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Find the *ABB / Baldor FDH1A05TB-EN20* at our website: *Click HERE*



FLEX+Drive

The FLEX+Drive from Baldor integrates a powerful motion controller and brushless AC servo into a compact package capable of incremental positioning. Up to 15 pre-set point-to-point moves can be programmed into the drive. Moves may be incremental or absolute, as well as a return to home. By simply selecting the appropriate machine input, the pre-programmed position is selected. Repeatable moves become easy to accomplish, with this simple to program, stand alone package.

- Direct 115 or 230 power
- Resolver Feedback
- 15 Pre-set Programmable Positions
- CAN-bus
- External customer supplied 24VDC Logic
- RS 232/485
- Integral Regenerative Resistors
- Overvoltage
- Short Circuit Proof
- Over Temperature
- Over Current
- Resolver Fault
- Under Voltage
- I^2t
- Electronic Fusing

FLEX+Drive
(with Internal Power Supply)

AC Input Voltage		115 VAC 1Ø		230 VAC 1Ø		400/460 VAC 3Ø	
Bus Voltage		160 VDC		300 VDC		565/650 VDC	
Output Amps[1]		Catalog Number	Pkg. Size	Catalog Number	Pkg. Size	Catalog Number	Pkg. Size
Cont.	Peak						
2	4	-	-	-	-	-	-
2.5	5	FP1A02TR-RN20	A	FP2A02TR-RN20	A	FP4A02TB-RN23	G
5	10	FP1A05TR-RN20	B	FP2A05TR-RN20	B	FP4A05TB-RN23	G
7.5	15	FP1A07TR-RN20	C	FP2A07TR-RN20	C	FP4A07TR-RN23	G
10	20	-	-	-	-	-	-
15	30	-	-	-	-	FP4A15TR-RN23	H
20	40	-	-	-	-	FP4A20TR-RN23	H

Note: 1) RMS Current
2) Contains internal power supply which is suitable for sharing.
3) 24V required for operation of I/Os.
4) Units with internal regen have 200 ohm/50 watt capability.

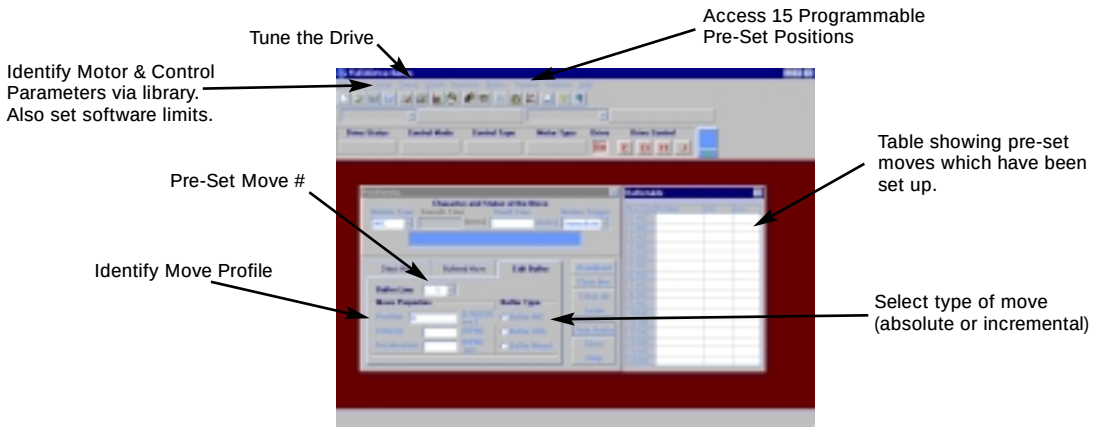
FLEX+Drive
(with Internal Power Supply)[2]

115 VAC 1Ø		230 VAC 3Ø	
160 VDC		300 VDC	
Catalog Number	Pkg. Size	Catalog Number	Pkg. Size
FP1A02SR-RN20	E	FP2A02SR-RN20	E
-	-	-	-
FP1A05SR-RN20	E	FP2A05SR-RN20	E
-	-	-	-
FP1A10SR-RN20	E	FP2A10SR-RN20	E
FP1A15SR-RN20	E	FP2A15SR-RN20	E

The above products contain an internal 15A power supply which can be connected to the following controls.

DC Input Voltage		160 VDC		300 VDC	
Bus Voltage		160 VDC		300 VDC	
Output Amps[1]		Catalog Number	Pkg. Size	Catalog Number	Pkg. Size
Cont.	Peak				
2	4	FP1A02PO-RN20	E	FP2A02PO-RN20	E
5	10	FP1A05PO-RN20	E	FP2A05PO-RN20	E
10	20	FP1A10PO-RN20	E	FP2A10PO-RN20	E
15	30	FP1A15PO-RN20	E	FP2A15PO-RN20	E

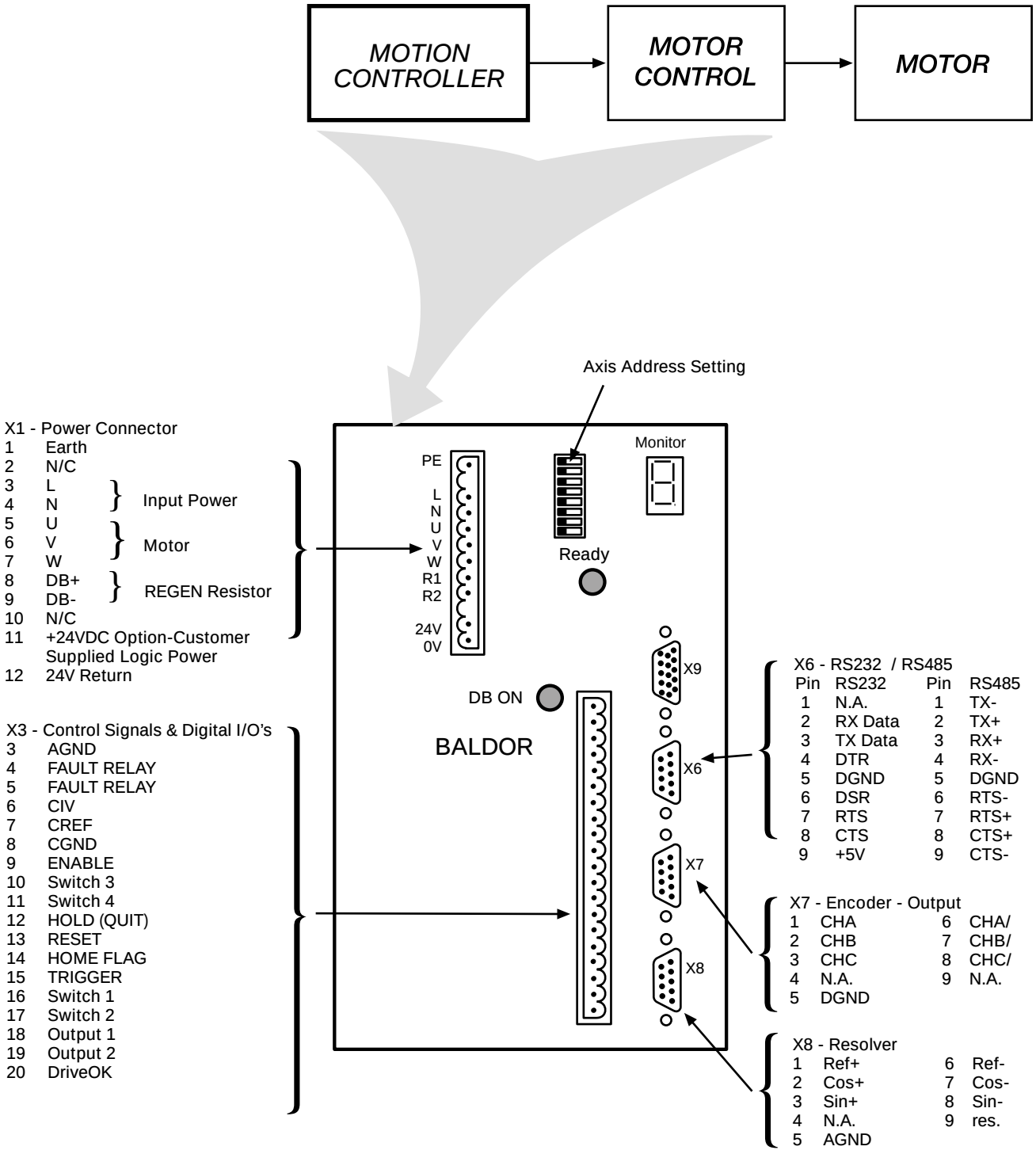
15 Pre-Set Position PC Setup



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FLEX+Drive

The FLEX+Drive is used for applications needing repeatable moves. It allows for up to 15 different positions to be “pre-set” in memory. A specific “pre-set” position is selected through the “switch inputs” and the “trigger” input activates the move.



Note: Pre-Set Positioner
FP1A05TR-RN20 shown.

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FLEXDrive/FLEX+Drive Technical Data

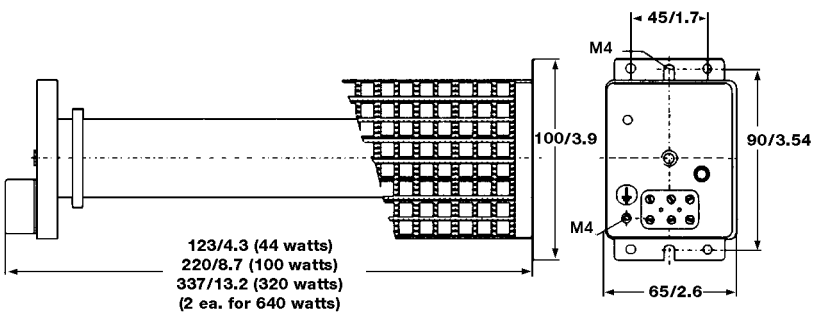
Description	Unit	Specifications			
Input Voltage Range	VAC	Models	1Ø Models	3Ø Models	3Ø Models
		115V	97-125	100-120	-
		230V	220-250	220-250	-
		400/460V	-	-	342-528
Input Frequency	Hz	50/60 ± 5%			
Efficiency	%		>97	>95	>95
Minimum Load Inductance	µH		400	200	100
Command Input	VDC	± 10			
Signal Resolution	bits	12			
Velocity Feedback Resolution	bits	14 bits velocity ≤ 6100 rpm			
		12 bits velocity > 6100 rpm to 7500 rpm			
Simulated Encoder Output	ppr	512/1024/2048/4096 - RS422			
Pulse & Direction Input	-	12-29 VDC galvanically isolated (Max 125 kHz)			
Handwheel Input	-	Encoder (A and B) RS422/5V (Max 125 kHz)			
Interface Bit Rate	Baud	9600 (Fixed)			
Operating Altitude	Feet	3300 (Above derate 1.1% per 330)			
	Meters	1000 (Above derate 1.1% per 100)			
Operating Temperature	°C	+5 to +40			
Storage Temperature	°C	-25 to +70			
Humidity	%	10-90 non-condensating			
Shock	-	1G			
Vibration	-	1G; 10-60 Hz			
Optional Customer Supplied 24V Logic Input					
Range	VDC	20 to 30			
Ripple	%	±10			
Current @ 24Volts	Amps	1.75, 4.0 Surge			

Regen Resistors

115 VAC Drive				230 VAC Drive				460/400 VAC Drive			
		Regen Resistor				Regen Resistor				Regen Resistor	
Control	Amps	Catalog	Watts	Control	Amps	Catalog	Watts	Control	Amps	Catalog	Watts
Fx1AxxTR	2.5, 5	RG27	44	Fx2AxxTR	2.5, 5	RG56	44	Fx4AxxSR	5, 7.5	RG68	320
Fx1A07TR	7.5	RG22	100	Fx2A07TR	7.5	RG39	100	Fx4A15SR	15	RG27A	320
Fx1AxxSR	2.5,10,15	RG4.7	320	Fx2AxxSR	2.5,10,15	RG10	320	Fx4A20SR	20	RG23	640

Dimensions

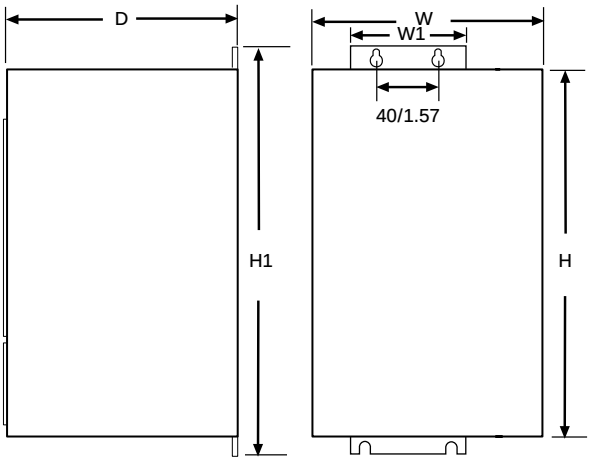
(millimeters/inches)



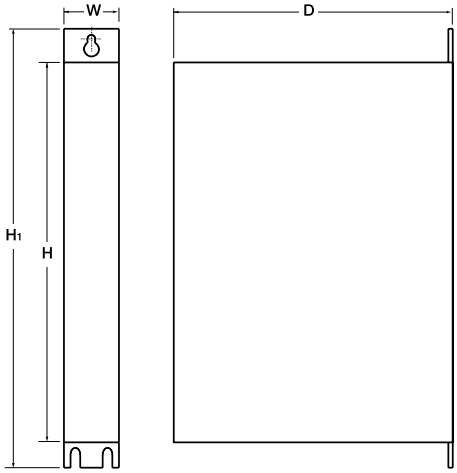
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FLEXDrive/FLEX+Drive Dimensions (inches/millimeters)

Package size A/B/C



Package sizes E/F/G/H



Package Size	Dimensions (in/mm)					Weight (lbs/Kg)
	H	H1	W	W1	D	Control
A	6.8/173	8.07/205	2.6/67.5	0.59/15	6/152	2.73/1.24
B	6.8/173	8.07/205	3.6/92.5	0.90/23	6/152	4.69/2.13
C	6.8/173	8.07/205	4.3/109	0.90/23	6/152	4.8/2.19
E	14/357	15.7/400	2.16/55	0/0	10.4/265	10/4.5
G	14/357	15.7/400	2.6/65	0/0	13/328	10.1/4.6
H	14/357	15.7/400	5.2/130	0/0	13/328	20.9/9.5

Catalog Identification/Option Specifying Information

F			A					–				

Control Family
FD = FLEXDrive
FP = FLEX+Drive

Input Voltage
1=115 V
2=230 V
4=400/460 V

Current Code
A02 = 2/2.5 amps
A05 = 5 amps
A07 = 7.5 amps
A10 = 10 amps
A15 = 15 amps
A20 = 20 amps

Enclosure Type
T = Panel mount with Internal Power Supply
P = Panel mount without Power Supply
S = Panel mount with Internal Supply
Suitable for sharing across multiple drives

Braking Options
R = Requires external resistor
B = Built in regen resistor
O = No internal DB capability

Feedback Options
R = Resolver
E = Encoder

Bus Options
N = None
C = CAN Bus

Serial Port Options
2 = RS232
4 = RS485

Logic Supply Voltage Options
O = Internally generated
3 = External Customer supplied +24 VDC

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Matched Performance Selection Guide

FLEXDrive/FLEX+Drive Series with BSM A/N Motors

Cont. Stall Torque		Motor Catalog ④	Input Voltage			
			115VAC 1Ø		230VAC 1Ø	
			Rated Speed	Control ③	Rated Speed	Control ③
LB-IN	NM	Number	RPM	Catalog Number	RPM	Catalog No.
3.9	0.45	BSM50N-133AA	4000	FD1A02TR-RN20	-	-
		BSM50N-175AA	-	-	4000	FD2A02TR-RN20
6.8	0.77	BSM63X-133AA	4000	FD1A02TR-RN20	-	-
		BSM63X-150AA	3000	FD1A02TR-RN20	6000	FD2A02TR-RN20
		BSM63X-175AA	-	-	4000	FD2A02TR-RN20
8	0.91	BSM50N-233AA	4000	FD1A05TR-RN20	-	-
		BSM50N-275AA	-	-	4000	FD2A02TR-RN20
12	1.36	BSM50N-333AA	4000	FD1A05TR-RN20	-	-
		BSM50N-375AA	-	-	4000	FD2A02TR-RN20
12	1.3	BSM63X-233AA	4000	FD1A05TR-RN20	-	-
		BSM63X-250AA	3000	FD1A05TR-RN20	6000	FD2A05TR-RN20
		BSM63X-275AA	-	-	4000	FD2A02TR-RN20
14.6	1.6	BSM80X-133AA	4000	FD1A05TR-RN20	-	-
		BSM80X-150AA	3000	FD1A05TR-RN20	6000	FD2A05TR-RN20
		BSM80X-175AA	-	-	4000	FD2A02TR-RN20
16	1.8	BSM63X-350AA	3000	FD1A05TR-RN20	6000	FD2A05TR-RN20
		BSM63X-375AA	-	-	4000	FD2A05TR-RN20
28.3	3.2	BSM80X-275AA	-	-	4000	FD2A05TR-RN20
18.5	2	BSM63X-350AA	6000	FD1A05TR-RN20	-	-
		BSM63X-375AA	4000	-	-	FD2A05TR-RN20
28.3	3.2	BSM80X-250AA	6000	FD1A07TR-RN20	-	-
		BSM80X-275AA	4000	-	-	FD2A05TR-RN20
40	4.5	BSM80X-375AA	4000	FD1A05TR-RN20	-	-
			230VAC 3Ø		400/460VAC 3Ø	
53	6	BSM90X-175AA	4000	FD2A10SR-RN20	-	-
		BSM90X-1150AA	2200	FD2A05SR-RN20	4400/5400	FD4A05TR-RN23
		BSM90X-1250AA	-	-	2500/3500	FD4A05TR-RN23
88	10	BSM90X-275AA	4000	FD2A15SR-RN20	-	-
		BSM90X-2150AA	2200	FD2A10SR-RN20	4400/5400	FD4A07TR-RN23
		BSM90X-2250AA	-	-	2500/3500	FD4A05TR-RN23
123	14	BSM100X-1150AA	2200	FD2A10SR-RN20	-	-
		BSM100X-1250AA	1200	FD2A10SR-RN20	2400/2400	FD4A07TR-RN23
117	13.3	BSM90X-3150AA	2200	FD2A10SR-RN20	4400/5200	FD4A10TR-RN23
		BSM90X-3250AA	-	-	2800/3800	FD4A07TR-RN23
203	23	BSM100X-2250AA	1200	FD2A15SR-RN20	2400/2400	FD4A15TR-RN23
354	41.4	BSM100X-4250AA	-	-	3000	FD4A20TR-RN23

Note: 1) Input voltage to power supply.
2) Order regen resistor and cables separately.
3) To order FLEX+Drive replace the prefix "FD" with "FP" in the control catalog number.
4) In place of ‘x’, in motor catalog number, insert “N” or “A” for desiged motor series

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Matched Performance Selection Guide

FLEXDrive/FLEX+Drive Series with BSM B Motors

Cont. Stall Torque		Motor Catalog Number	Input Voltage			
			115 VAC - 1Ø		230 VAC 1Ø	
LB-IN	NM		Rated Speed RPM	Control Catalog No.	Rated Speed RPM④	Control Catalog No.
14.4	1.6	BSM80B-150AA	3000	FD1A05TR-RN20	6000	FD2A05TR-RN20
		BSM80B-175AA	2000	FD1A05TR-RN20	4000	FD2A05TR-RN20
19.4	2.2	BSM80B-250AA	3000	FD1A05TR-RN20	6000	FD2A05TR-RN20
		BSM80B-275AA	2000	FD1A05TR-RN20	4000	FD2A05TR-RN20
20	2.3	BSM90B-175AA	2000	FD1A05TR-RN20	4000	FD2A05TR-RN20
		BSM90B-1150AA	-	-	2000	FD2A02TR-RN20
27	3	BSM80B-350AA	3000	FD1A07TR-RN20	6000	FD2A07TR-RN20
		BSM80B-375AA	2000	FD1A07TR-RN20	4000	FD2A07TR-RN20
38	4.3	BSM90B-275AA	-	-	4000	FD2A10TR-RN20
		BSM90B-2150AA	2000	FD1A05TR-RN20	2000	FD2A05TR-RN20
		BSM90B-2250AA	-	-	1000	FD2A02TR-RN20
			230VAC 3Ø ②		400/460VAC 3Ø ③	
56	6.4	BSM100B-175AA	4000	FD2A10SR-RN20	-	-
		BSM100B-1150AA	2000	FD2A05SR-RN20	4000/5000	FD4A05TR-RN23
57	6.5	BSM90B-375AA	4000	FD2A15SR-RN20	-	-
		BSM90B-3150AA	2000	FD2A10SR-RN20	4400/5500	FD4A07TR-RN23
106	12	BSM100B-2150AA	2000	FD2A10SR-RN20	-	-
		BSM100B-2250AA	-	FD2A10SR-RN20	2500/3000	FD4A07TR-RN23
150	17	BSM100B-3150AA	2000	FD2A15SR-RN20	4500/5500	FD4A15TR-RN23
177	20	BSM100B-4250AA	-	FD2A10SR-RN20	2500/3000	FD4A10TR-RN23

Note: 1) Input voltage to power supply.
2) Order regen resistor and cables separately.
3) To order FLEX+Drive replace the prefix "FD" with "FP".

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