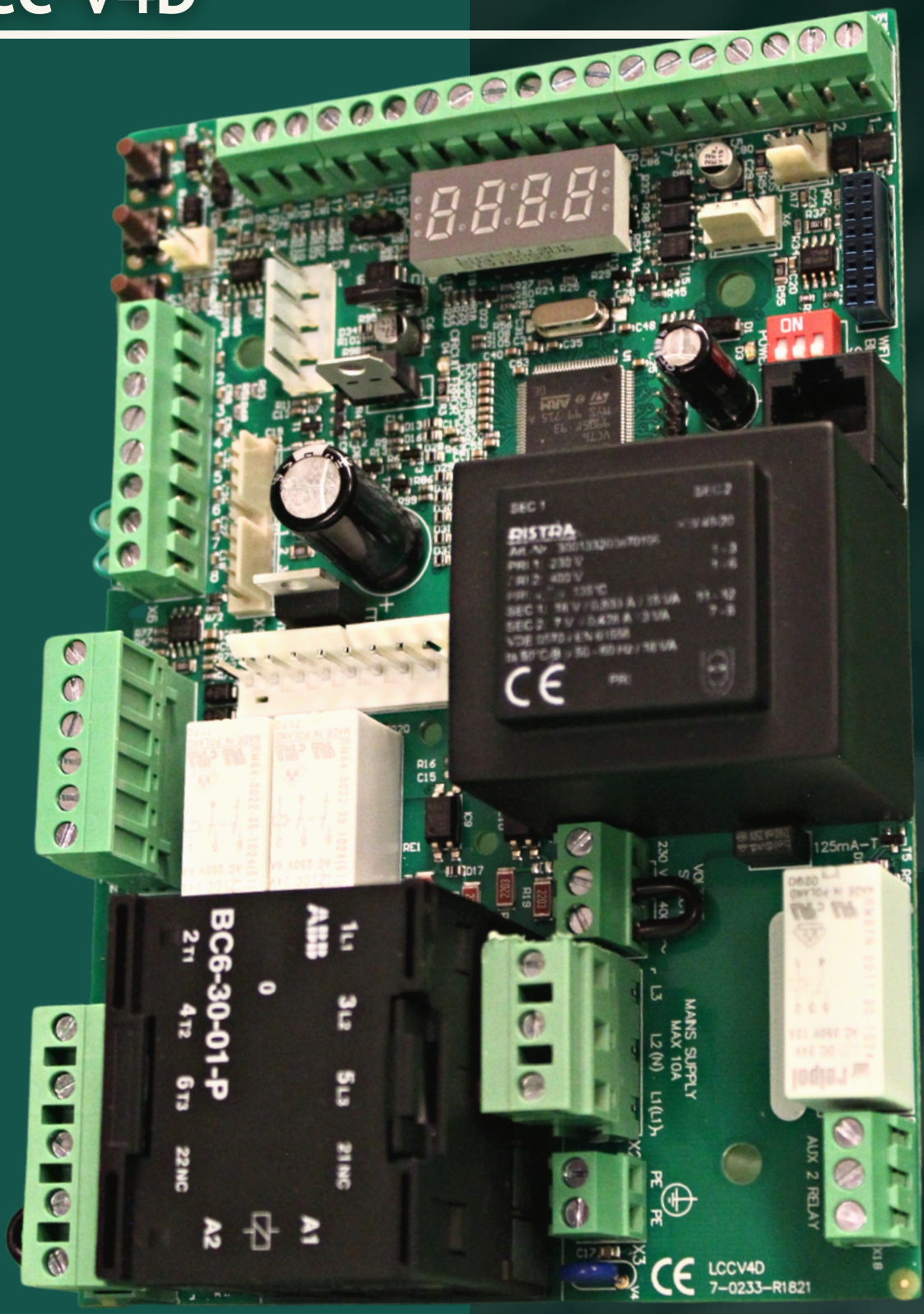
CONTROLLER PCB LCC-V4D

DALMATIC



The LCCV4D Mini Basic controller has been designed as a controller with capabilities to operate an industrial door safely under electrical control by means of a pushbutton station or keypad switch.

Its intended use is to be connected to a suitable motor not exceeding the load for the controller.

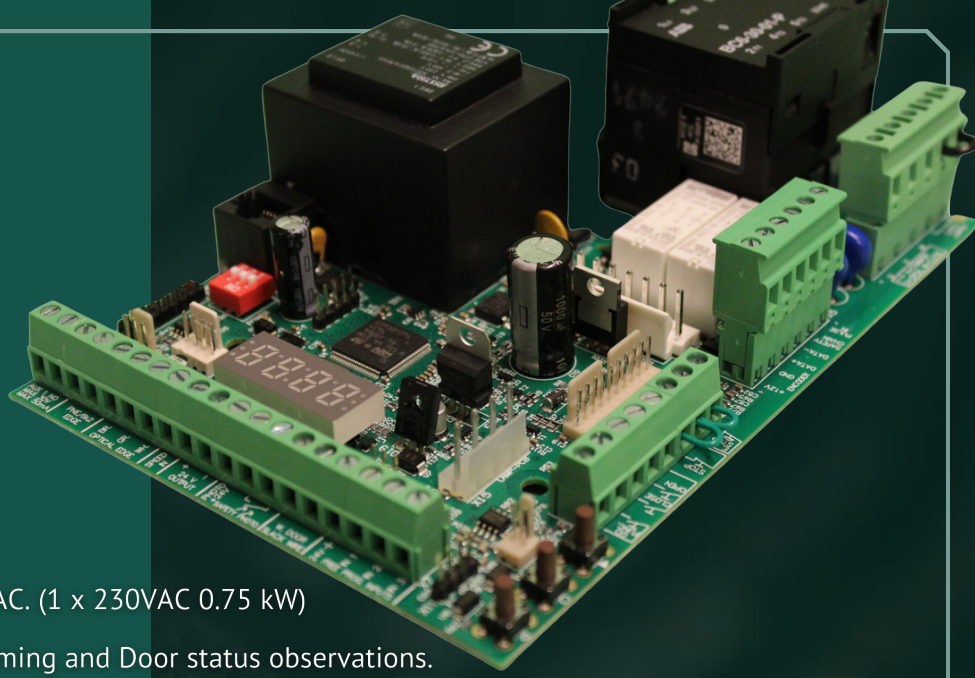
Connections are provided for Mains supply, Motor power, Electronic Travel Limits switches, Push Buttons, Pneumatic or Electrical or Optical Safety Edge, Photo beam safety and 24VDC Auxiliary power (250mAmax). Optional plug-in connectors for Radio's, Traffic light or Relay module 1.

Basic functions include: - Stop, Open, Close, and Auto close via a time delay provided a suitable monitored safety edge is fitted. Additional functions selected by programing of parameters with display. Force control when using encoder with tacho output or a separate tacho module on motor.

TECHNICAL DETAILS

	50/60Hz, Mains fuse max: 3 x 10A Insulation Ui = 400V. (No Neutral required by 3 x 400VAC Mains)
Temperature range (opererate)	-10…+50°C
Humidity	Op til 93% RH non-condensing.
Vibration	Low-vibration installation, wall mounted.
Print dimensions	176 x 115 mm
Enclosure data	Open frame PCB board. Must be mounted in IP54 enclosure as minimum.
Low voltage supply:	Transformer 230-400VAC/7-18VAC 18VA with build-in thermo fuse and proteched with multifuse on secondary windings.
Motor output (Contactor).	Max motor load by 3 x 400VAC: 2.2 kW Max motor load by 3 x 230VAC: 1.5 kW Max motor load by 1 x 230VAC: 0.75 kW (1-phase use)
Emergency stop, Stop, Termo spec. door stop and safety chain.	Function as normal stop. Emergency stop also disconnect power to contactor coil as double safety.
24VDC output.	24 VDC unregulated. Max load 250 mA. (if no plug-in module is used, else these currents must be subtracted)
Safety edge inputs:	PNE/air switch (working at 24VDC -NC)) Electric type - 8k2 termination ± 10% One Optical type (Fraba OSE or Dalmatic TSS/RSS) (All with test function (Performance level C, Category 2)
Photo input.	24VDC PNP With test function (Performance level C, Category 2)
Input for wicket door and slack rope	One special input for "wicket door/slack cable circuit", selectable type With test function (Performance level C, Category 2)
Electronic limits	Enkoder: MTM Dalmatic multiturn, Feig mutiturn and Kostal singleturn, GFA singleturn. (RS485, Data+ Data-, terminated with 120 Ohm) (MTM Dalmatic has build-in tacho for torque control)
Torque control:	Tacho based input for torque control. (4 pulses/motor-turn).
Other inputs:	Safety chain. With test function (Performance level C, Category 2)
Programable inputs:	3 pcs. Free programable 24VDC
Relay outputs	1 pcs. 250V/12A insulated relay output. 1 pcs. 30V/50mA insulated solid state relay output.
Radio connector	Plug-in Teleco
Display	4 x LED digit mounted on PCB. Option graphic display with backlight. Mounted on lid and connected with Ex. RS485 connector.
Trafic light	Plug-in for trafic light. (LAMP-PCB) or Relay module 1.

CONTROLLER LCCV4D PCB FOR SECTIONAL DOORS



FEATURES:

- AC motor size up to 2.2 kW, 3 x 400VAC. (1 x 230VAC 0.75 kW)
- 4 digits LED display for easy programming and Door status observations.
- Connection for electronic limits encoders. (Dalmatic, Feig and Kostal).
- Connection for 3 safety edge types with test function. (24VDC Pneumatic, 8k2 electric or optical).
- Connection for wicket door and slack rope circuit. (with test function)
- Photo inputs with automatic test function. (6 month check not necessary)
- Connection for 3 extra programable inputs.
- Connection for keypad. (option keypad with lights available).
- Terminals for external push-buttons – Emergency STOP - OPEN – STOP - CLOSE.
- Plug-in connector for Teleco radio
- 2 AUX relays outputs for free programming. (high and low voltage)
- 24VDC 250 mA power output for other equipment.
- LED on inputs and relay outputs for easy fault finding.
- Plug-in screw terminals on motor and encoder.
- Option for different colours on screw terminals.
- Plug-in connector for Lamp-PCB for traffic light or Relay module-1.
- Automatic learning encoder type and rotation direction.
- Automatic learning of connected safety devices.
- Option for graphic display.
- Option 3 x digital optocoupler output for inverter drive.
- Option for Bluetooth, Wi-Fi and CAN bus communication.
- Option for Modbus communication. (for e.g. inverter)
- Prepared for inverter usage.
- Contactor monitoring with second switch off safety – (in case of welded main contactor).
- Torque/force control.
- Automatic adjustment of force control related to door wear and annual variations. 4 setpoint windows.
- Designed for standard EN 12453:2017.with reference to EN13849-1.
- Certified Class B functional safety software.

LCCV4D PCB

CIRCUIT BOARD

DALMATIC