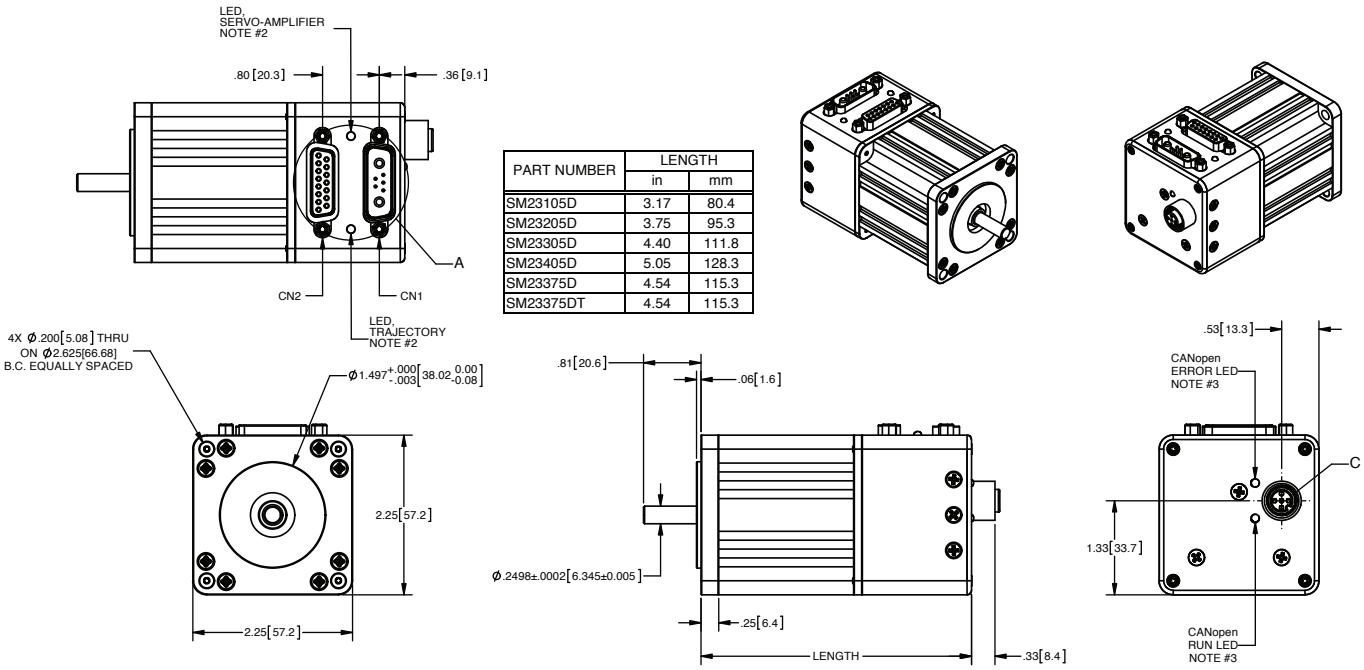
in [mm]



PART NUMBER	LENGTH	
	in	mm
SM23105D	3.17	80.4
SM23205D	3.75	95.3
SM23305D	4.40	111.8
SM23405D	5.05	128.3
SM23375D	4.54	115.3
SM23375DT	4.54	115.3

Moog Animatics SmartMotor™ SM23x05D-C

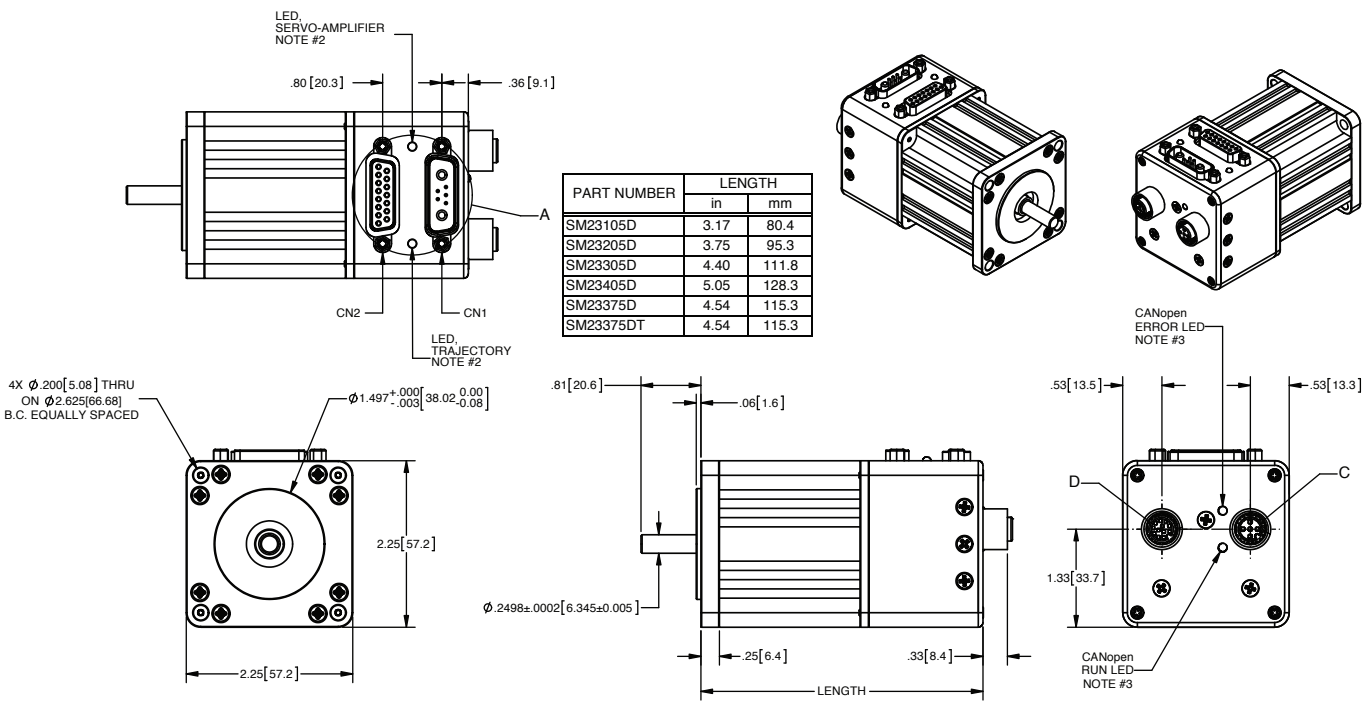
in [mm]



PART NUMBER	LENGTH	
	in	mm
SM23105D	3.17	80.4
SM23205D	3.75	95.3
SM23305D	4.40	111.8
SM23405D	5.05	128.3
SM23375D	4.54	115.3
SM23375DT	4.54	115.3

Moog Animatics SmartMotor™ SM23x05D-C-AD1

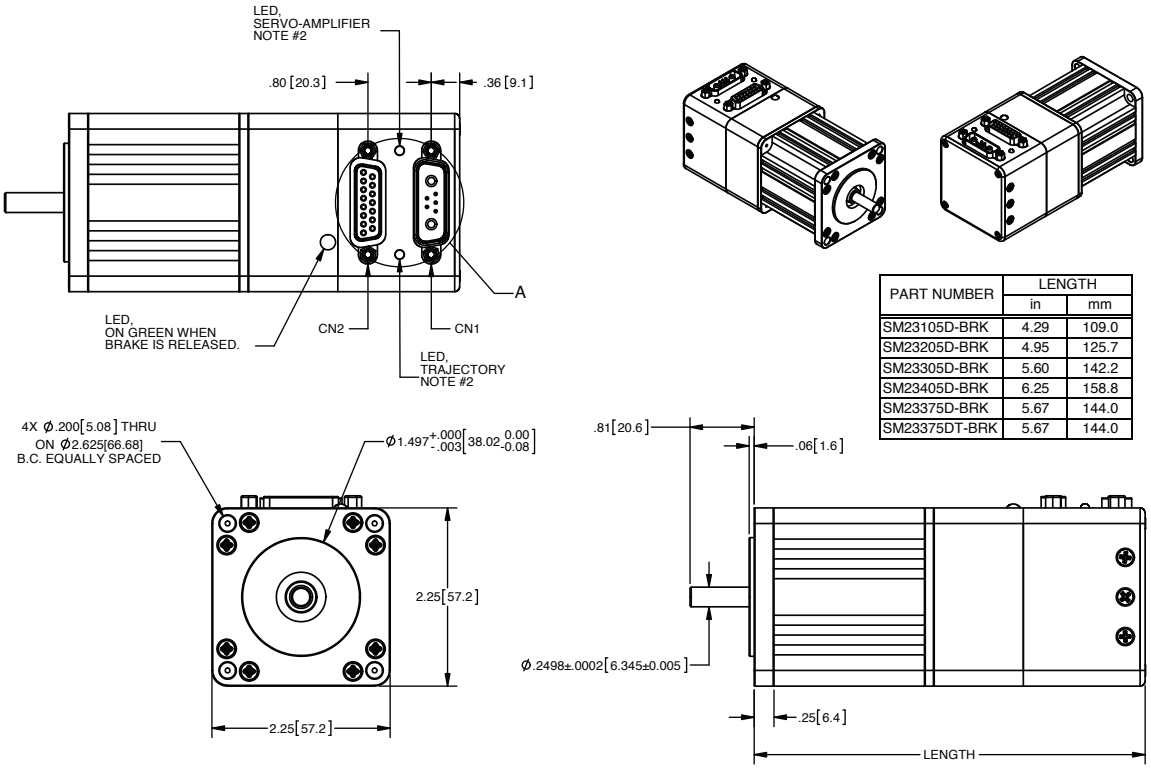
in [mm]



PART NUMBER	LENGTH	
	in	mm
SM23105D	3.17	80.4
SM23205D	3.75	95.3
SM23305D	4.40	111.8
SM23405D	5.05	128.3
SM23375D	4.54	115.3
SM23375DT	4.54	115.3

Moog Animatics SmartMotor™ SM23x05D-BRK

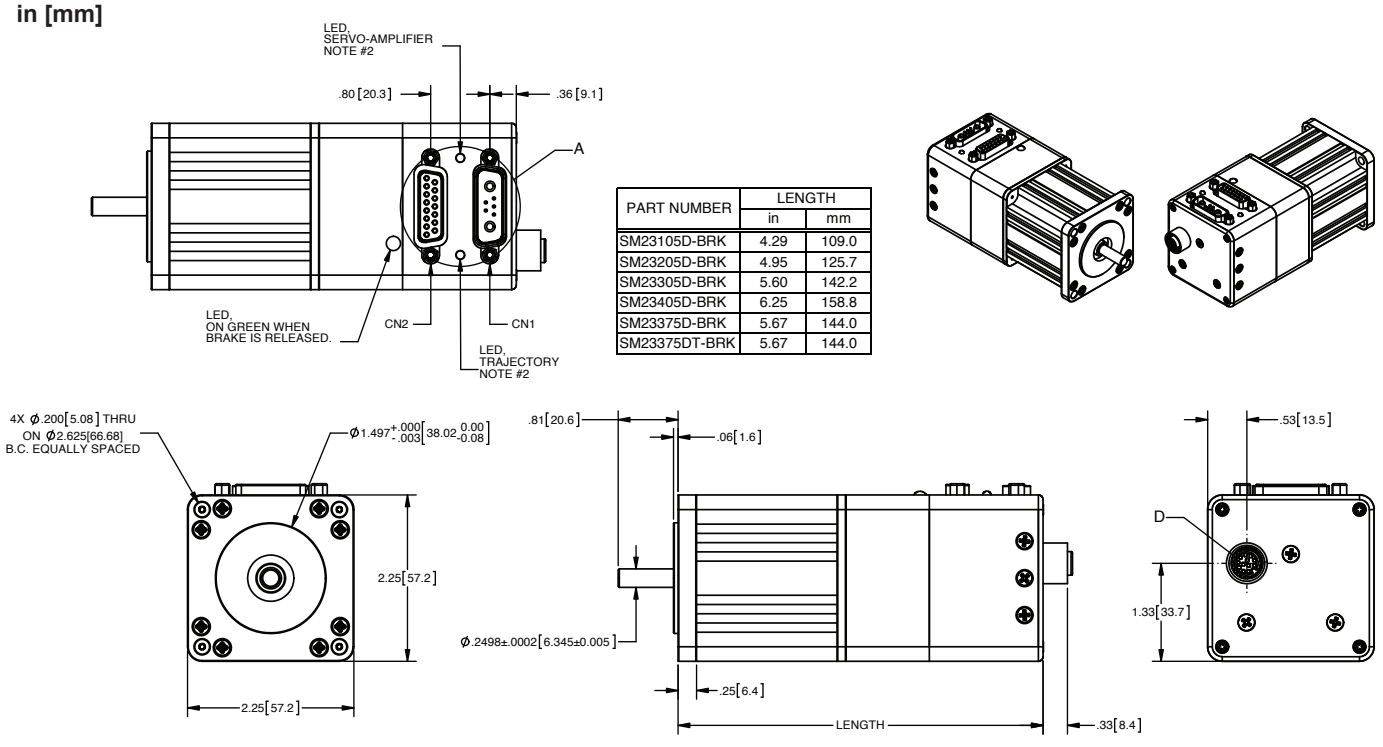
in [mm]



PART NUMBER	LENGTH	
	in	mm
SM23105D-BRK	4.29	109.0
SM23205D-BRK	4.95	125.7
SM23305D-BRK	5.60	142.2
SM23405D-BRK	6.25	158.8
SM23375D-BRK	5.67	144.0
SM23375DT-BRK	5.67	144.0

Moog Animatics SmartMotor™ SM23x05D-BRK-AD1

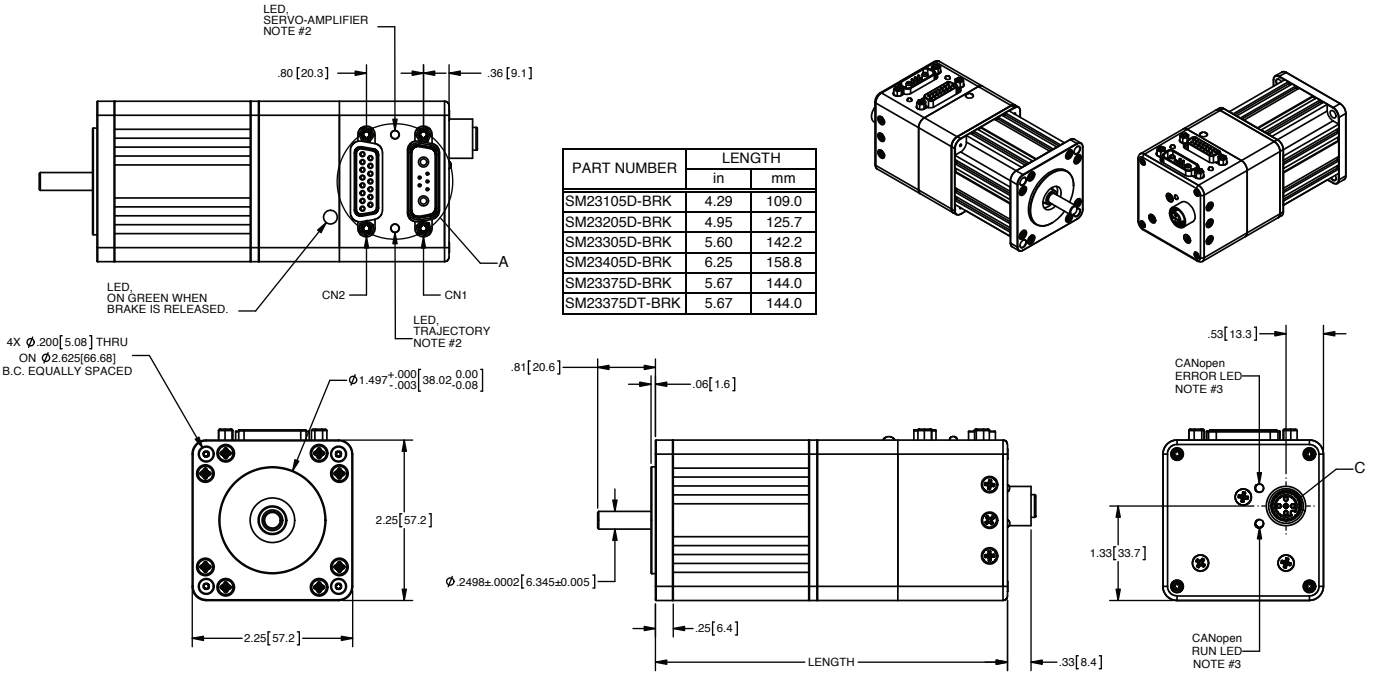
in [mm]



PART NUMBER	LENGTH	
	in	mm
SM23105D-BRK	4.29	109.0
SM23205D-BRK	4.95	125.7
SM23305D-BRK	5.60	142.2
SM23405D-BRK	6.25	158.8
SM23375D-BRK	5.67	144.0
SM23375DT-BRK	5.67	144.0

Moog Animatics SmartMotor™ SM23x05D-BRK-C

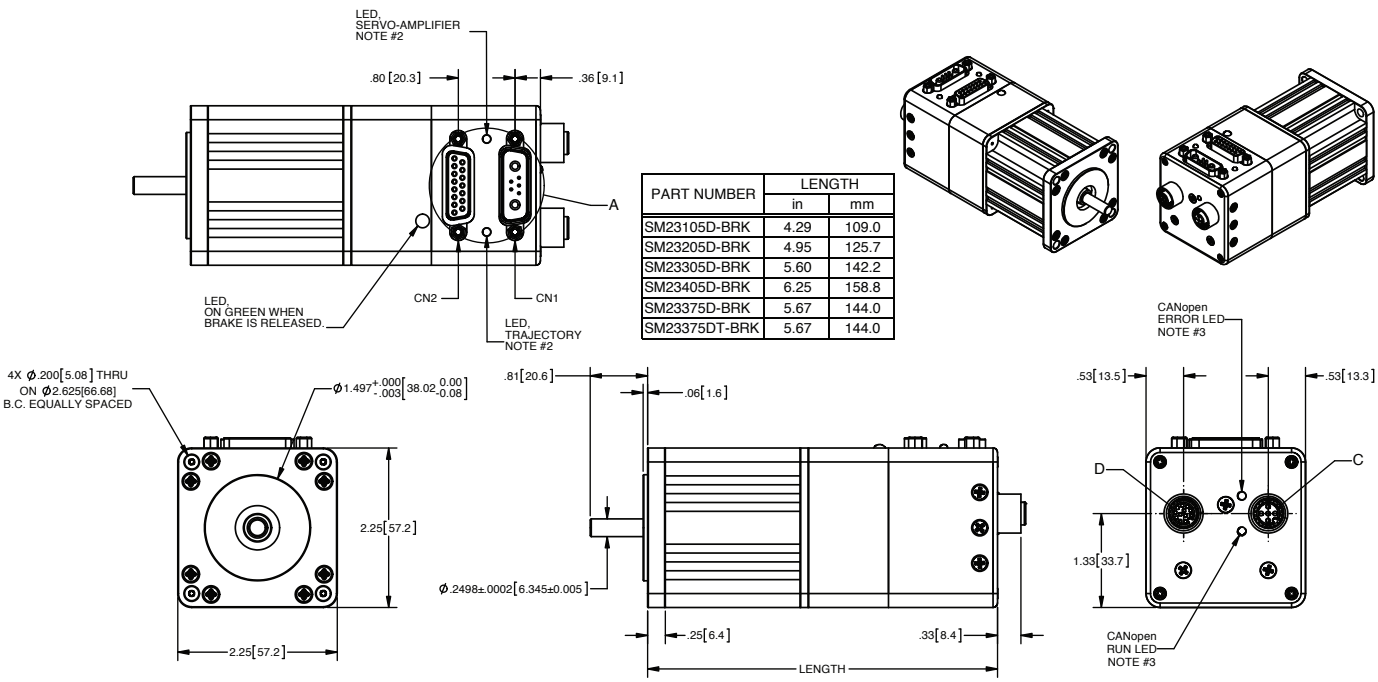
in [mm]



PART NUMBER	LENGTH	
	in	mm
SM23105D-BRK	4.29	109.0
SM23205D-BRK	4.95	125.7
SM23305D-BRK	5.60	142.2
SM23405D-BRK	6.25	158.8
SM23375D-BRK	5.67	144.0
SM23375DT-BRK	5.67	144.0

Moog Animatics SmartMotor™ SM23x05D-BRK-C-AD1

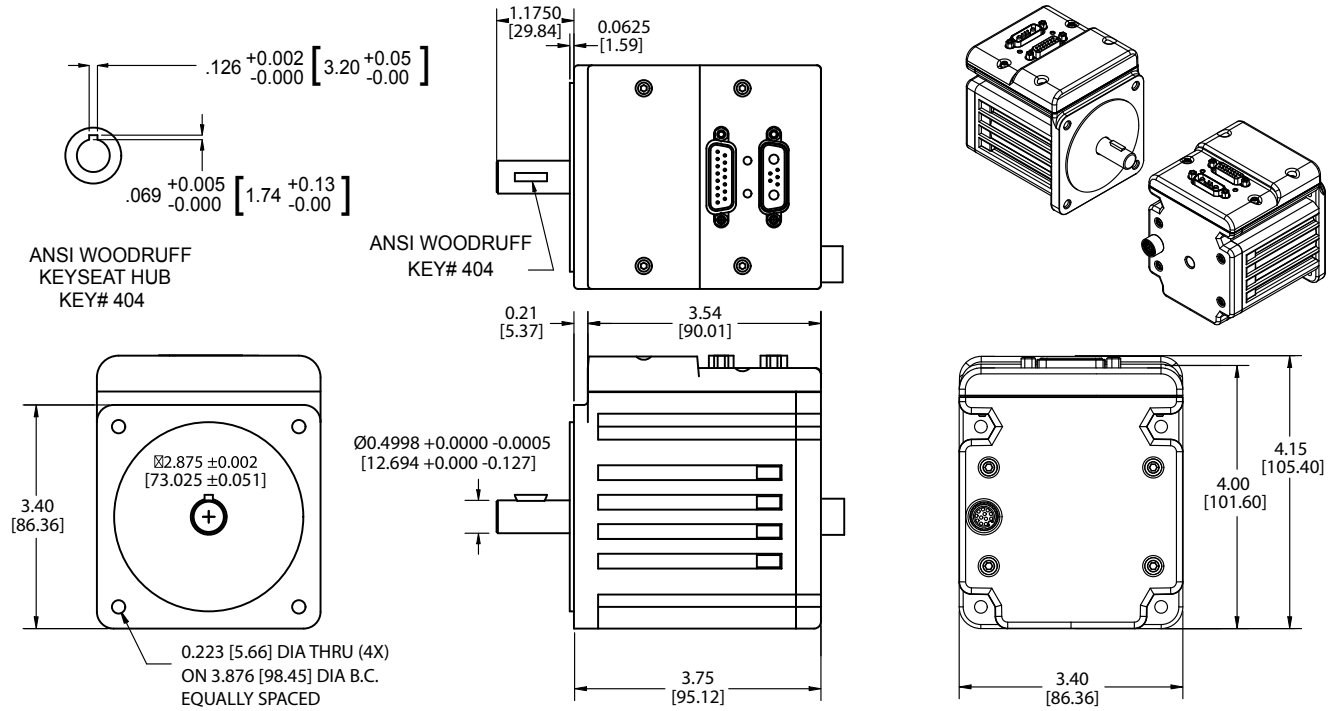
in [mm]



PART NUMBER	LENGTH	
	in	mm
SM23105D-BRK	4.29	109.0
SM23205D-BRK	4.95	125.7
SM23305D-BRK	5.60	142.2
SM23405D-BRK	6.25	158.8
SM23375D-BRK	5.67	144.0
SM23375DT-BRK	5.67	144.0

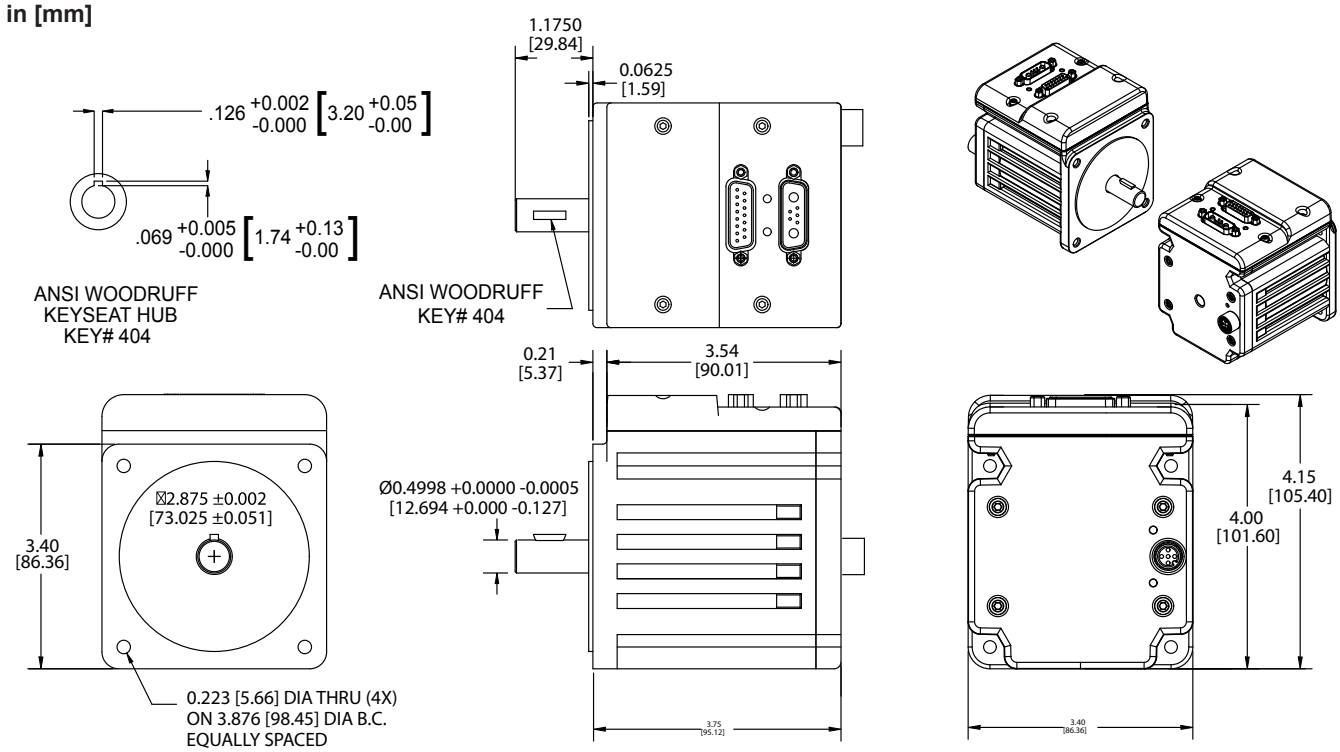
Moog Animatics SmartMotor™ SM34165DT-AD1

in [mm]



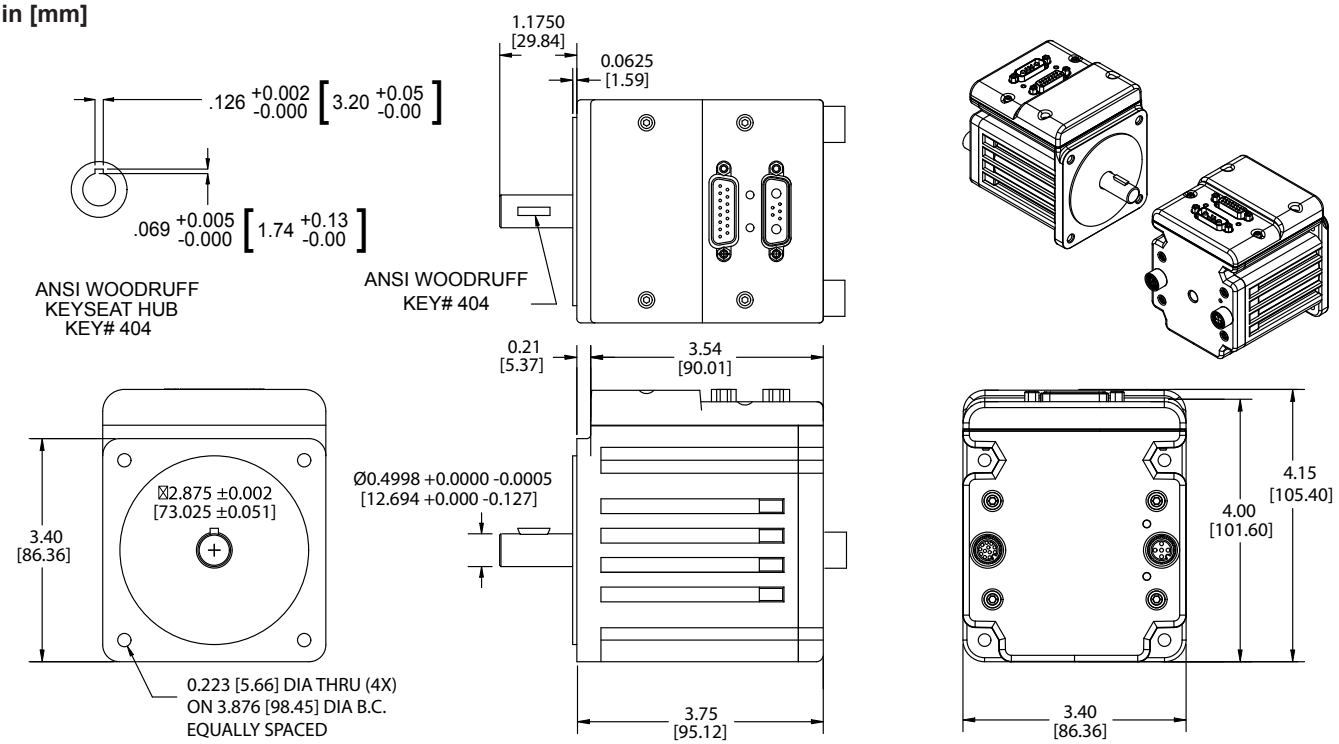
Moog Animatics SmartMotor™ SM34165DT-C

in [mm]



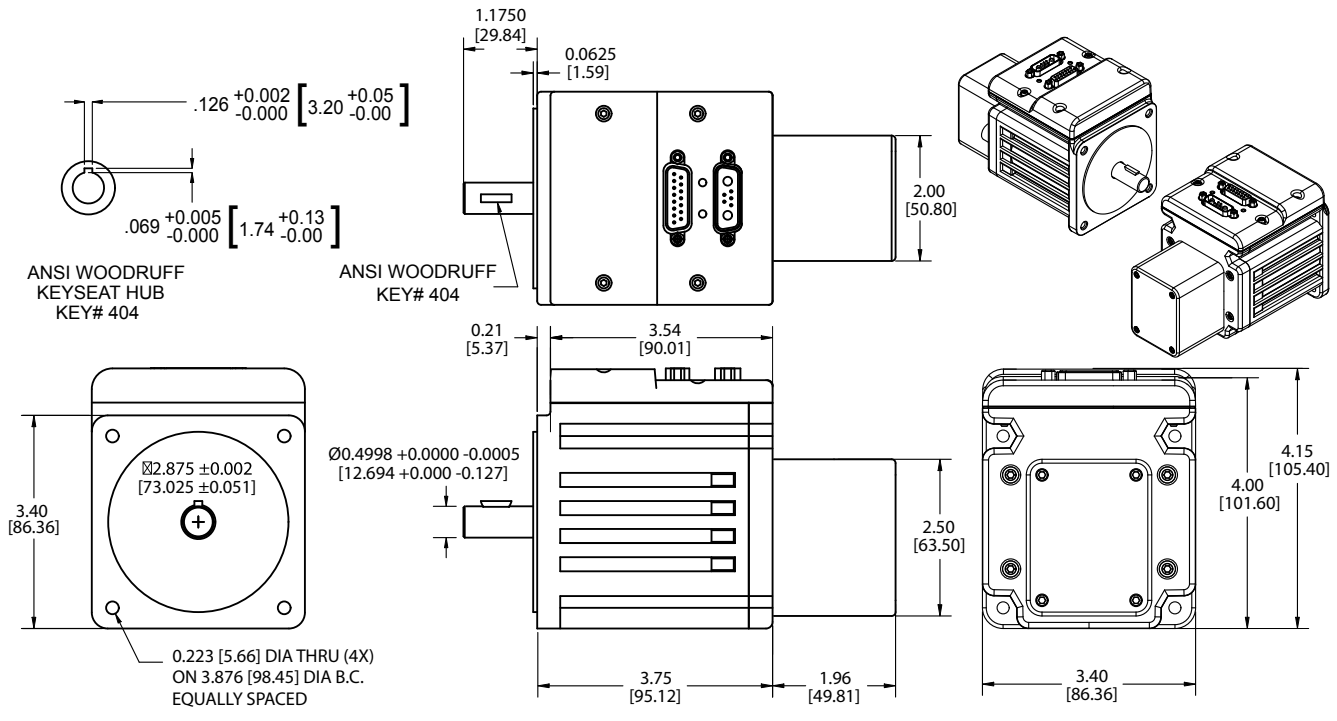
Moog Animatics SmartMotor™ SM34165DT-C-AD1

in [mm]



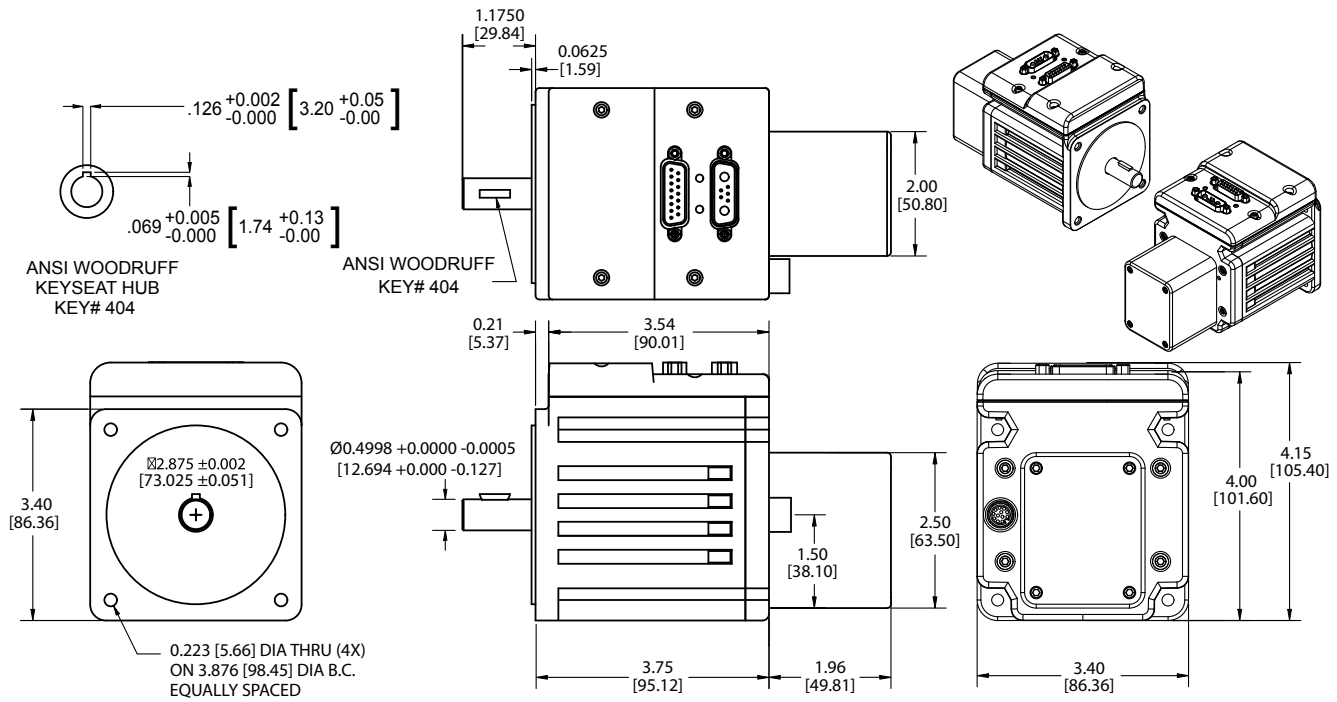
Moog Animatics SmartMotor™ SM34165DT-BRK

in [mm]



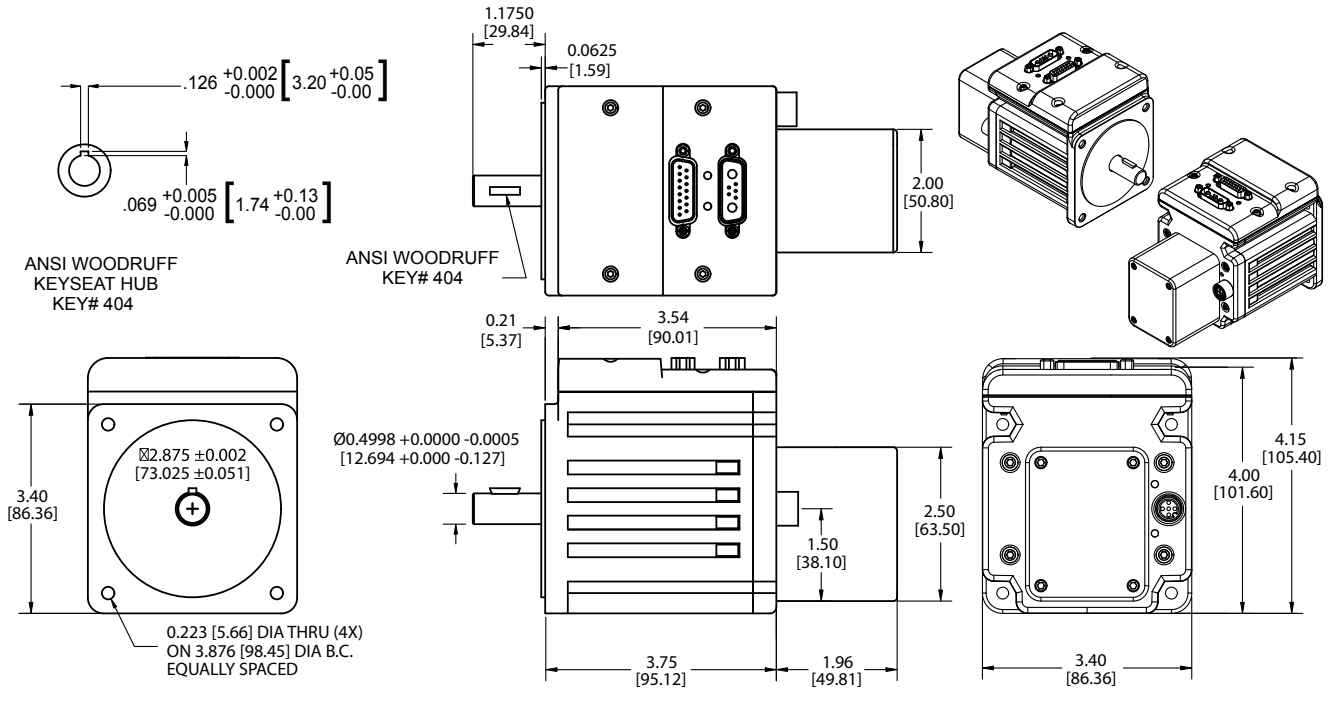
Moog Animatics SmartMotor™ SM34165DT-BRK-AD1

in [mm]



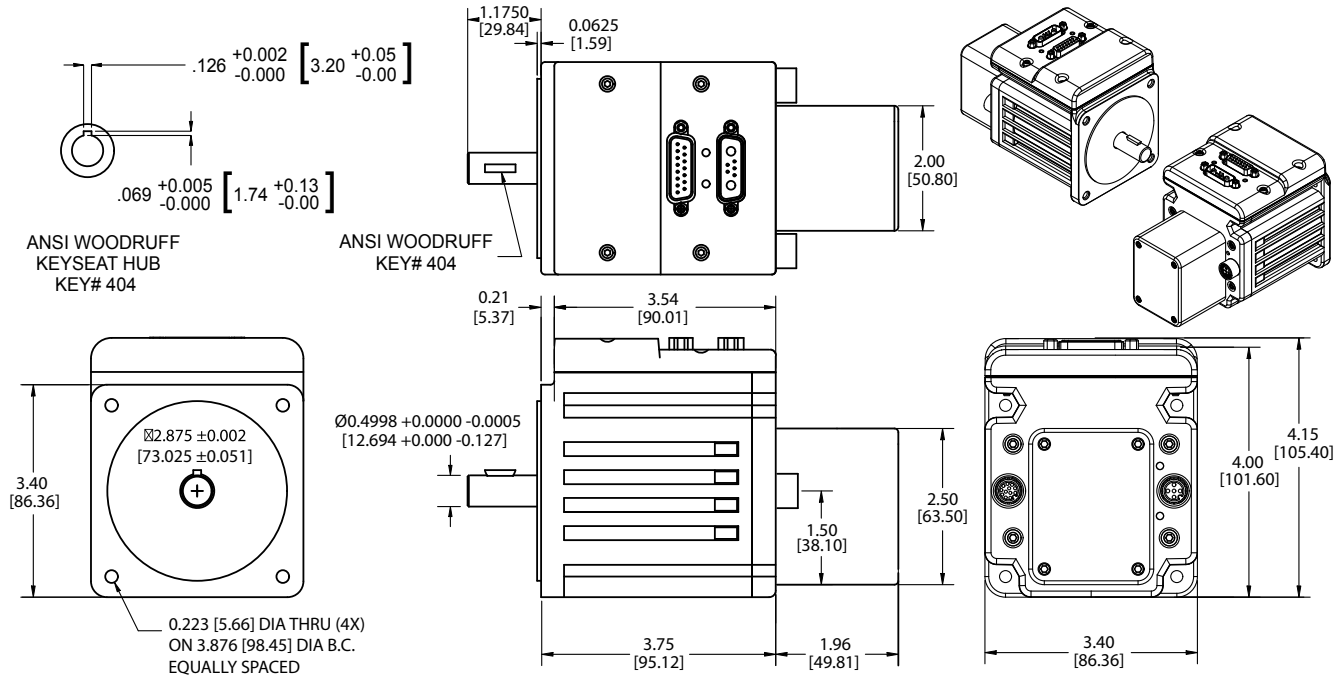
Moog Animatics SmartMotor™ SM34165DT-BRK-C

in [mm]



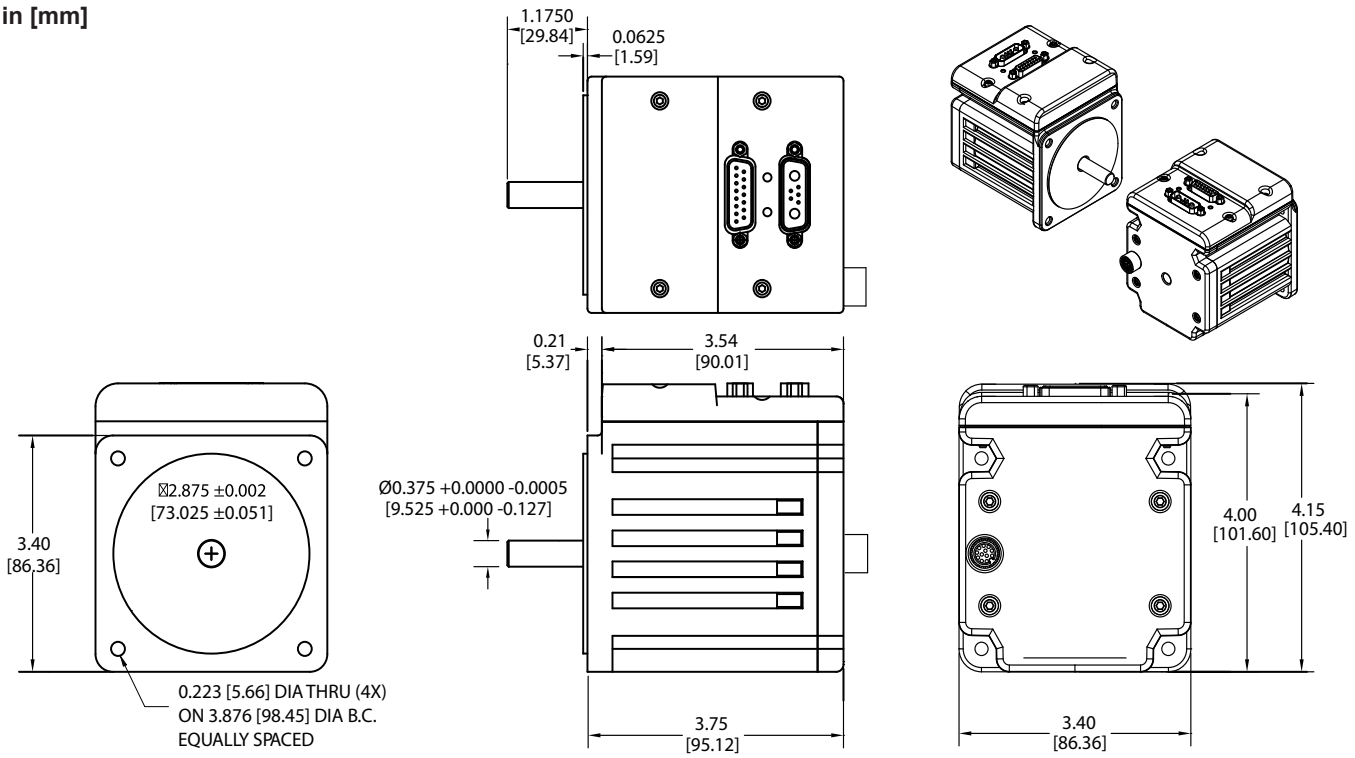
Moog Animatics SmartMotor™ SM34165DT-BRK-C-AD1

in [mm]



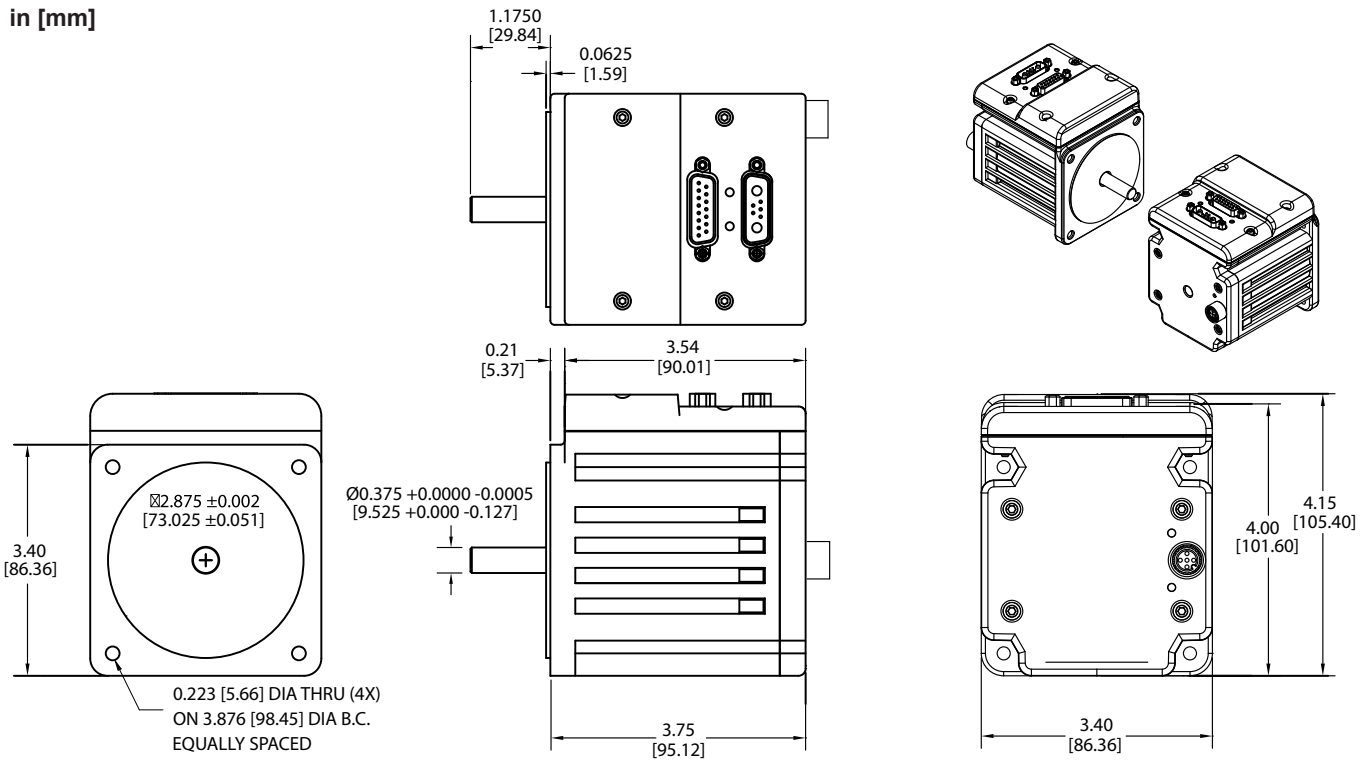
Moog Animatics SmartMotor™ SM34165D-AD1

in [mm]



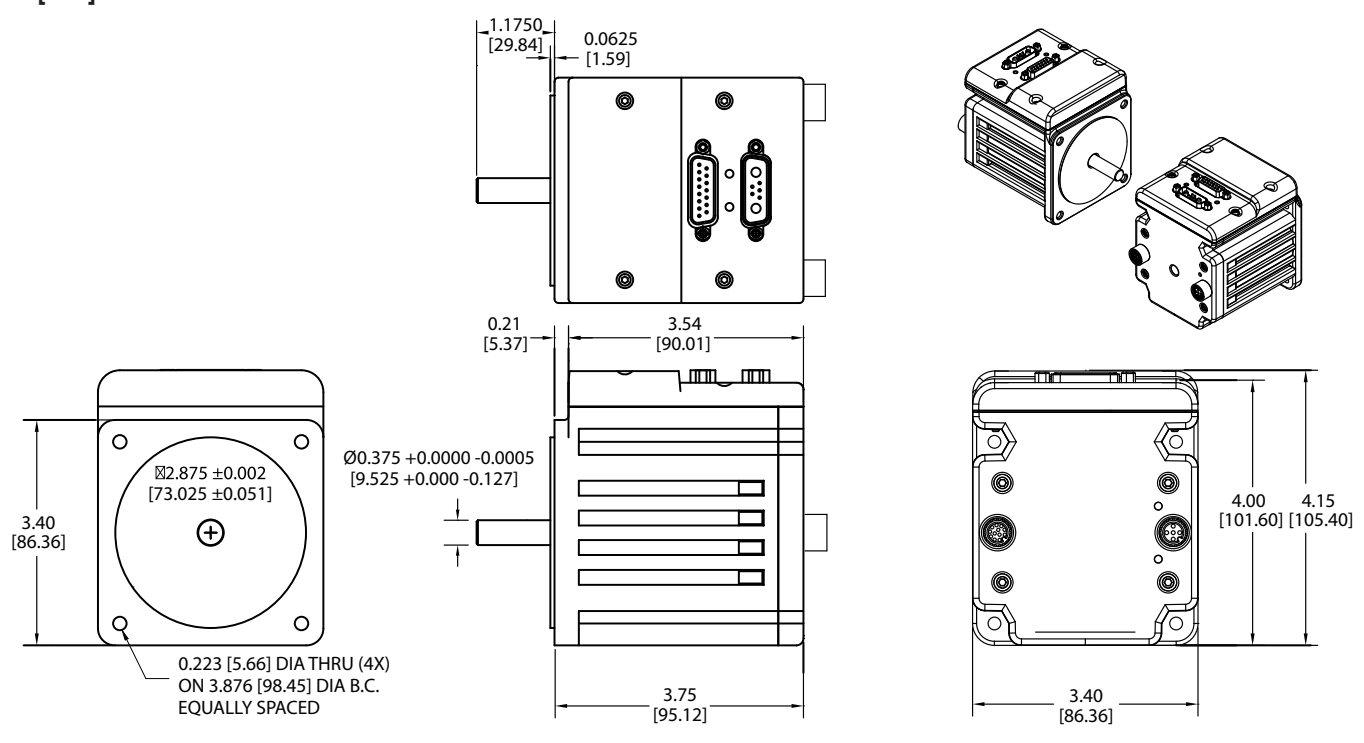
Moog Animatics SmartMotor™ SM34165D-C

in [mm]



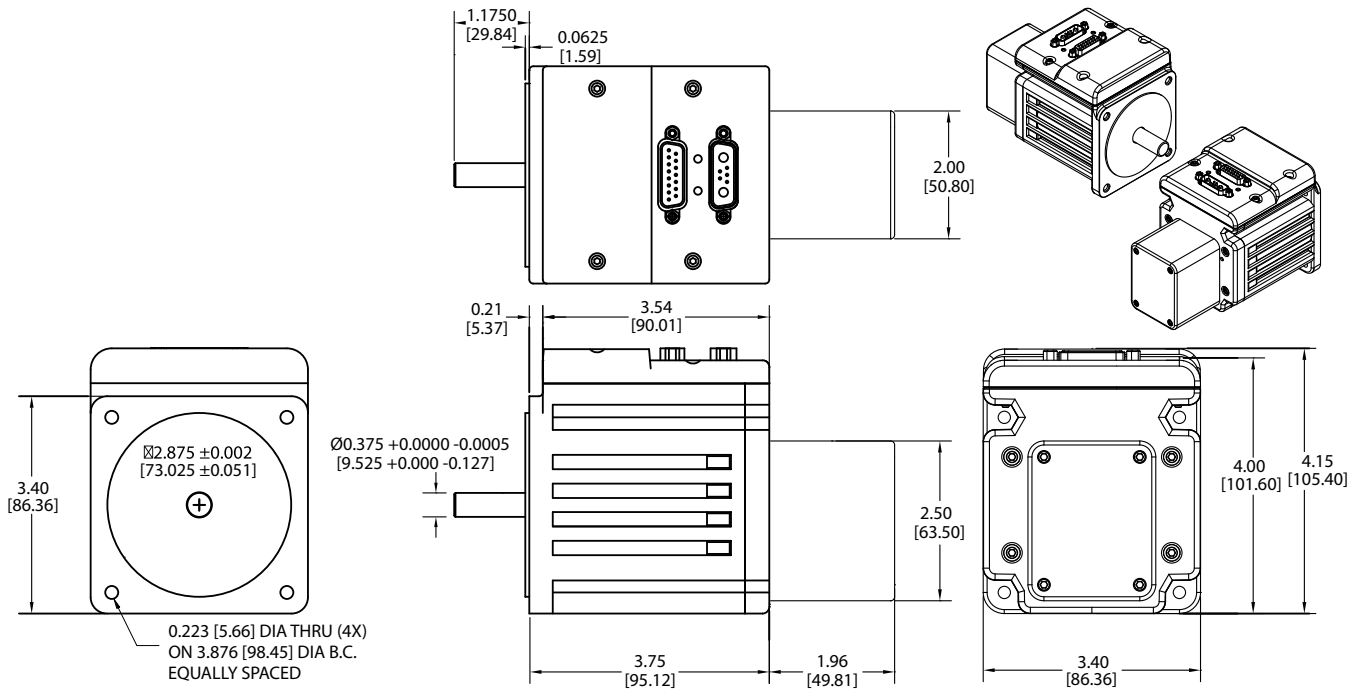
Moog Animatics SmartMotor™ SM34165D-C-AD1

in [mm]



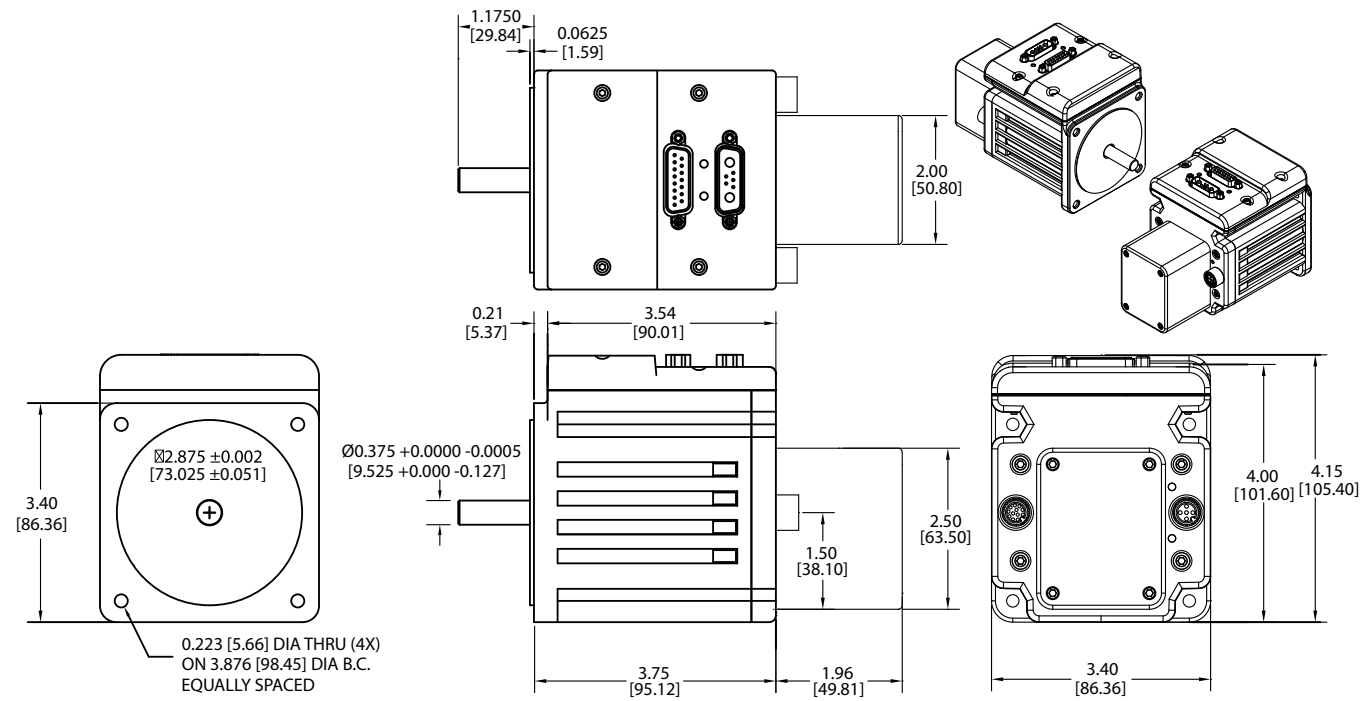
Moog Animatics SmartMotor™ SM34165D-BRK

in [mm]



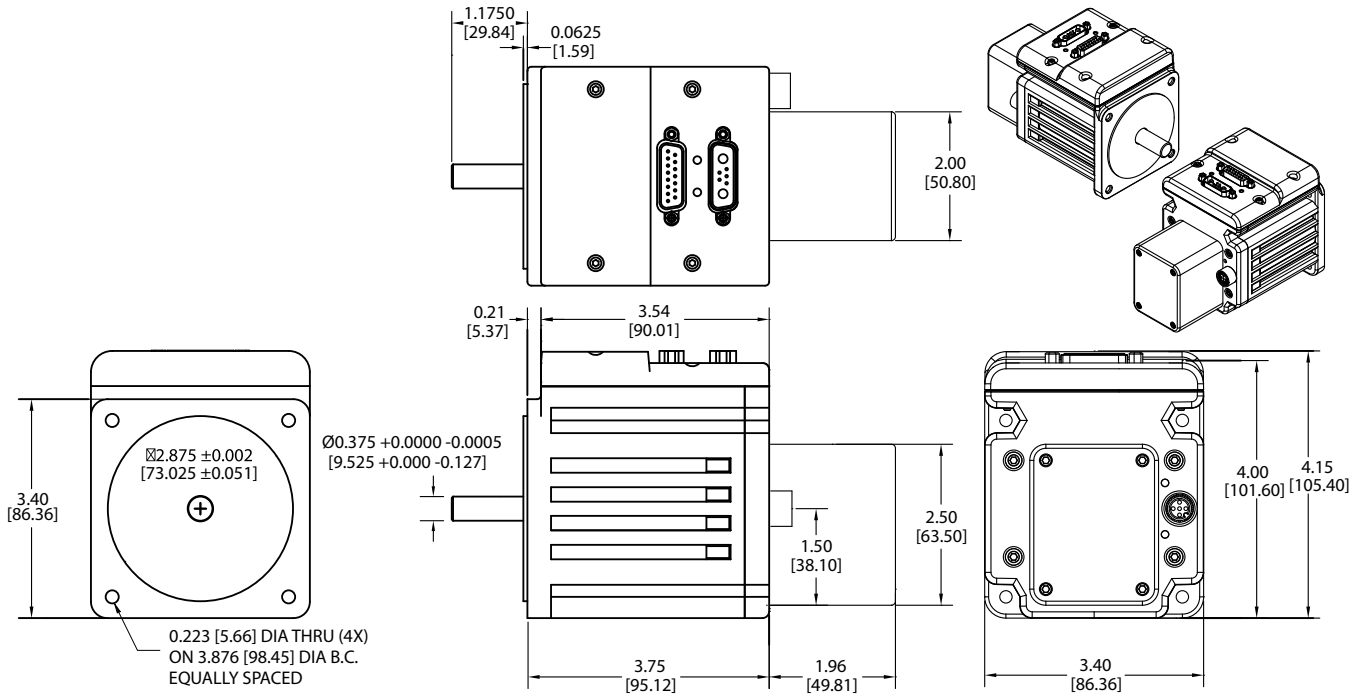
Moog Animatics SmartMotor™ SM34165D-BRK-C-AD1

in [mm]



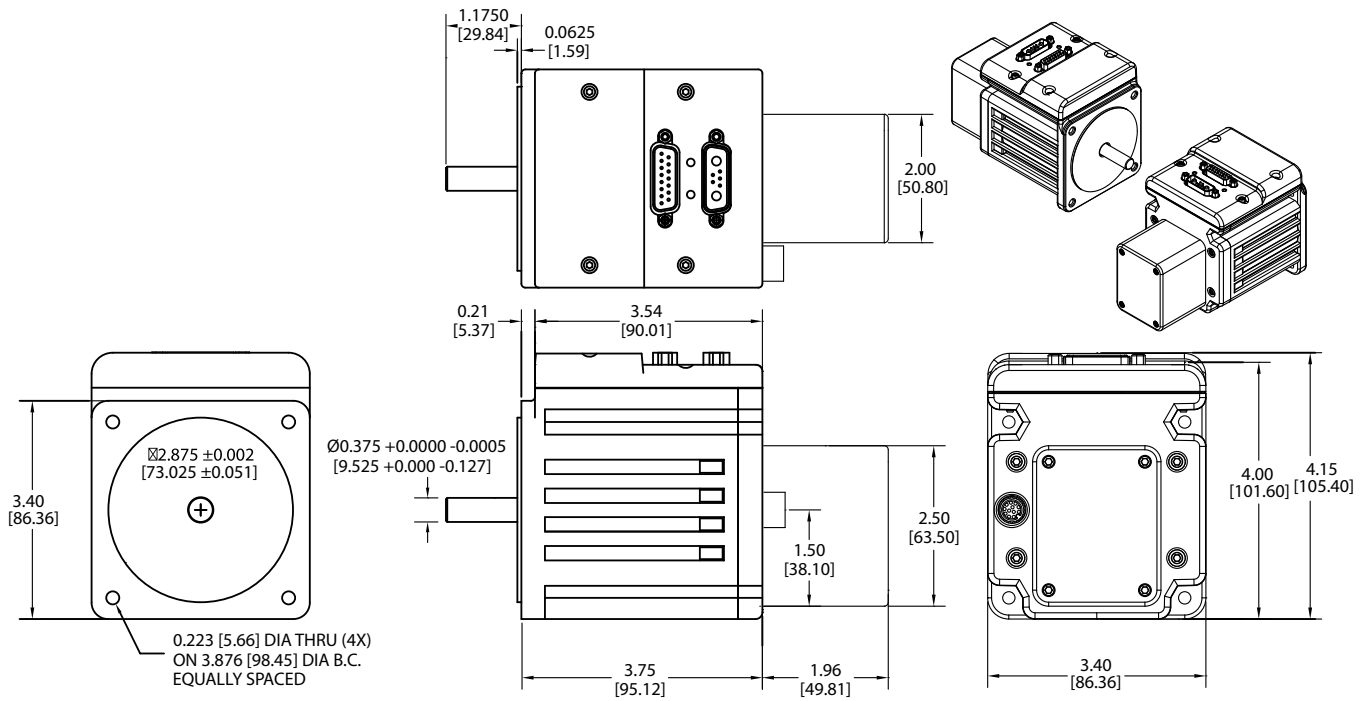
Moog Animatics SmartMotor™ SM34165D-BRK-C

in [mm]



Moog Animatics SmartMotor™ SM34165D-BRK-AD1

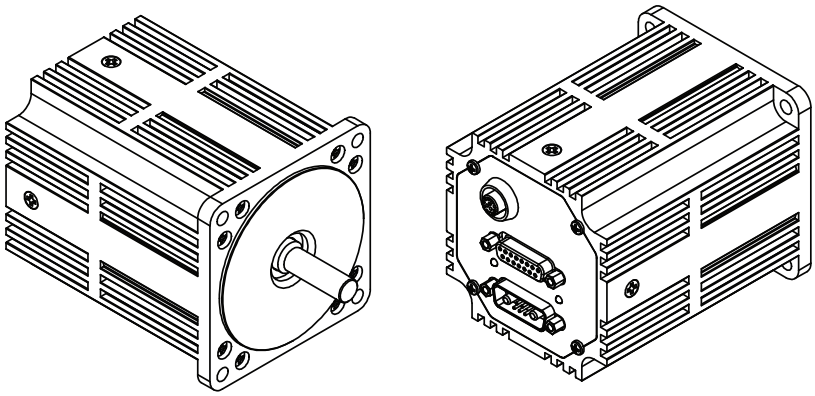
in [mm]

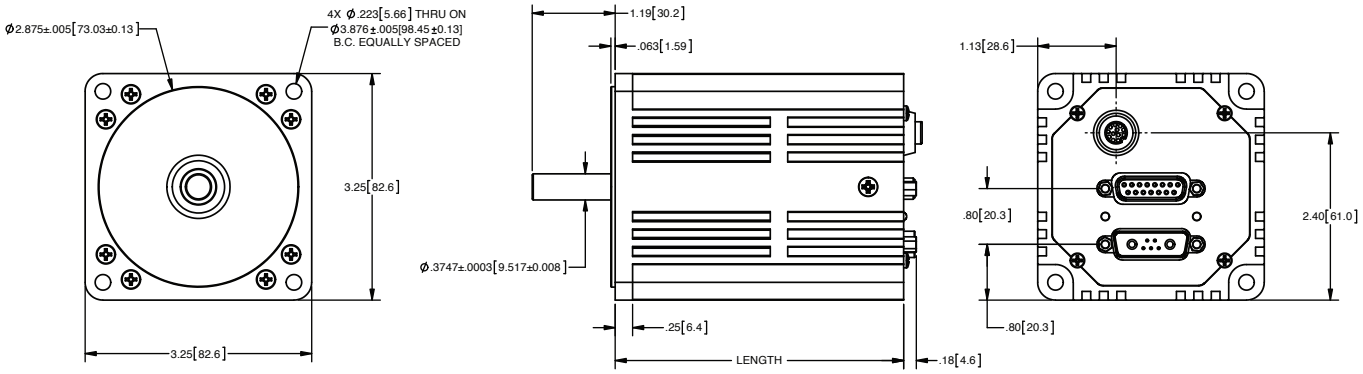


Moog Animatics SmartMotor™ SM34x05D-AD1

in [mm]

PART NUMBER	LENGTH	
	in	mm
5M34105D	3.49	88.6
5M34205D	4.14	105.1
5M34305D	4.79	121.6
5M34405D	5.44	138.1
5M34505D	6.09	154.6

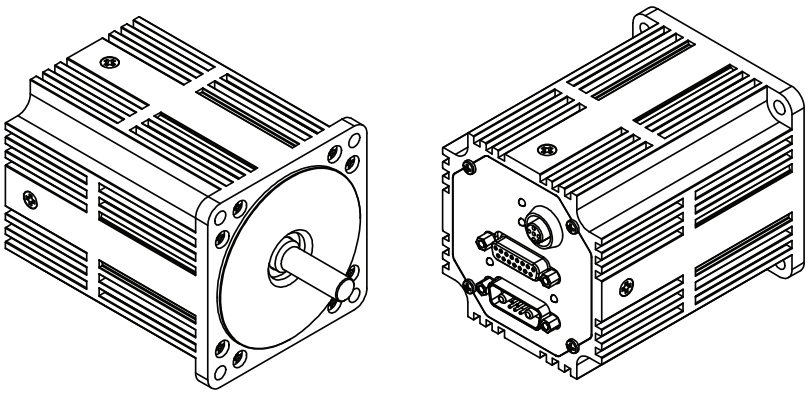


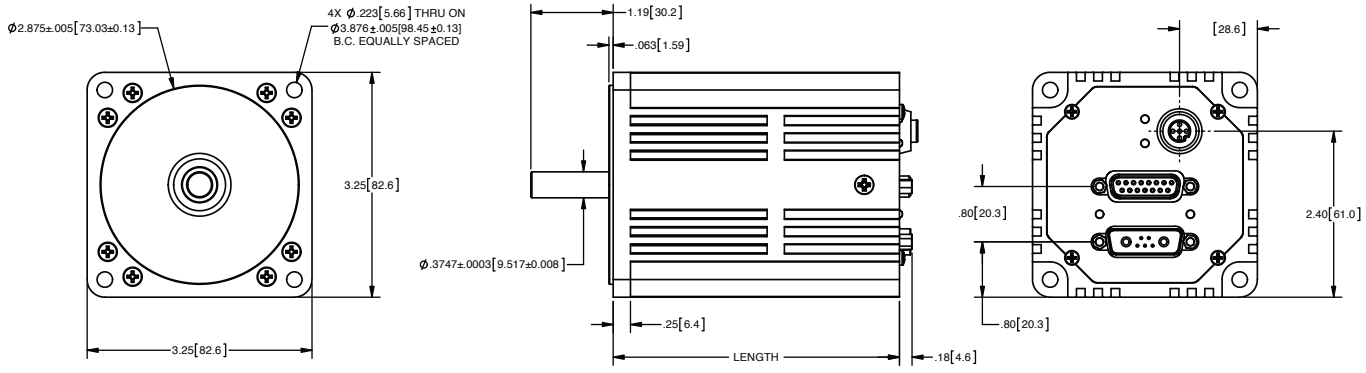


Moog Animatics SmartMotor™ SM34x05D-C

in [mm]

PART NUMBER	LENGTH	
	in	mm
5M34105D	3.49	88.6
5M34205D	4.14	105.1
5M34305D	4.79	121.6
5M34405D	5.44	138.1
5M34505D	6.09	154.6

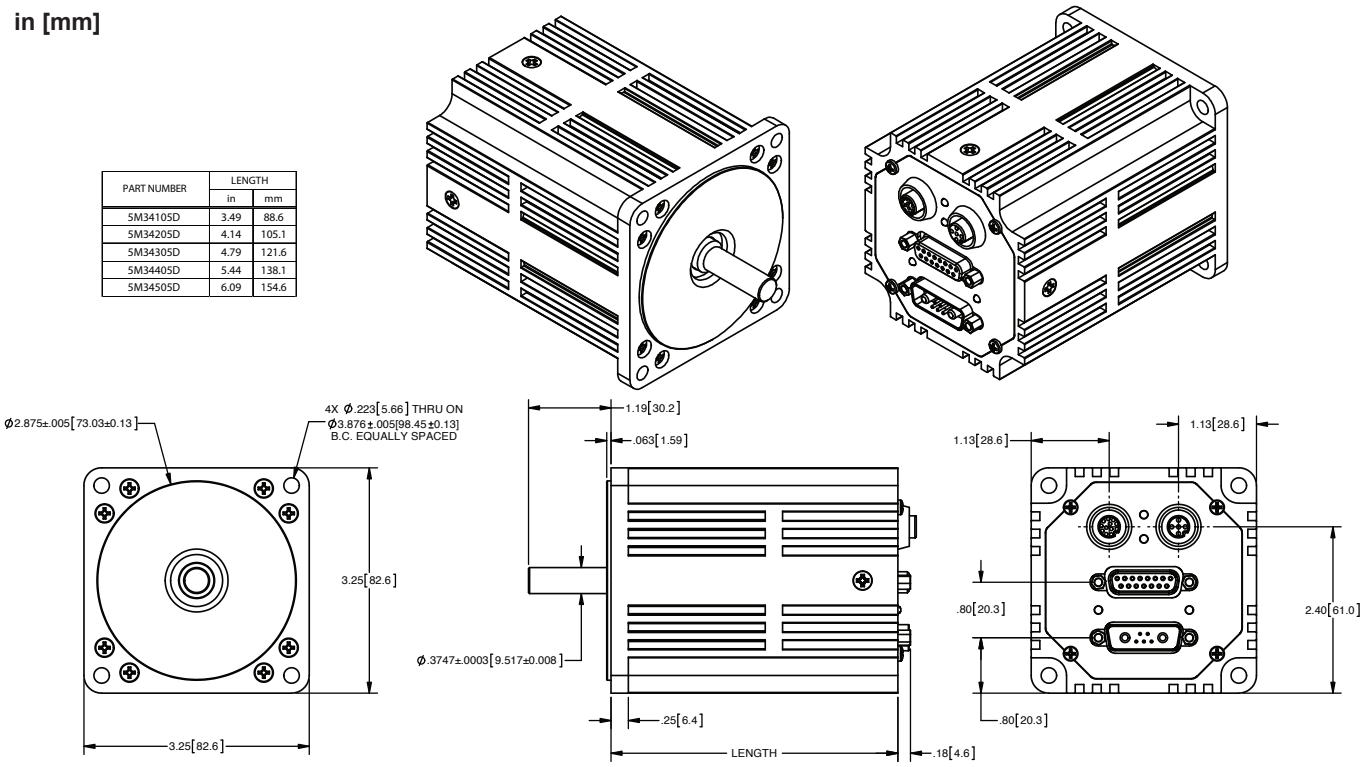




Moog Animatics SmartMotor™ SM34x05D-C-AD1

in [mm]

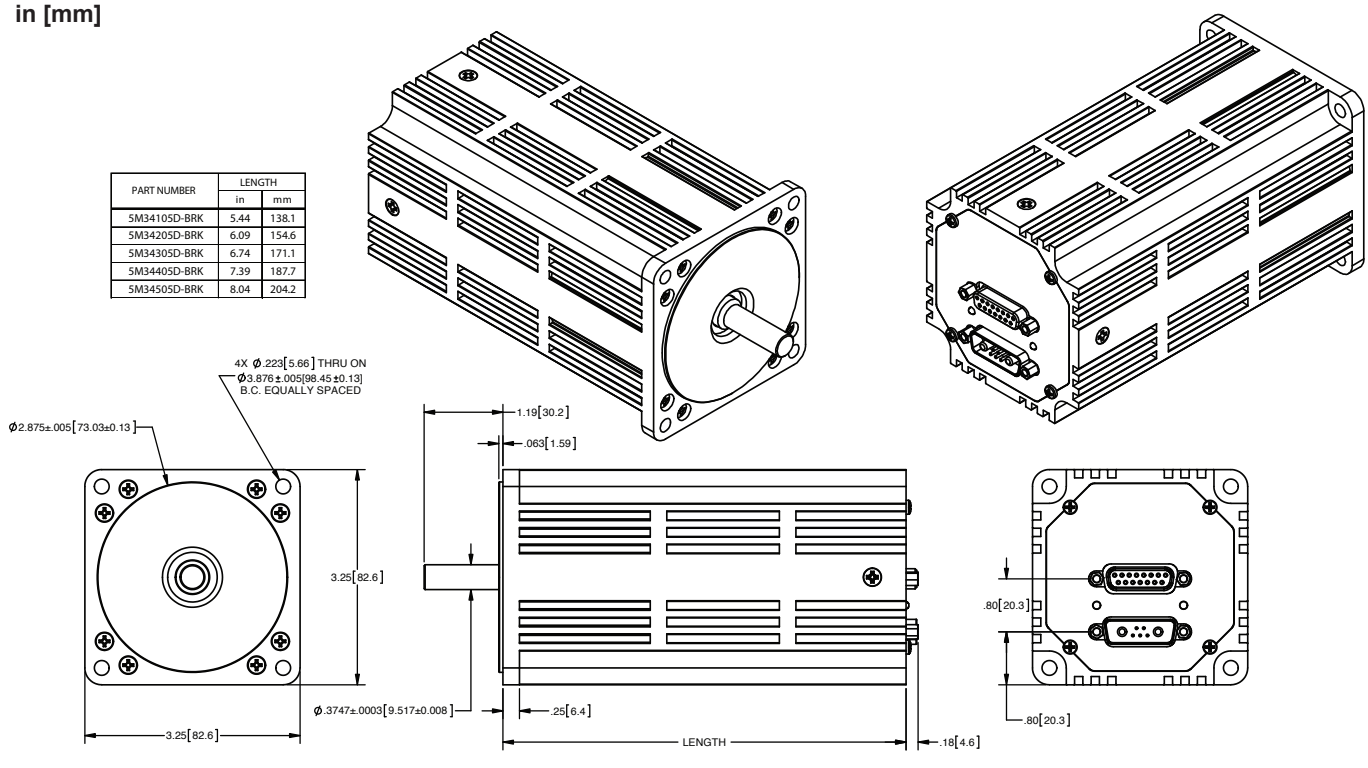
PART NUMBER	LENGTH	
	in	mm
5M34105D	3.49	88.6
5M34205D	4.14	105.1
5M34305D	4.79	121.6
5M34405D	5.44	138.1
5M34505D	6.09	154.6



Moog Animatics SmartMotor™ SM34x05D-BRK

in [mm]

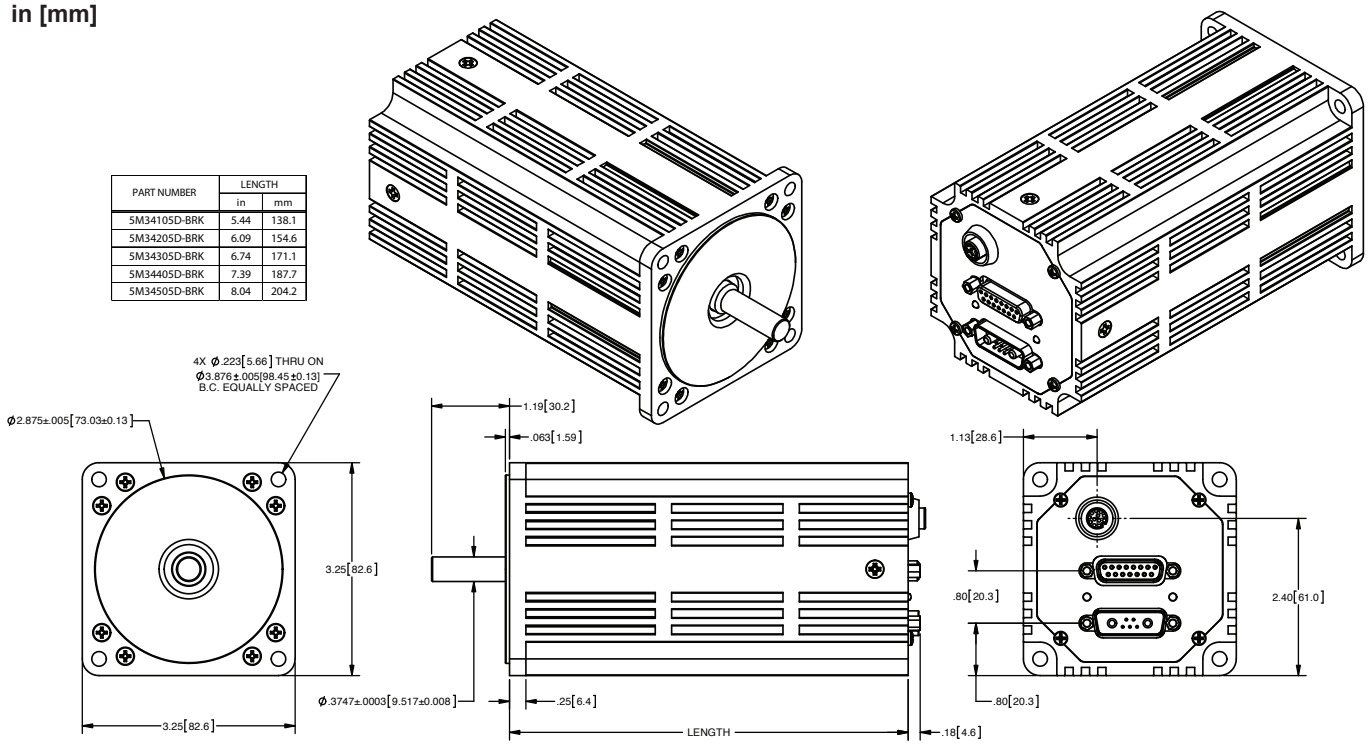
PART NUMBER	LENGTH	
	in	mm
5M34105D-BRK	5.44	138.1
5M34205D-BRK	6.09	154.6
5M34305D-BRK	6.74	171.1
5M34405D-BRK	7.39	187.7
5M34505D-BRK	8.04	204.2



Moog Animatics SmartMotor™ SM34x05D-BRK-AD1

in [mm]

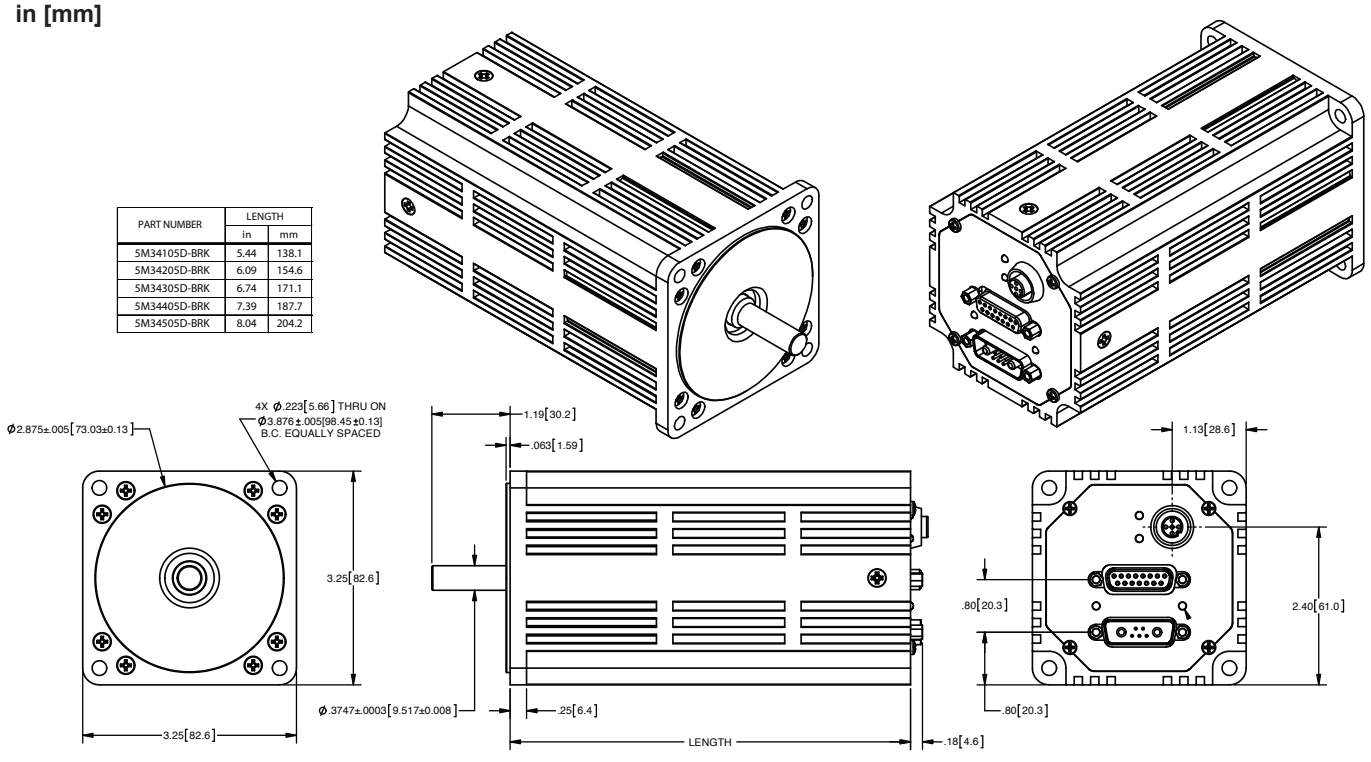
PART NUMBER	LENGTH	
	in	mm
SM34105D-BRK	5.44	138.1
SM34205D-BRK	6.09	154.6
SM34305D-BRK	6.74	171.1
SM34405D-BRK	7.39	187.7
SM34505D-BRK	8.04	204.2



Moog Animatics SmartMotor™ SM34x05D-BRK-C

in [mm]

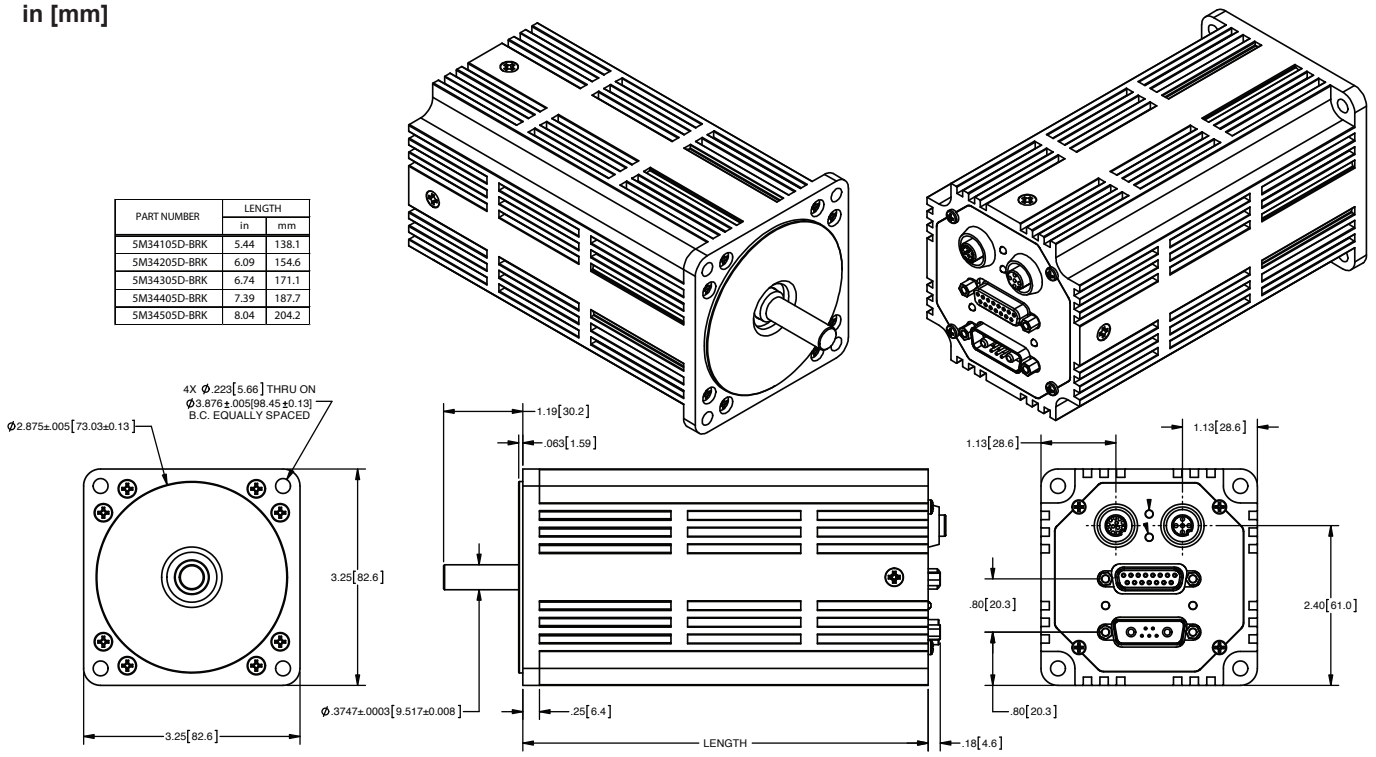
PART NUMBER	LENGTH	
	in	mm
SM34105D-BRK	5.44	138.1
SM34205D-BRK	6.09	154.6
SM34305D-BRK	6.74	171.1
SM34405D-BRK	7.39	187.7
SM34505D-BRK	8.04	204.2



Moog Animatics SmartMotor™ SM34x05D-BRK-C-AD1

in [mm]

PART NUMBER	LENGTH	
	in	mm
SM34105D-BRK	5.44	138.1
SM34205D-BRK	6.09	154.6
SM34305D-BRK	6.74	171.1
SM34405D-BRK	7.39	187.7
SM34505D-BRK	8.04	204.2



The information in this section has been superseded.
Please see the information in the latest product catalog at:
www.animatics.com/support/moog-animatics-catalog.html