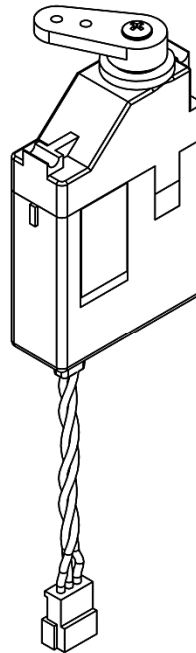


DA 10

Technical Specification



DA 10-05-42

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1. General Description

With its low profile design the DA 10-series actuator fits in smallest airfoil cross sections. Featuring all steel gears and full programmability. It is provided with a snap-in mounting frame for quick and easy installation.

2. Operating Data

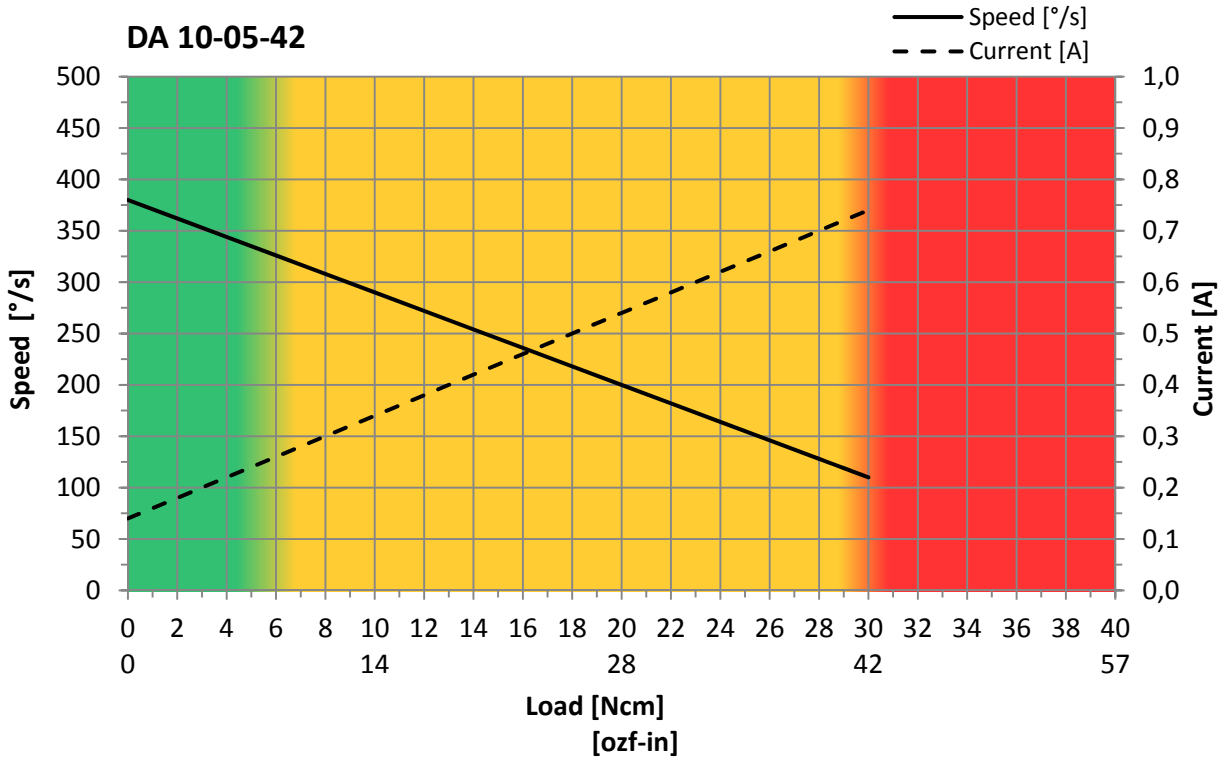
		DA 10-05-42
Supply Voltage (rated)		5.0 V DC
Supply Voltage Range		4.8 ... 5.0 V DC
Standby Current ¹	at rated voltage	< 0.008 A
Rated Current ¹	at rated voltage	0.25 A
Peak Current ¹	at rated voltage	0.74 A
Rated Torque ¹	at rated speed	6 Ncm (8.4 ozf-in)
Peak Torque ¹	at rated voltage	30 Ncm (42 ozf-in)
No Load Speed ¹	at rated voltage	380 °/s
Rated Speed ¹	at rated torque	325 °/s
Default Travel Angle		±45° = 90° total travel
Max. Travel Angle ²		±65° = 130° total travel
Backlash (mechanical)		< 0.9°
Position Error under Temperature ³		< ±1.0°
Operating Temperature		-30°C ... +70°C (-22°F ... +158°F)
Storage Temperature		-35°C ... +80°C (-31°F ... +176°F)

1) Tolerance ±10%

2) Programming Tool # 985.1 required

3) -20°C ... +50°C , Δt = 70°C (-4°F ... +122°F , Δt = 126°F)

3. Performance



Operation Mode:

■ Continuous

■ Short Time
< 10s , 60s cool down

■ Overload
< 1s , 60s cool down

4. Command Signal

Signal Voltage Levels	TTL-Level HIGH: min. 2.2V , max. 5.0V TTL-Level LOW: min. 0.0V , max. 0.8V
Frame Rate	7... 20 ms
Valid Pulse Lengths	0.8 ... 2.2 ms
Pulse Length for Position Left / Center / Right	1.0 / 1.5 / 2.0 ms
Resolution	< 1 μ s

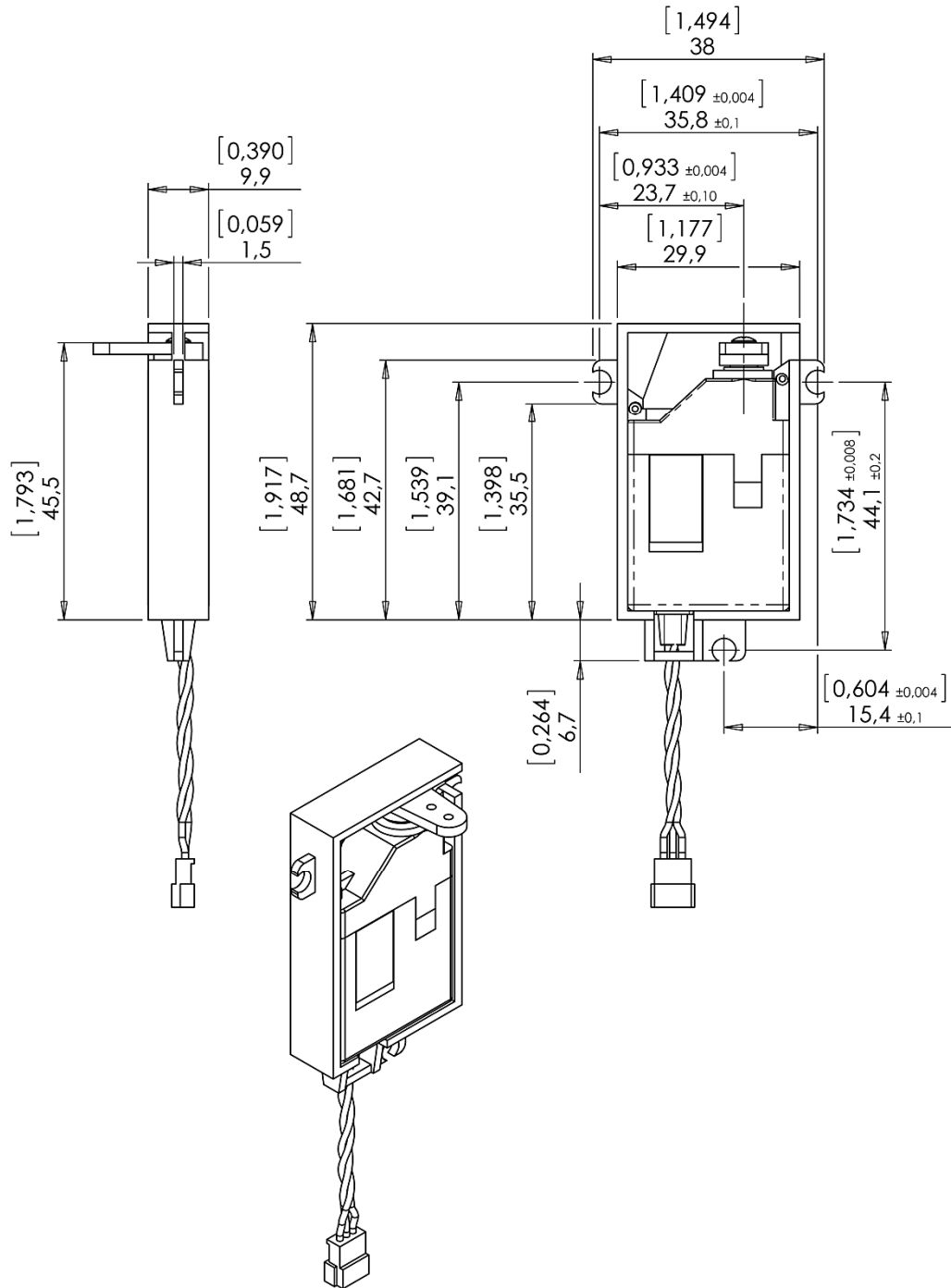
5. Materials and Protective Features

Case	POM, Chrome plated bottom case part
Splash Water Resistance	not available
Salt Water Resistance	not available
EMI / RFI Shielding	not available
Motor	Brushed 4.5 V DC Motor
Gear Set	Hardened Steel
Position Sensor	Precision Potentiometer
Position Feedback	not available

6. Dimensions

Case Dimensions	38.0 mm x 26.5 mm x 10.0 mm (1.496 in x 1.043 in x 0.394 in)
Weight	19g (0.67 oz) $\pm 10\%$

6.1. Installation Dimensions



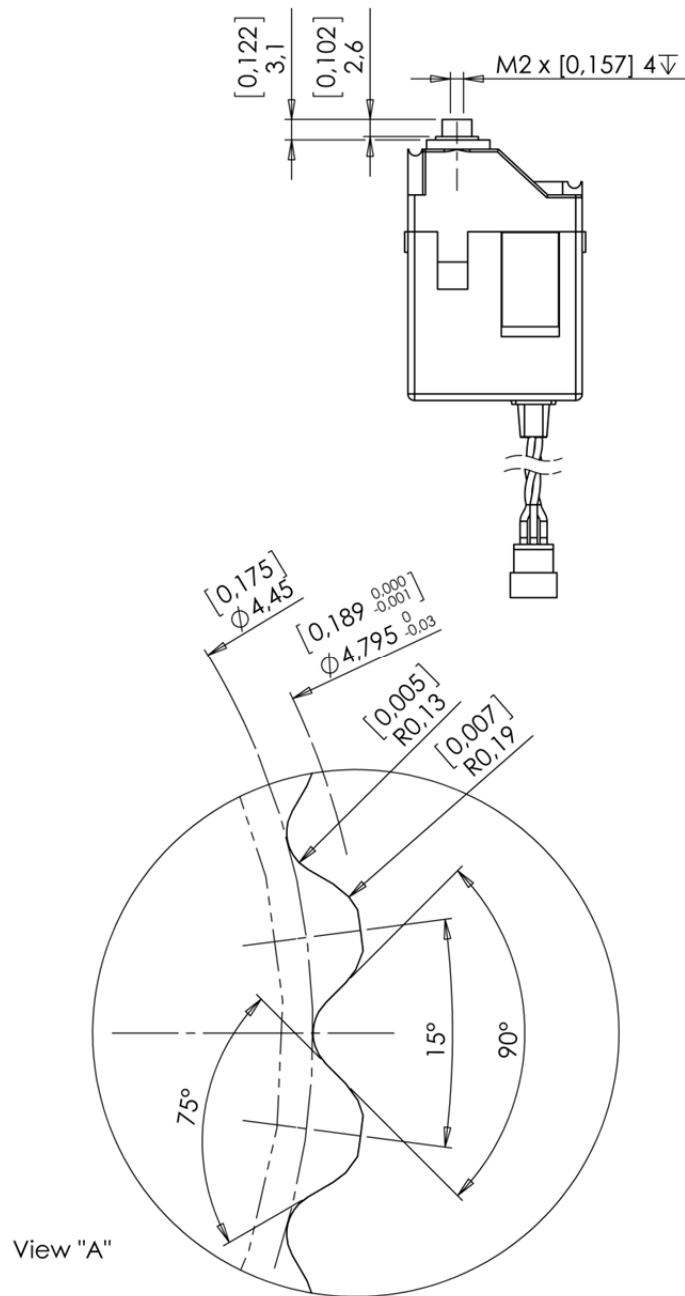
Not to scale

Dimensions: [in] , mm

Content is subject to change without notice

Revision: B

6.2. Output Shaft Spline



Not to scale

Dimensions: [in] , mm

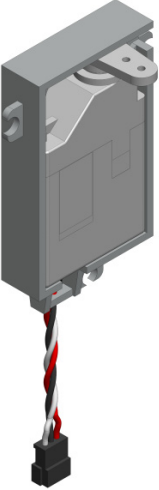

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Revision: B

7. Electrical Connection

Standard Connector
 Leads length 45mm (1.77in)

Item # DA 10.05.42

	 1 2 3	Standard Connector		
		Manufacturer	JST	
		Type	ZMR-03	
		Mating	ZHR-3	
	Pin Assignment			
	1	Red	+V DC	Supply Voltage
	2	Black	GND	Supply Ground / Signal Ground
3	White	SIG	Command Signal	

8. Accessories

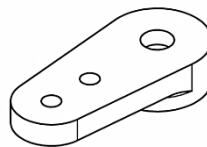
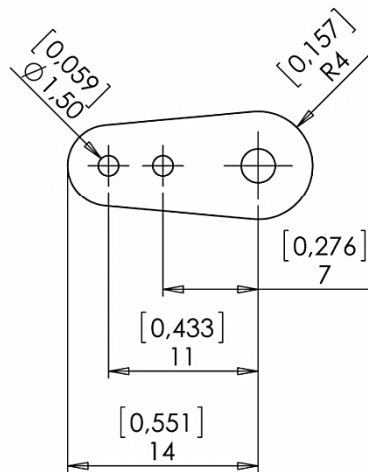
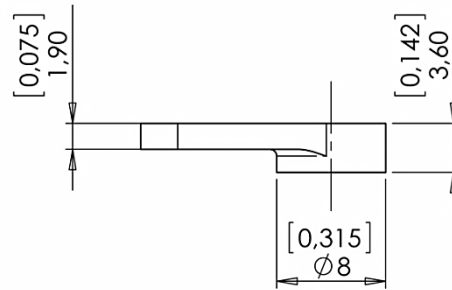
Item	Item-No.
Aluminum Servo Arm, short	1521.21
Aluminum Servo Arm, long	1521.22
Grommets (3 pcs.)	1521.25
Extension Lead , 50cm (19in) , 3 lead , 4g (0.141oz) ⁴	110.050
Extension Lead , 80cm (31in) , 3 lead , 6g (0.212oz) ⁴	110.080
Extension Lead , 100cm (39in) , 3 lead , 8g (0.282oz) ⁴	110.100
Extension Lead , 150cm (59in) , 3 lead, 12g (0.423oz) ⁴	110.150
Programming Tool	985.1

4) JST ZMR-03 , JST ZHR-3 Connectors

All Accessories to be purchased separately.

8.1. Servo Arm, short

1521.21



Not to scale

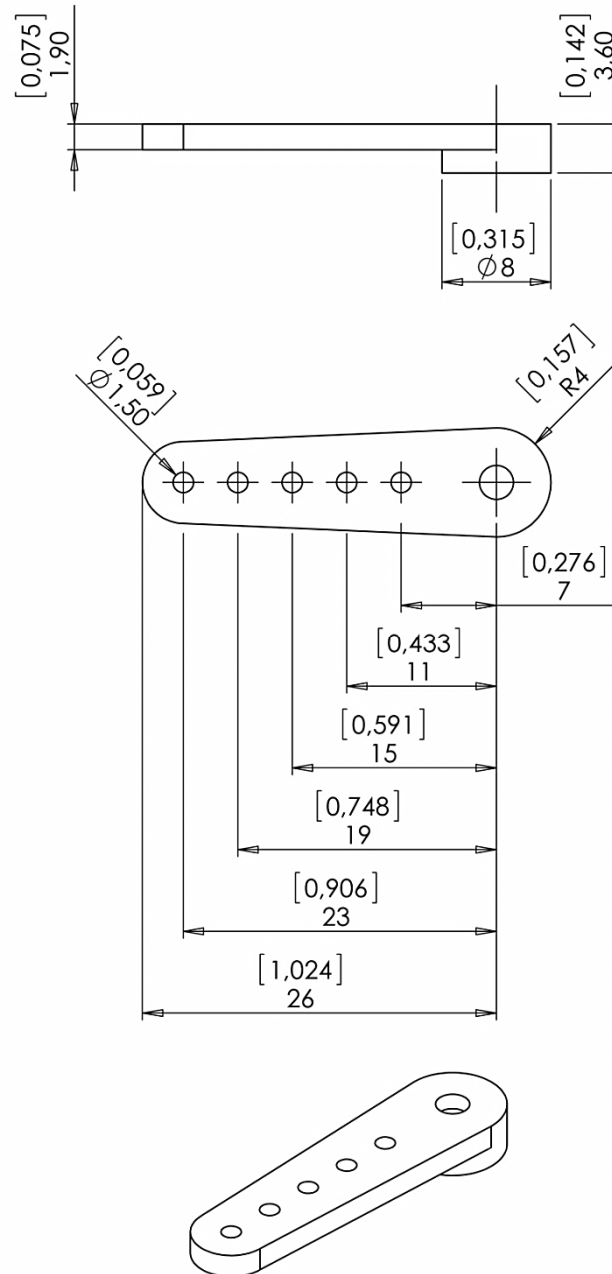
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8.2. Servo Arm, long

1521.22



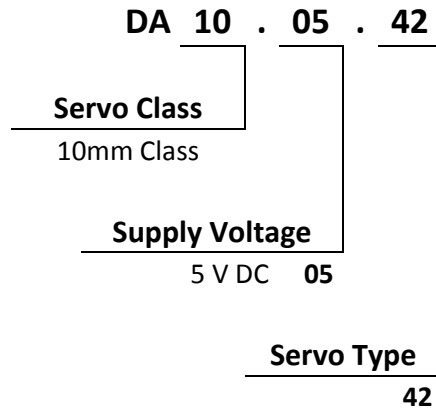
Not to scale

Dimensions: [in] , mm

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Revision: B

9. Item Number System



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