



BRUSHLESS SERVODRIVES

Advantages

TDE MACNO digital brushless drives are the result of a significant experience in the design and development of products for industrial automation.

▶ **EASE-OF-USE AND EASY SET UP**

Thanks to the automatic functions, such as auto phasing of the resolver and auto tuning of the motor, TDE MACNO's products are easy to adjust to any kind of motor type. The programming software from PC allows a rapid and precise use of all the operations and makes the set-up easy and extremely quick.

▶ **ADVANCED CHARACTERISTICS**

The control software enables particular functions such as electronic gearing, multi positioning, cams, etc. and a wide flexibility in the control of the motor. The advanced control system of the speed and current loop allows high dynamic performances.

▶ **PARAMETER SETTING SOFTWARE**

The programming software, developed in Windows operating system, leads the user to the programming of the drive: it displays all the set-up and control parameters and enables customised solutions.

▶ **SMALL IN SIZE**

As a result of an accurate research TDE MACNO has developed compact drives, which bring substantial space savings in the installation.

▶ **FLEXIBILITY AND CUSTOMISED SOLUTIONS**

Based on our experience as application and systems engineers for industrial automation we provide our know-how to realise in a flexible way customised solutions for the specific needs of the customers.

▶ **RELIABILITY**

Since its establishment in 1976 TDE MACNO has been designing and developing comprehensive and straight forward solutions to a wide variety of industrial automation applications. We have a strong commitment to the continuous development of high quality and reliable solutions. This has made TDE MACNO your reliable partner.

BRUSHLESS SERVODRIVE

DMBL is a small size digital converter for sinusoidal brushless motors. Thanks to its high dynamic response, DMBL is suitable for a wide range of applications.

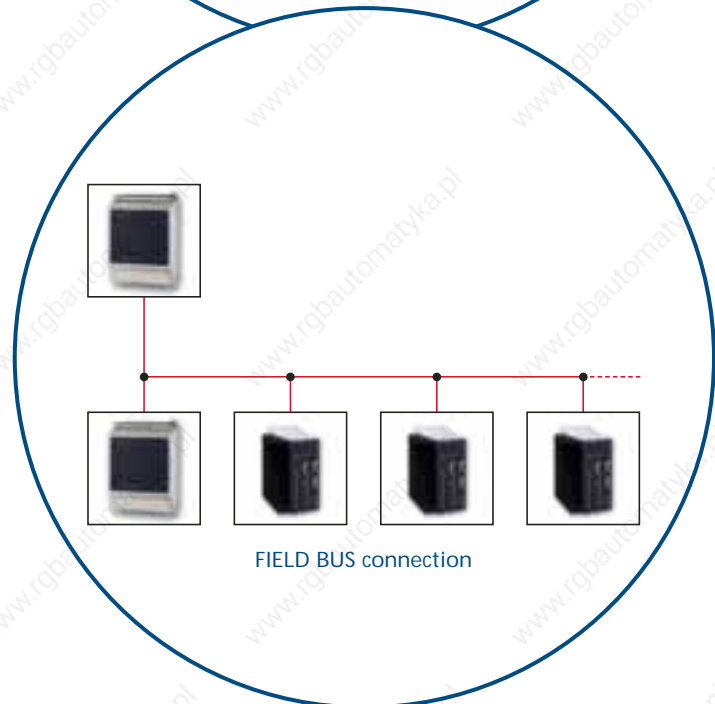
MAIN FEATURES

SPECIAL FUNCTIONS

- » Resolver auto phasing
- » Current loop gain automatic calibration according to motor inductance (motor auto tuning)
- » Resolver resolution self-adjustment to maximize precision in the whole speed range
- » Configurable simulated encoder output from 64 to 4096 ppr (line driver)
- » Backup power supply
- » Monitor software under Windows for parameters setting and monitoring
- » Possibility to set speed
- » Electrical gearing and master/slave function
- » Multipositioner: 12 full programmable positions
- » Programmable profiles
- » Digital potentiometer for setting speed ratio in master/slave function
- » Step motor function with space loop control
- » RS485 serial interface with Modbus protocol (baud rate 9.600÷115.200)
- » Single-phase supply for 3A and 7A sizes

OPTIONS

- » CAN BUS interface (can open compatible)
- » PROFIBUS DP interface
- » Opto isolated simulated encoder output
- » RS232 / 485 adapter for PC
- » Remote keypad for drive parameters setting and monitoring
- » Clamping resistors



DMBL SERIES

POWER

- ▶ Built in clamping circuit (external resistor)
- ▶ Built in EMC filter
- ▶ Output frequency: 0 ÷ 640 Hz
- ▶ Drive diagnostic through display or from serial line
- ▶ Three-phase, single-phase 230Vac or external DC bus supply
- ▶ Built in soft-start circuit

CONTROL AND REGULATION

- ▶ Full digital regulation
- ▶ Keypad for programming and diagnostic
- ▶ Independent ramps in the 4 quadrants
- ▶ 8 opto isolated configurable digital inputs
- ▶ 3 programmable speed references (jog)
- ▶ Inputs for speed reference:
 - analog $\pm 10V$
 - digital: from keypad or RS485 serial line
 - frequency (encoder-like or frequency and up/down)
- ▶ Inputs for torque and current limit references:
 - analog $\pm 10V$
 - digital: from keypad or RS485 serial line
- ▶ 3 opto isolated digital outputs
- ▶ 2 programmable analog outputs
- ▶ 1 analog output for speed monitoring

Technical data

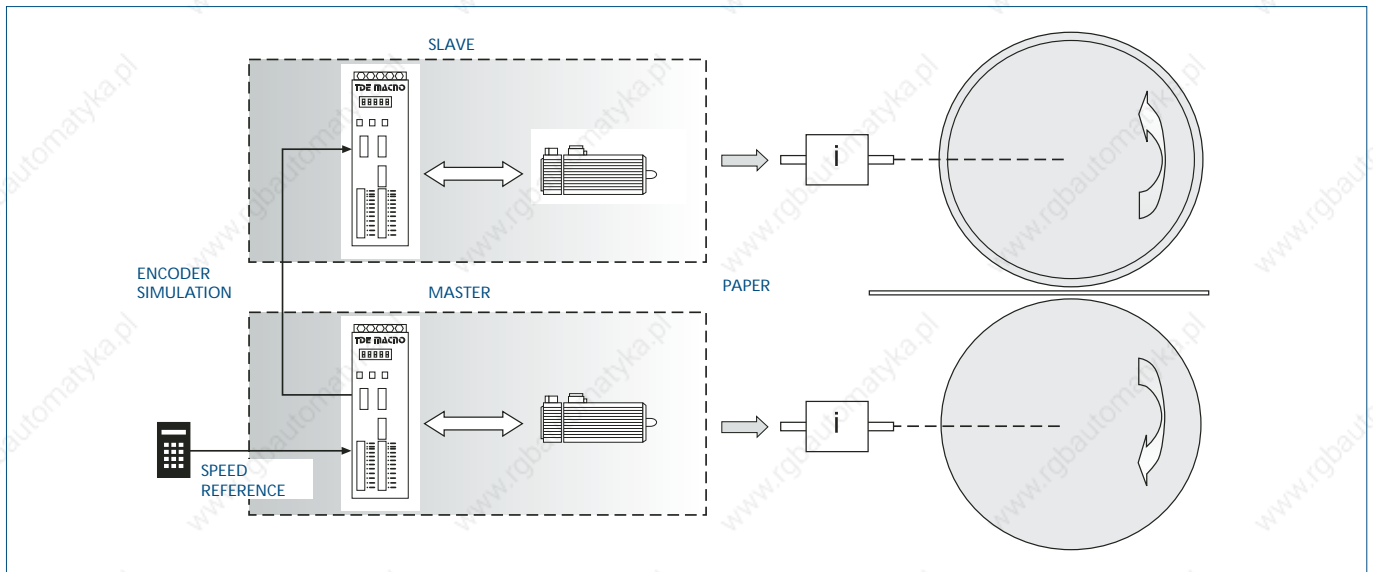
Size		DMBL 03	DMBL 07	DMBL 10	DMBL 12	DMBL 15	DMBL 20
Rated current	A rms	3	7	10	12	15	20
Peak current	A rms	6	14	20	24	30	40
Dimensions							
H= 236 P= 153 (mm)	L (mm)	108	108	128	128	148	148
H= 236 P= 153 (mm) (with field bus)		125	125	145	145	165	165

Main supply

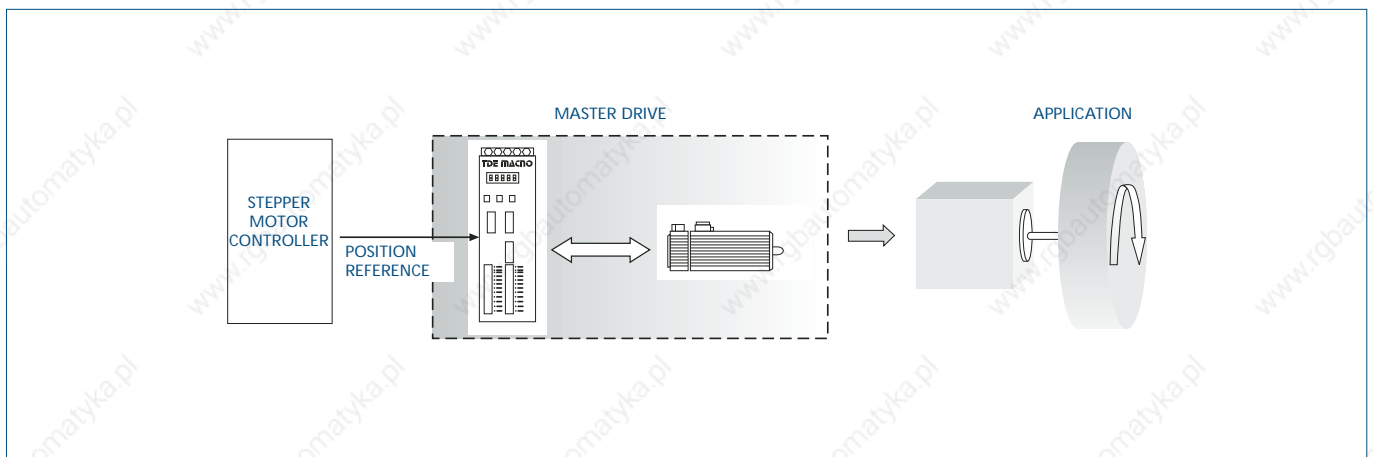
Line voltage	V a.c.	three-phase 230 Vac $-15\% / + 10\%$ (single-phase 230 Vac for 3A and 7A es)
Line frequency	Hz	50 ÷ 60 $\pm 5\%$
Power supply from external	DC bus	
Environment temperature	°C	0 ÷ 45

SOME APPLICATIONS

ELECTRONIC GEARING



STEPPER MOTOR FUNCTION



MULTIPOSITIONING

