

OD700 OPENdrive



The line of OSAI **OPENdrive OD700** servo-drives perfectly matches the **OPENcontrol CNC** family, improving system dynamic performances and simplifying configurability and commissioning. OD700 are provided with EtherCAT fieldbus, they have compact mechanical dimensions and they support a wide range of operating currents and power supply voltages.

OD700 are the perfect solution for machines dedicated to wood and marble working, metal sheet cutting (plasma, Oxy-fuel, Water-jet, Laser cutting) and for milling machines. There are six available sizes, in four different mechanical formats, having nominal currents of 3A, 4,5A, 6A, 12A, 18A and 36A.

The capability to supply a high peak current, which can reach the 300% of the nominal current for some specific sizes, allows costs reduction and dimensions

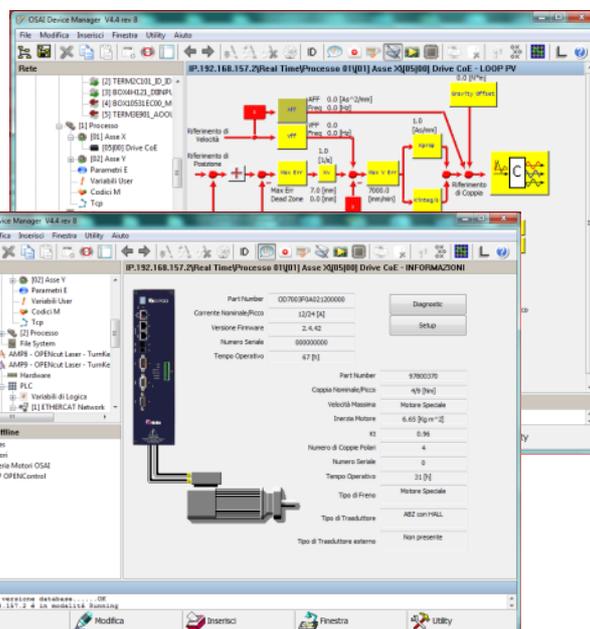
optimization. High internal sampling, advanced motor-management algorithms and the high speed of the communication bus allow managing high dynamics machines, while the possibility to connect an auxiliary transducer allows improving mechanical system precision.

The automatic recognition of the connected motors and the configuration by “ODM”, a powerful integrated browser able to simultaneously manage all connected drives and motors, facilitate all the start-up operations.

ODM allows both the visualization and the modification of motors and drives parameters, as well as the diagnostic analysis of the drive through several graphical pages easy to use.

A complete multi-trace oscilloscope allows performing a detailed analysis of the dynamic behaviour of the axes, obtaining the best performances of the machine.

All models have available the integrated security function **STO (Safe Torque Off)** to control the cut of the power supplied by the drive to the motors and allow the safe intervention of the operator without cutting power to the machine tool.



Together with OD700 drives, OSAI offers different series of high-inertia sinusoidal brushless servomotors

According to the model, the available stall torques range from 0,2 Nm to 66 Nm, maximum speed of 3000, 4000 and 6000 rpm and different number of poles (4 or 8). Servomotors have available a thermal sensor and can also be equipped with an optional brake.



Technical Data

OD700 OPENdrive						
P/N	OD7003F0A010300000	OD7003F0A010400000	OD7003F0A010600000	OD7003F0A011200000	OD7003F0A011800000	OD7005F0A013600000
P/N (with 2 nd encoder input)	OD7003F2A010300000	OD7003F2A010400000	OD7003F2A010600000	OD7003F2A011200000	OD7003F2A011800000	OD7005F2A013600000
Rms current	3A	4,5A	6A	12A	18A	36A
Peak current	9A		12A	24A	36A	108A
Dimensions (h, d, w) [mm]	183 x 200 x 65		275 x 266 x 73		310 x 266 x 104	320 x 310 x 90
Protection	Overcurrent, overvoltage, over-temperature of the drive. Overcurrent and over-temperature of the motor					
Connection	2 x RJ45 for EtherCAT, 1 x RJ45 for Ethernet, D-sub connectors for main and auxiliary motor feedback Removable power connections					
Power supply	230VAC ÷ 480VAC ±10% Three-phase					
Integrated Clamp Resistor	60W		100W		200W	NO
External Clamp Resistor	Optional					Always
Local diagnostic	7 segments display					
Safe Torque Off (STO)	YES					
Transducer interface Port 1	Encoder SinCos 16/1024 Hiperface Single/Multi turn, Incremental SinCos 1Vpp, Incremental ABZ + Hall, Resolver, Incremental SinCos 1Vpp+Hall, ABZ, ABZ+Hall Proprietary 20 bit serial absolute					
Transducer interface Port 2	Incremental SinCos 1Vpp, Incremental ABZ					
Digital input	Rapid Halt, Zero switch, Fast Touch Probe (optoisolated, programmable)					
Other digital inputs	1 optoisolated, programmable (i.e. Gantry axes emergency management)					
Digital output	Drive ready					
Other digital output	3 optoisolated, programmable (i.e. Gantry axes emergency management)					
Motor brake	Driven directly by the drive					
Parametrization & Programming	Integrated on CNC, executable on Windows. Parameters setup, diagnostic and monitoring functions through oscilloscope Drive connection through EtherCAT port (CNC) or local browser connected to drive through Ethernet port					
Cooling	Forced cooling					
Operating temperature	-20÷55°C		-20÷45°C From 45÷55°C with de-rating (-3% for each °C)			
Humidity	Storage: -25÷70°C 10% ÷ 90% no condensation					



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