

## FLEXI PRO DRIVE TYPE

FPRO

006

2A

AP

1

XX

Drive Name

Rating

AC and Controller  
Input Power Supply

Interface  
Options

Analog  
Input

Special  
Specification

1

2

3

4

5



1

	Rating	
	120/240 VAC	
	Cont. [A rms]	Peak [A rms]
1D5	1.5	4.5
003	3	9
4D5	4,5	18
006	6	18
008	8	28
010	10	28
013	13	28
020	20	48
024	24	48

	Rating	
	400/480 VAC	
	Cont. [A rms]	Peak [A rms]
003	3	9
006	6	18
012	12	24
024	24	72
030	30	90

2

AC and Controller Input Power Supply	
2A	Input Single Phase 120L - L VAC +10% -15% 50/60Hz
	Input Single Phase 240L - L VAC +10% -15% 50/60Hz
	Input Three Phase 120 - 240L - L VAC +10% -15% 50/60Hz
4D	AC Input Power Supply:
	- Input Three Phase 400L - L VAC +10% -15% 50/60Hz
	- Input Three Phase 480L - L VAC +10% -15% 50/60Hz
	24VDC input for control board power supply

3

Interface Options

AF - Analog Voltage/Pulse Train Ref & CANopen® & USB & RS 232  
EC - EtherCAT, USB, RS232  
EB - EtherCAT, USB (two analog inputs only)

4

Analog Input

1 - One Analog input, 16 bit  
2 - Two Analog inputs, 14 bit each

## PATENTED MAGNETIC ENCODER

The original magnetic encoder features a simple mechanical design that allows the same level of resolution and accuracy as optical absolute encoders whilst reducing complexity.

The simplicity is the key to achieving compactness, high resolution and accuracy at a competitive cost. This original encoder offers a resolution of 20 bit and an accuracy of  $\pm 0.02^\circ$ . Advanced signal processing applies a unique patented method.

Featuring only few mechanical components and no optical elements, the encoder is less sensitive to contamination and mechanical tolerance deviations. Furthermore, lifetime expectancy of the encoder is higher due to the elimination of both optical components and bearings.



SEE IT BEFORE IT HAPPENS

**MOTOR  
POWER**  
COMPANY

The FLEXI PRO series features a high-performance digital servo drive offering advanced functionality, high power density and seamless commissioning in a superior package. The innovative hardware design and software algorithms boast outstanding performance in one of the smallest footprints in the market.

## FEATURES

- > **INNOVATIVE AND PATENTED 20 BIT ABSOLUTE MAGNETIC ENCODER**
- > **MULTIFEDBACK**
- > **DIGITAL I/O: 11 DIGITAL INPUT AND 6 OUTPUT CUSTOMIZABLE WITH SEVERAL BUILT-IN FUNCTIONS AND INTERNAL SCRIPT**
- > **CONTROL: HD ADVANCED CONTROL LOOP WITH ADAPTIVE GAINS**
- > **SERVO MODES: TORQUE, VELOCITY AND POSITION WITH S-CURVE PROFILE**
- > **STO SIL 2**
- > **INTEGRATED SUPPORT FOR EXTERNAL BRAKING RESISTOR**
- > **COMPLETE MOTOR DATABASE**

## BENEFITS

- > **INTELLIGENT AUTO-TUNING - MINIMIZES POSITION ERROR AND SETTLING TIME TO ALMOST ZERO**

Engineering experience and expertise has been implemented in a sophisticated Auto-Tuning function that performs optimal configurations for a difference-making performance

- > **NEW CURRENT LOOP DESIGN - ACHIEVES AN INDUSTRY-LEADING FREQUENCY RESPONSE OF UP TO 3.0 KHZ**

Rapid control loop sample rates and flexible filtering options provide a faster response, and ensure maximum machine accuracy and throughput

- > **INNOVATIVE ANTI-VIBRATION ALGORITHM - ELIMINATES MECHANICAL RESONANCE**

An active-non-linear algorithm eliminates vibration in highly flexible resonant systems. Commissioning is easy since only few gain parameters are required



## INTERFACE

- > **USB WITH DAISY CHAIN CAPABILITY**
- > **PULSE & DIRECTION**
- > **ANALOG VELOCITY AND TORQUE COMMAND  $\pm 10V$**
- > **CANopen**
- > **EtherCAT**

# FLEXIBLE AND COMPREHENSIVE

## PRODUCT DATA

FEATURE	UNITS	FPRO 1D5	FPRO 003	FPRO 4D5	FPRO 006	FPRO 008	FPRO 010	FPRO 013	FPRO 020	FPRO 024	FPRO 003	FPRO 006	FPRO 012	FPRO 024	FPRO 030
Input Voltage	VAC	120/240 VAC Single Phase		240 VAC Single or Three Phase				120/240 VAC Three Phase			400/480 VAC Three Phase				
Max Continuous power output	W	350	700	1000	1400	1800	2300	3000	4500	5500	1100	2200	4400	9000	11000
Efficiency at rated Power	%	> 90													
Auxiliary Supply Voltage		120 .. 240 Vac									24 Vdc				
Continuous current rms	A rms	1,5	3	4,5	6	8	10	13	20	24	3	6	12	24	30
Peak current	A rms	4,5	9	18	18	28	28	28	48	48	9	18	24	72	90
Ambient Operating Temperature	°C	0 to + 45													
Maximum Humidity	%	90% not condensing													
Vibration		0.6G 10-60 Hz													
Shock		1 G													
Mounting Method		Wall Mount													
Dimensions	WxDxH mm	43x144x150		55x167x150		62x182x170			117x194x234		110x193x163		FPRO 012 117x194x234 FPRO 024 - FPRO 030 147x209x353		
Weight	Kg	0,7	0,75	0,97	0,97	1,15	1,15	1,15	3,2	3,2	2,1	2,1	3,2	10,5	10,5

## FLEXI PRO SUITE

### > SIMPLIFIES SETUP, TESTING AND TUNING

User-friendly FLEXI SUITE software provides step-by-step guidance through the setup and tuning process. Setup and testing are intuitive thanks to auto-tuning functions and graphic representations of control loops

