

## INTELLIGENT BRUSHLESS AC SERVO DRIVE

### 3 in 1 – Motion Controller – PLC – Drive

Designed to reduce the cost of machine automation, the IMD and IMDL series combine Motion, PLC and Drive functions in one compact unit that can be operated as either a torque, speed or position controller. The on-board processing power, which in many cases is sufficient to control a small machine, ensures the operational flexibility required for today's demanding servo applications.

The IMD series handles power ranges up to 11.2kVA , while the compact IMDL series covers the range 0.7 to 2.2kVA.

#### ■ Performance

32 bit DSP  
150 Mips  
Multi-tasking

#### ■ Integrated PLC

Counters  
Timers  
Cam boxes

#### ■ Motion functions

Positioning  
Electronic gearbox  
Cam profiles  
Registration  
Position capture  
Synchronisation

#### ■ Set-up tools

Instrument display  
Function generator  
Oscilloscope  
Hyper-terminal

#### ■ Software tools

BASIC tasks  
Trajectories table  
Cam editor



#### ■ Position feedback

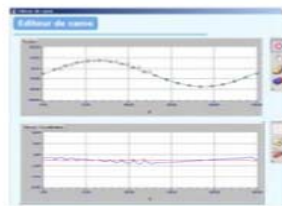
Resolver  
Incremental encoder  
Absolute encoder SSI  
SinCos encoder  
Stepper emulation

#### ■ Communications

Modbus RTU  
CANopen  
Ethernet

#### ■ Applications

Machine tools  
Pick & place robots  
Packaging machines  
Label printing  
Winding  
Flying shears  
Dosing



Panel PC



## IMD & IMDL Series Specification

<b>Supply</b>	See below
<b>Auxiliary supply</b>	24V DC $\pm 10\%$ , 400mA typical (700mA max if all options fitted)
<b>Supply filter</b>	Integral
<b>Architecture</b>	Processor : 32 bit: 150 MHz DSP plus 100,000 gate FPGA Real-time, multi-tasking operating system Memory : FLASH for programs and parameters RAM for data FRAM for saved variables Memory Stick option
<b>Control loops</b>	Current loop : 75 $\mu$ s Speed loop : 150 $\mu$ s Position loop : 150 $\mu$ s
<b>Motor feedback</b>	Resolver, SinCos encoder
<b>Master encoder</b>	Incremental, Absolute, SSI, SinCos and Virtual encoders
<b>Encoder emulation</b>	Incremental : A, /A, B, /B, Z, /Z 1 to 100 000 points per rev
<b>Communication</b>	RS 232 / RS 485 MODBUS RTU IMDBUS : for master/slave applications CANopen : SDO, PDO, master or slave ETHERNET : EtherCAT link for high-speed control & synchronisation
<b>Inputs / Outputs</b>	4 digital input (with 2 fast 1 $\mu$ s) / 2 digital outputs 2 analogue inputs / 1 analogue output Additional module 12 digital inputs / 8 digital outputs
<b>Diagnostics</b>	STATUS display
<b>Operating modes</b>	Torque, Speed, Position and Stepper Mode (pulse input and direction) Motion functions (absolute, relative and infinite movements, S profile) Advanced motion functions (gearbox, CAM profiles, CAMBOX functions, triggered movement)
<b>Operating temperature</b>	0 to 40°C
<b>Storage temperature</b>	-10 to 70°C
<b>Degree of protection</b>	IP 20

### IMD Range

	IMD/1	IMD/2	IMD/5	IMD/10	IMD/20
<b>V supply (V rms)</b>	230 to 480V / 3ph				
<b>I cont (A rms)</b>	1.25	2.5	5	10	20
<b>I peak (A rms)</b>	2.5	5.0	10	20	40
<b>P nom (kVA)</b>	0.7	1.4	2.8	5.6	11.2
<b>W x H x D (mm)</b>	72 x 293 x 233				125x293x233

### IMDL Range

	IMDL230/2	IMDL230/5	IMDL400/1	IMDL400/4
<b>V supply (V rms)</b>	230 / 1ph	230 / 1ph	400 / 3ph	400 / 3ph
<b>I cont (A rms)</b>	2.5	5.0	1.25	4
<b>I peak (A rms)</b>	5.0	10	2.5	8
<b>P nom (kVA)</b>	0.7	1.5	0.7	2.2
<b>W x H x D (mm)</b>	64 x 293 x 201			