

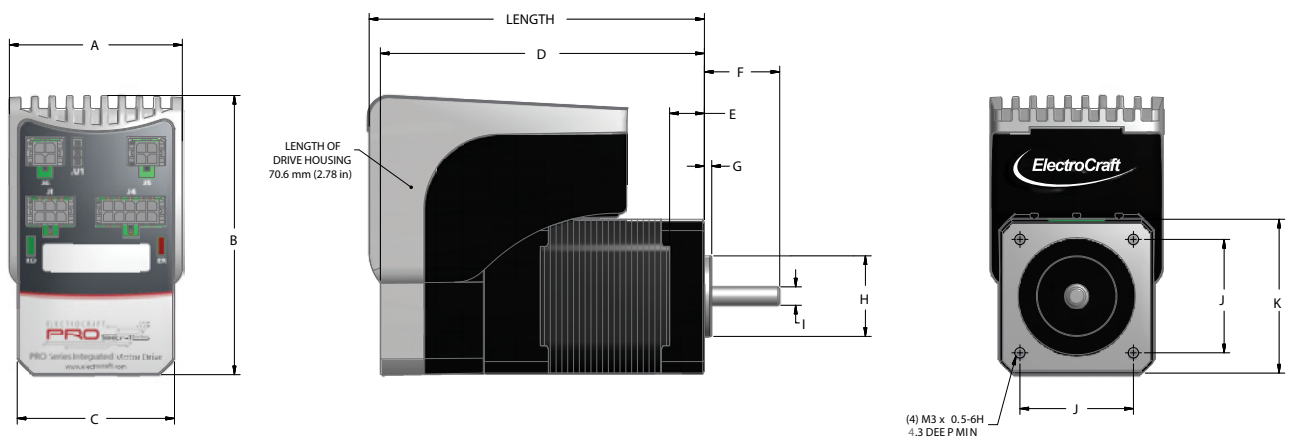
### Compact. Programmable.

ElectroCraft PR integrated brushless DC motor drive controllers are designed for high-precision applications. Each combines a high performance neodymium brushless motor with a fully-programmable PRO Series controller, providing a high level of control accuracy in a very compact package. Two frame lengths are available in this PR42 variant, providing peak torque of up to 96 Ncm (136 oz-in) and speeds of up to 11,400 RPM.



PR42 Integrated Motor Drive Controller	
Size	42mm or Nema 17
Peak Torque	to 96 Ncm (136 oz-in)
Continuous Torque	to 32 Ncm (45 oz-in)
Speed	to 11,400 RPM

Model	Units	Length	A	B	C	D	E	F	G	H	I	J	K
PR42-A8	mm	71	47.24	76.3	42.96	67.8	9.5	20.59±0.76	2.01	21.97 - 22	4.99 - 5	30.99	42
	inch	2.8	1.86	3.0	1.69	2.7	0.37	0.81±0.03	0.08	0.8648-0.866	0.1963 - 0.1967	1.22	1.65
PR42-A16	mm	91.6	47.24	76.3	42.96	88.52	9.5	20.59±0.76	2.01	21.97 - 22	4.99 - 5	30.99	42
	inch	3.6	1.86	3.0	1.69	3.48	0.37	0.81±0.03	0.08	0.8648-0.866	0.1963 - 0.1967	1.22	1.65
PR42-A25	mm	109	47.24	76.3	42.96	105.9	9.5	20.59±0.76	2.01	21.97 - 22	4.99 - 5	30.99	42
	inch	4.3	1.86	3.0	1.69	4.17	0.37	0.81±0.03	0.08	0.8648-0.866	0.1963 - 0.1967	1.22	1.65
PR42-A32	mm	131.1	47.24	76.3	42.96	128.52	9.5	20.59±0.76	2.01	21.97 - 22	4.99 - 5	30.99	42
	inch	5.2	1.86	3.0	1.69	5.06	0.37	0.81±0.03	0.08	0.8648-0.866	0.1963 - 0.1967	1.22	1.65



### PR42 Model Number

#### 1 - Motor Type

**P R**  
Product Name

#### 2 - Torque

**4 2**  
Frame Size

#### 3 - Voltage

**A 3 2**  
Drive Type  
Holding Torque (Ncm)

#### 4 - Features

**V 4 8 A**  
Voltage (Volts)  
Drive Version

#### 5 - Front Shaft

**0**  
Front Shaft

#### 6 - Feedback

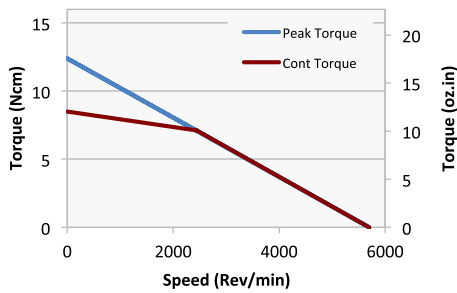
**D**  
Feedback

#### 7 - Network

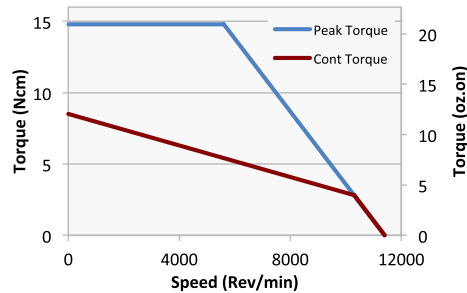
**CAN**  
Network

PR42 - Performance

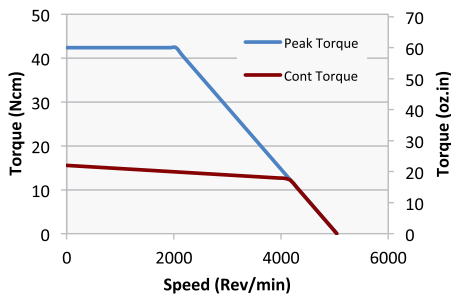
PR42-A8 at 24V



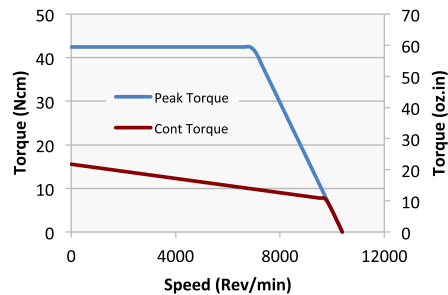
PR42-A8 at 48V



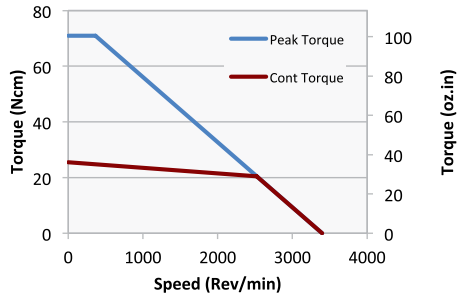
PR42-A16 at 24V



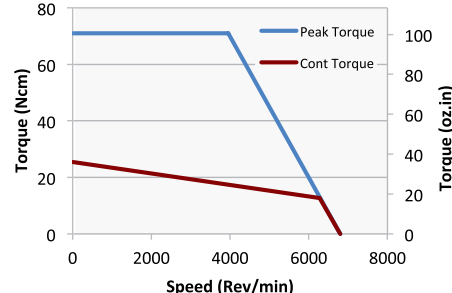
PR42-A16 at 48V



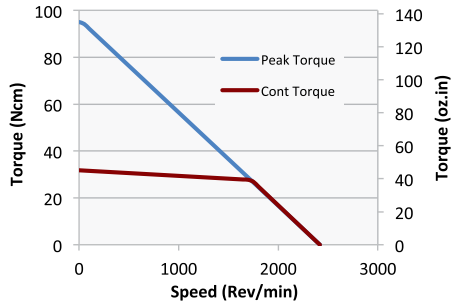
PR42-A25 at 24V



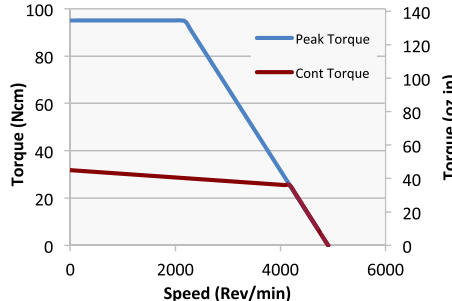
PR42-A25 at 48V



PR42-A32 at 24V



PR42-A32 at 48V



## PR42 Mechanical Data

### PR42 Stack Size Mode/s

Stack Size Models	PR42-A8	PR42-A16	PR42-A25	PR42-A32
Peak Torque (oz-in)	45	60	100	136
Peak Torque (Ncm)	31.77	42.37	70.61	96.03
Continuous Torque (oz-in)	12	23	36	45
Continuous Torque (Ncm)	8.47	16.24	25.42	31.77
Length (inches)	2.80	3.58	4.30	5.16
Length (mm)	71.12	90.93	109.22	131.06
Rotor Inertia (oz-in-sec <sup>2</sup> )	0.0008	0.0012	0.0016	0.0019
Rotor Inertia (kg-cm <sup>2</sup> )	0.0565	0.0847	0.1130	0.1342
Phase Resistance ±10% (Ohms)	2.5	1.1	1.3	2.0
Phase Inductance ±10% (mH)	2.0	1.2	1.4	2.3
Weight (oz)	12.5	20.1	27.0	33.5
Weight (Kg)	0.4	0.6	0.8	0.9

Power Inputs	
Motor Supply Voltage (VDC)	12-48
Logic Supply Voltage (VDC)	9-36
Control Inputs	
AUX Analog Input (x1)	12-BIT, 0 - 5V
Digital inputs (x5) Enable, 2 Limit Switches, Plus 2 General Purpose	5 - 36V, NPN
Control Outputs	
Digital outputs (x2) Status, Plus 1 General Purpose	5 - 36V, 0.5A, NPN open Collector
Operation Modes	
Operation Mode	Single axis motion controller, Intelligent slave executing I/O triggered motion sequences, Multi-axis, distributed motion solution, Intelligent slave executing network (RS232 or CAN) triggered motion sequences
Communications	
Serial	RS232
CAN	CAN-bus 2.0
Environmental	
Operating Temperature (°C)	0 - +40
Storage Temperature (°C)	-40 - +80
Humidity Range Not Condensing (% Rh)	90
Protections	
Hardware protections	Short circuit - Phase to GND Short circuit - Phase to Phase Over-voltage Under-voltage I <sup>2</sup> t
Regulatory Compliance	
CE	IEC60529
UL	UL508



Your Genius. Our Drive.

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