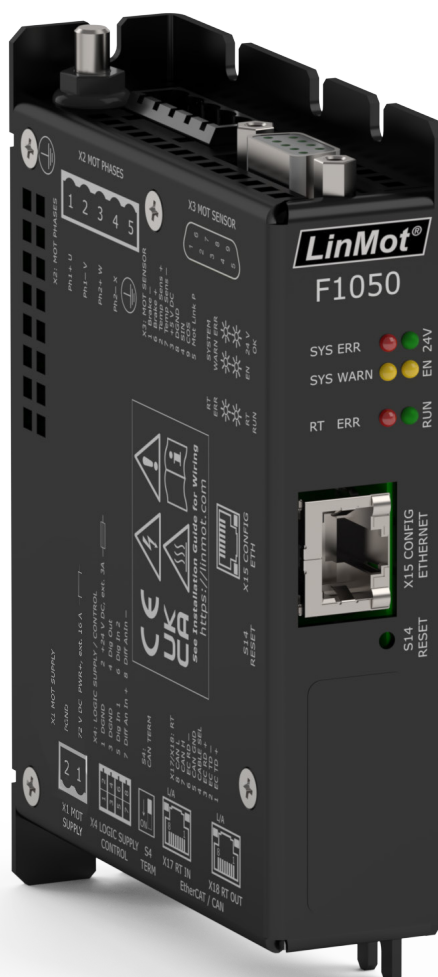


SERVO DRIVE F1050-DS-HC-0S



- ✓ Compact Drive with EtherCAT and CANOpen interface
- ✓ Optimized for LinMot linear motors and LinMot EC02 motors
- ✓ Configuration over Ethernet (X15) or EtherCAT (EoE)
- ✓ 15A power stage
- ✓ Plug and Play (PnP) motor configuration

Servo Drive F1050-DS-HC-0S

F1050 servo drives are axis controllers with 32-bit position resolution and integrated power stage for linear motors and EC02 motors. The controllers are suitable for standard and high-end positioning tasks with NC synchronisation.

The servo drives offer a universal solution for a flexible drive concept in single and multi-axis applications with linear motors and other actuators.

The drives have two separate power supplies for the logic and power sections. This has the advantage that the drive and linear motor do not need to be re-initialised when machine power is restored, as all process data, including the actual position of the linear motor, is still up to date.

The ultra-fast control cycle, combined with the high resolution of the A/D converter, ensures perfect motor control for demanding positioning tasks. Features include interpolated motion, trajectory tracking, motion profile positioning and position streaming. The drives can be configured directly from the higher-level control system. The Ethernet interface ensures fast parameter transfer.

Freely programmable analogue and digital inputs and fast trigger inputs are available as fast process interfaces or for direct evaluation of sensor signals.

Easy configuration is guaranteed by the intuitive LinMot Talk PC software. In addition to online documentation, comprehensive debugging tools such as an oscilloscope or error memory ensure fast commissioning of the axes. Plug-and-play motors are automatically detected and configured.

The F1050 servo drives offer all the necessary interfaces to equip linear motors or EC02 motors with optional peripherals such as reference and limit switches.

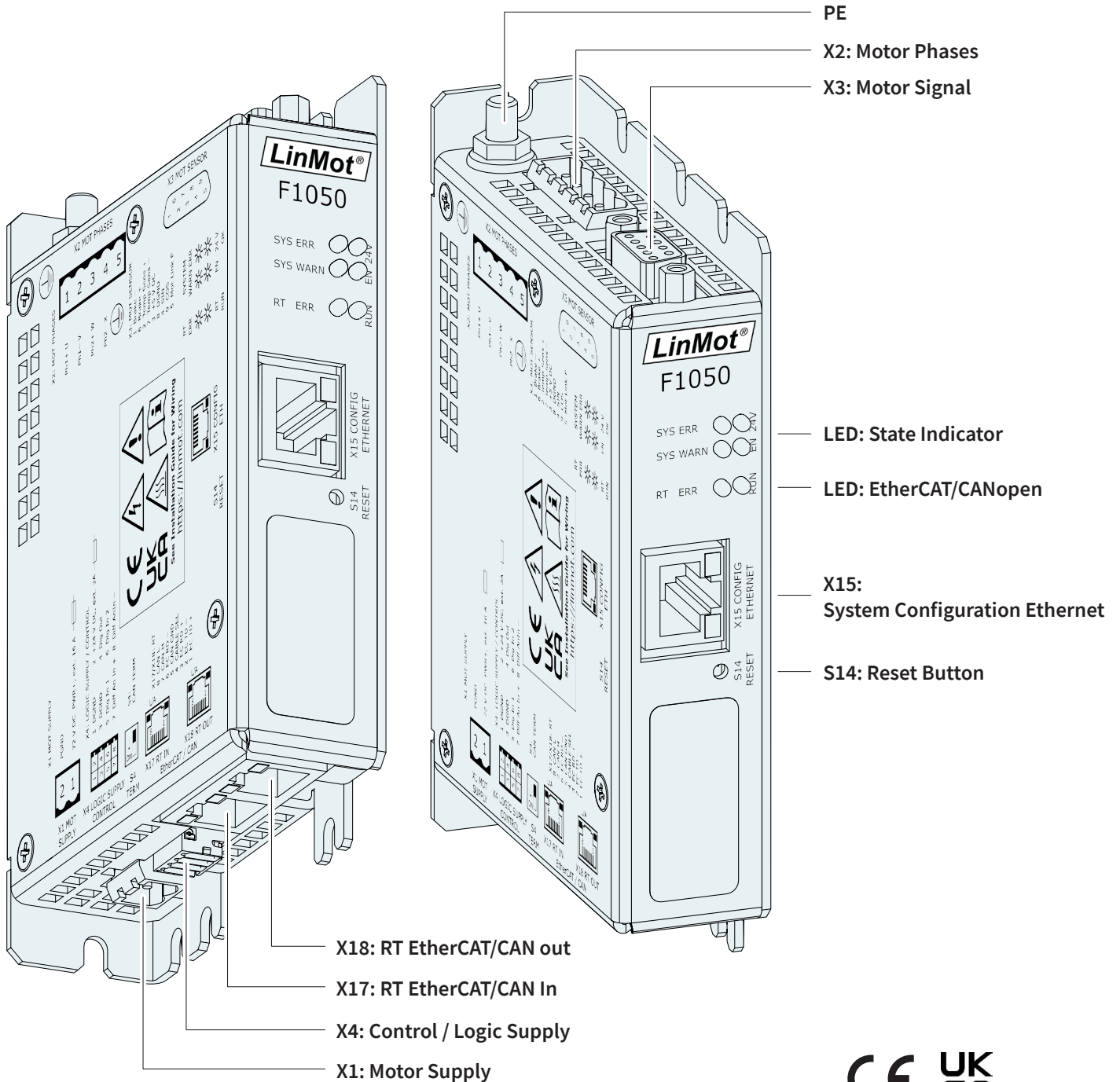


Power Supply	
	72 VDC (24 to 85 VDC)
Maximum Motor Current	
	15 A _{pk} (0 to 599 Hz)
Logic Supply	
	24 VDC (22 to 26 VDC)
Control	
LinMot Motors P0x-... / PR0x-... / EC02 Motors	•
Plug and Play (PnP) Auto Configuration	•
Phase short-circuit on disable- and error-states*	•
Technology Functions	
	Point-to-Point Entries (VAI)
	Limited Jerk Motion Commands (VAIJ)
	Command Table with up to 255 Entries
	Plug and Play (PnP) Auto Configuration
	Time Curves up to 50 Motion Profiles / Up to 8110 Curve Points
	Cyclic command value input
	Drive Profile
Fieldbuses (Protocols)	
EtherCAT CiA402 (preinstalled)	•
CANopen up to 1Mbaud (CANopen FW must be installed)	(•)
Interfaces	
Analog Inputs +-10V	1
Digital Inputs / Outputs 24 V	2 / 1
Configuration Interface	
Ethernet (X15), 100BASE-TX, IPV4 and IPV6	•
Ethernet (EoE) (only if EtherCAT is used)	•
Timings	
Min. Bus Cycle Time	4 kHz
PWM Frequency	16 kHz
Trigger Commands	≥ 4 kHz
Current Controller	8 kHz
Position Controller	4 kHz
Certification	
cULus - pending	The F1050-DS-HC-0S-xxx will be listed according UL61800-5-1 (pending, this is planned to be done until the end of the year 2025).

* This feature greatly improves the system behavior on error states, because the motor will be braked by the eddy current.

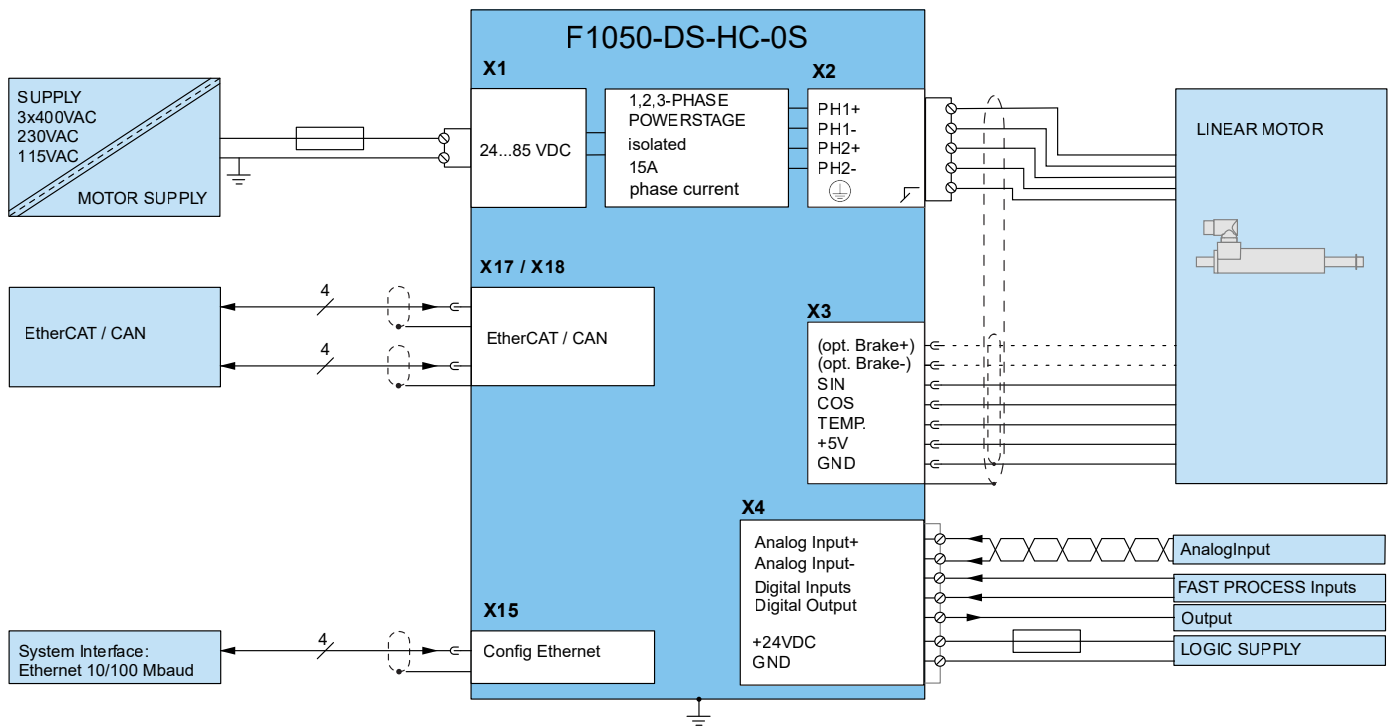
EtherCAT®

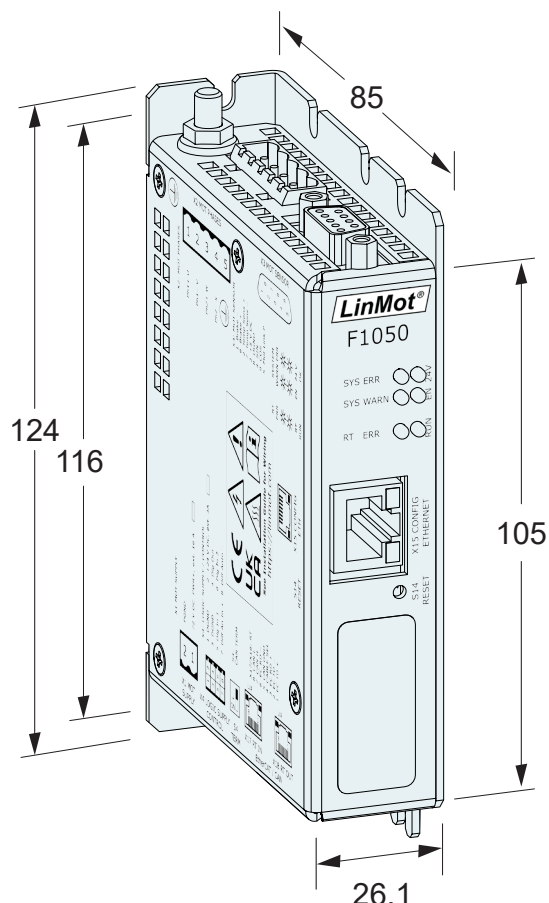
CANopen



cULus - pending

The F1050-DS-HC-0S-xxx will be listed according UL61800-5-1 (pending, this is planned to be done until the end of the year 2025).





Dimensions in mm
Mounting points for M4 screws

Servo Drive		F1050-DS-HC-0S
Width	mm (in)	26.1 (1.03)
Height	mm (in)	105 (4.13)
Height with fixings	mm (in)	124 (4.88)
Depth	mm (in)	84.8 (3.34)
Weight	g (lb)	400 (0.88)
Mounting Screws		2 x M4
Mounting Distance between screw holes	mm (in)	116 (4.57)
Case IP Code	IP	20
Storage temperature	°C	-25...40, maximum change 20 K/hour
Transport temperature	°C	-20...70
Operating temperature	°C	5...40 at rated data
Relative humidity		< 85 % (non-condensing)
Air pressure	hPa	700...1060
Exposure to ionizing radiation		Not acceptable
Exposure to corrosive environment		Not acceptable
Pollution	IEC/EN 60664-1	Pollution degree 2
Shock resistance (30 ms)	g (lb)	5 (0.01)
Vibration resistance (10-150 Hz)	g (lb)	1 (0.002)
Max. case temperature	°C	70
Max. power dissipation	W	30
Mounting place		in the control cabinet (minimum IP54)
Mounting position		vertical
Distance between Drives	mm (in)	Without power derating *: 20 (0.8) horizontal / 50 (2) vertical With power derating *: 5 (0.2) horizontal / 20 (0.8) vertical

* The derating is depending on the situation in the cabinet. The temperature of the drive should be checked under full load (the temperature should be stable, which may take an hour or more). This allows to verify that enough margin is there if the cabinet goes to the maximum allowable temperature of 40° C. For example, if the drive temperature reaches 45° C and the cabinet temperature is 30° C, this would result in a drive temperature of about 55° C at a cabinet temperature of 40° C. The warning level of the drive is configured by default to 75° C and the error level to 80° C. In this example, everything is fine. If the drive temperature is long time above the warning level, this might result in a reduced lifetime of the drive.

Servo Drives

Item	Description	Part Number
F1050-DS-HC-0S-000	EtherCAT DS402 Drive (72V/15A)	0150-6767

Accessories

Item	Description	Part Number
Single Connector	All included in set 0150-4391	
DC01-C1X00/X2	Drive Connector Motor Phases	0150-3526
Compatible Power Supplies		
S02-72/600	Power Supply 72 V/600W (1500W Peak), 120-230VAC	0150-5700
S02-72/1000	Power Supply 72 V/1000 W, 3x400-480 VAC	0150-4535
S01-24/500	Power Supply 24 V/500 W, 1x120/230 VAC	0150-2480



The connectors X1 and X4 are delivered together with the drive! The connector X2 is included on the motor cable.

