CronaTech

HDT®
Motors & Digital Drives

1969/2019
50
YEARS
IN THE ELECTRONIC
WORLD

DGFoxEvo SERVODRIVE
Evolution in Motion

DGFoxEvo

Digital servodrive for brushless and DC servomotors

Digital, sinusoidal, 4-quadrant bidirectional drives, supplied with 60CDV, for the control of rotary,linear brushless and DC current with rated current up to 13A.
Designed to work in EtherCat CoE, ProfiNet RT, CanOpen DS402, ModBus RTU, with analogue speed or frequency/direction reference.
Hall sensors feedback, incremental encoder or absolute encoder.
Enriched with software functionality, DGFoxEvo is a concentrate of tecnology, easy to manage, reliable and with a competitive price.

FIRMWARE FUNCTIONALITIES
- Speed control with adjustable ramps with or without Jerk
- Torque control with cogging compensation
- Torque limit control
- Multipositioner up to 64 indexes
- Electronic gear
- Pressure Control
- Electronic cam
- Rotary, linear and tubolar motor control
- Motor break management
- Digital filters
- Motor noise reduction observer

SPEED FEEDBACK
- Hall signals at 120°
- Incremental Encoder 5V Line Driver with/without Hall (+5V)
- Absolute Encoder SSI
- Sensorless

INPUTS AND OUTPUTS
- Main differential analogue input +/-10V (12bit)
- Auxiliary analogue input 0/+10V (12bit) single ended
- 6 programmable digital inputs
- 2 programmable digital outputs
- Auxiliary encoder input
- Encoder channels repetition output
- Pulse/direction output for encoder channels
- CCW e CW pulse train input

60VDC
900W

PROTECTIONS
- Alarm signaling by 3 leds
- Motor short circuit
- Power supply overvoltage
- Power supply undervoltage
- Heatsink overtemperature
- Rated current limit
- Hall sensors breaking
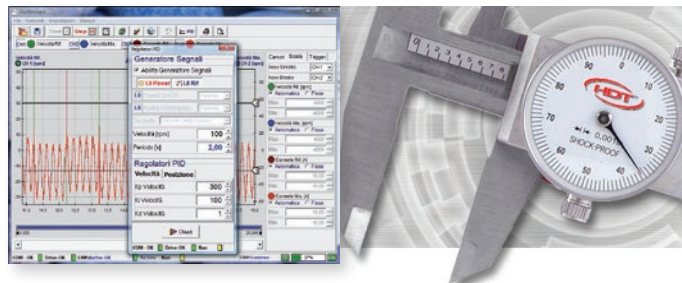- Motor temperature thermal image
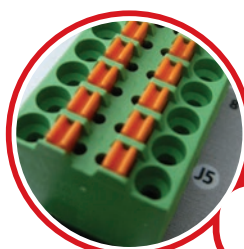
Easy-to-wire terminals

PROGRAMMING SOFTWARE
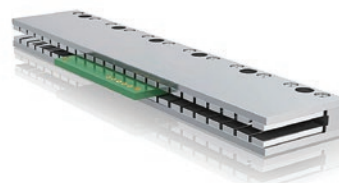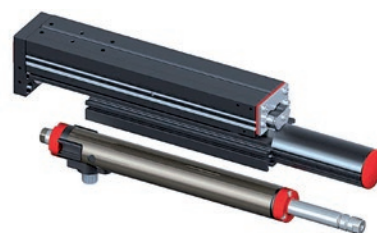
Programming via USB 2.0

CALIPER 4.0

- Programming software via USB2.0 for update and debug.
- Realtime oscilloscope with 100μs sampling on 4 channels
- Possibility to update the firmware by remote
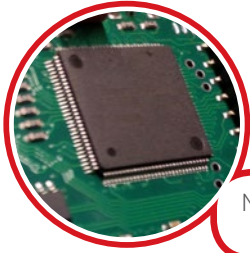
LINEAR MOTORS

LINEAR TUBOLAR MOTORS

AC BRUSHLESS MOTORS

DC CURRENT MOTORS

ADVANCED COMMUNICATION

The new DGFox Evo is not only faster thanks to a new CPU, but also more advanced in communication. Developed on 5 power sizes up to 900W and 4 versions with different fieldbuses that make it even more versatile.

New CPU 32 Bit FPU high performance

ST

STANDARD VERSION
Analogue and train pulse
- Speed control
- Torque control
- Electronic gear
- Multipositioner
- Electronic cam
- Pressure control

EtherCAT

ETHERCAT / COE
Protocollo DS 402
- Electronic Gear
- Position Mode
- Velocity Mode
- Profile Velocity Mode
- Profile Torque Mode
- Homing Mode
- Interpolated Position Mode
- Cyclic Sync Position Mode
- Cyclic Sync Velocity Mode
- Cyclic Sync Torque Mode
- Touch Probe
- Pressure Control

CANopen

CANOPEN
Protocollo DS 402
- Electronic Gear
- Position Mode
- Velocity Mode
- Profile Velocity Mode
- Profile Torque Mode
- Homing Mode
- Interpolated Position Mode
- Cyclic Sync Position Mode
- Cyclic Sync Velocity Mode
- Cyclic Sync Torque Mode
- Touch Probe
- Pressure Control

Modbus

Modbus RTU
- Speed control
- Torque control
- Electronic gear
- Multipositioner
- Electronic cam
- Pressure control

PROFINET

PROFINET RT
Profidrive Protocol (CA e CB)
- Speed control (AC1)
- Positioner in Program Mode (AC3)
- Manual positioner (AC3)
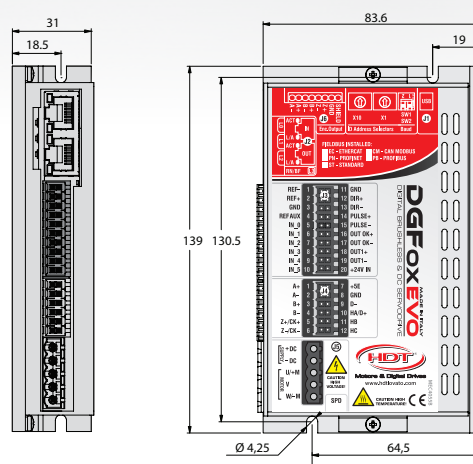- Electronic gear
- Pressure control

Technical specifications

SIZES	UdM	DGFox60 EVO				
		2.5/5	5/10	8/16	10/20	13/26
Supply voltage	V	60 VDC				
Min/Max supply voltage	V	20÷80VDC				
Rated current	A	2,5	5	8	10	13
Peak current for 1"	A	5	10	16	20	26
Max output power	KW	0,175	0,350	0,55	0,70	0,90
Max output power (DC brushed)	KW	0,125	0,250	0,40	0,50	0,65
Control method		IGBT/PWM, sinusoidal or trapezoidal for brushless motors and control for brushed DC motors				
Back-up logic power supply	VDC	+24VDC ± 20%				
Feedback		Hall sensors - Incremental Enc. 5V Line Driver with/without Hall sensors - Absolute Enc.SSI - Sensorless				
Driveable motor types		AC/DC rotary, linear and tubolar brushless - brushed permanent magnet DC motors with encoder				
Fieldbus		Modbus RTU - CanOpen DS402 - EtherCat COE - ProfiNet				
Analogue main reference		±10V differential speed and torque- 12Bit				
Analogue auxiliary reference		0/+10V speed and speed with torque limit- 12Bit				
Frequency reference		Pulse/Direction- A/B 5V Line Driver channels- CW/CCW (2MHz)				
Digital inputs and outputs		6 programmable inputs PNP - 2 programmable outputs NPN/PNP				
Control modes		Speed - Adjustable ramps- Torque control- Multipositioner - Electronic gear - Electronic cam				
Limit Switch management function		Breaking in torque limit in case of P-OT, N-OT				
Digital filters		Notch filter, Iq filter, digital input filter, Noise reduction observer				
Protection function		Short circuit - Over/Undervolt. - Drive Overtemp. - Hall sensor break- Current limit				
Drive signalings		3 LED for status and alarms				
Hardware Safety functions		STO: SafeTorque Input circuit according to IEC61800-5-2:2007*				
Brake management		Integrated. Immediate stop or in ramp				
Drive Setting		Through CALIPER 4.0 software via USB 2.0 port				
Approximative weight	Kg	0,39				

Drive/Motor Matching

HDT motors	Tn	2.5	5	8	10	13
		DGFox EVO - current sizes				
B05S	Nm	0,5	0,5			
B05M	Nm		0,9	0,9		
B05L	Nm			1,2	1,2	
B07S	Nm			1,2	1,2	
B07M	Nm				1,9	1,9
B07L	Nm					2,6
MS04M	Nm		0,32			
MS06M	Nm			1,27	1,27	1,27

Dimensions

*pending approval

CronaTech Drives AB

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UK

ORDER CODE FOR DG FOX 60 EVO

DX	0	6	0	1	0	2	0	C	M
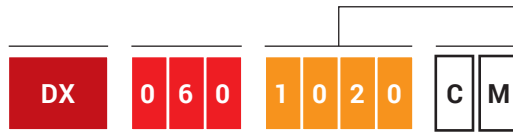
Model Drive DGFoxEvo

Power Voltage: **60Vdc**

ST = No fieldbus **CM** = CanOpen/ModBus **EC** = EtherCat CoE **PN** = ProfiNet RT

Current Size:		
2.5/5:	2 5
5/10:	5 1 0
8/16:	8 1 6
10/20:	1 0 2 0
13/26:	1 3 2 6

EXAMPLE:	**DX 060 25 CM**	DGFOX EVO 60V - 2.5A./5A.- With Option CanOpen/Modbus

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