

Stepper Motor Power Stage with Indexer and Plain Text Display

The GCD Stepper Motor Drive

GCD MINI is an 'intelligent' stepper motor power stage with indexer for two-phase stepper motors up to $9 A_{PEAK}$. Absolute and relative motion commands can be executed from a PLC or online on the PC.

PLC Mode

The GCD power stage receives motion commands from a PLC via the digital inputs and outputs.

Online Mode

The GCD receives motion commands from a PC via RS 485 or RS 232 interface.

Indexer

The embedded indexer allows a processor controlled selection of the best step resolution. The step resolution is automatically adapted to the frequency:

$1/8 \rightarrow 1/4 \rightarrow 1/2 \rightarrow \text{full step} \rightarrow 1/2 \rightarrow 1/4 \rightarrow 1/8$.

Ministep guarantees high resonance suppression during a slow run. Full step enables the complete motor power at high frequencies.

Plain Text Display



A two-line plain text display and three menu buttons are sufficient for operating the GCD.

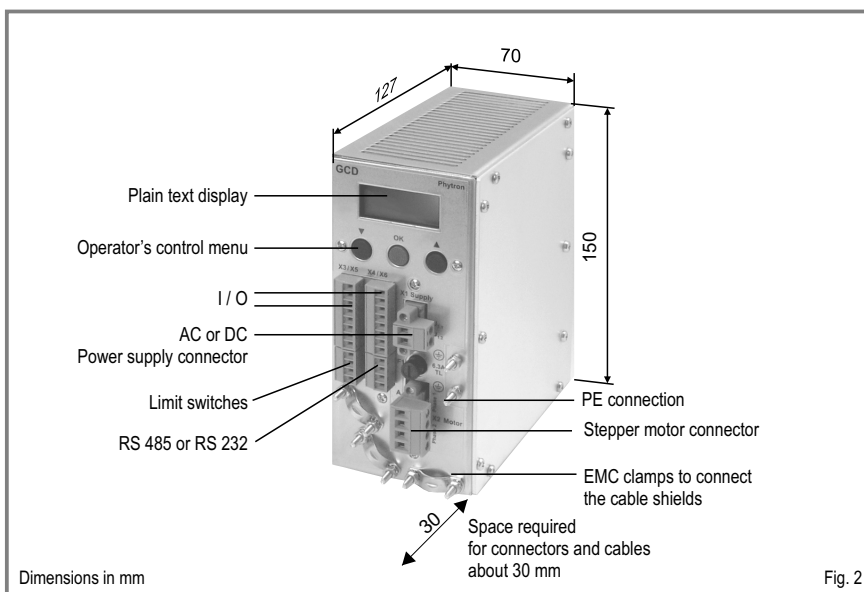
The parameters run, stop and boost current can be programmed and changed in the SETUP menu at any time.

The TEST menu allows to drive the motor for test with the programmed parameters, to set the outputs and to display the input states.

Active parameters are displayed during motor running: phase current, voltage or power stage temperature (optional).

The plain text display changes in case of an error: short circuit, under voltage or over temperature.

Front View / Dimensions



Technical Information

- Ministep stepper motor power stage for bipolar control of two-phase stepper motors
- Indexer for exact positioning
- PLC mode or online mode
- Parametrization and configuration in the online mode with IPCOMM
- 8 Digital inputs, 4 digital outputs for PLC mode
- 2 Limit switches
- Input logic 24 V
- Phase currents from 0.14 to $9 A_{PEAK}$
- Power supply: 50 V_{AC} or 70 V_{DC}
Admissible range: 17 to 50 V_{AC} or 24 to 70 V_{DC}
- Step resolution up to 1/8 step
- Plain text display 2 x 8 digits
- Compact design 70 x 150 x 127 mm
- User-friendly screw connectors
- Fully EMC compliant metal housing
- DIN rail or wall mounting
- Prepared for mounting an external 24 V fan at the bottom of the housing
- IPCOMM communication software included in delivery

IPCOMM Communication Software

IPCOMM, a Windows® PC software for configuring and programming, is included by every GCD. IPCOMM is used to set up parameters and to program the PLC sequences for the GCD.

Optionally the instructions can be integrated into the own programs as ASCII strings - e. g. with LabView, HyperTerminal or C. So it is possible to transmit the parameters to each GCD during initializing or changing a module and evaluate the status signal.

IPCOMM Characteristics

- Desktop with pull-down menus and mouse support
- Hotkeys for frequently used instructions
- Menu dialog in 3 languages (German, English, French)
- Offline and Online mode
- Configuration of the GCD
- Definition and transmission of PLC instructions
- Relative or absolute motion instructions
- Parameter settings like speed, ramp, motor current

IPCOMM Menu Example

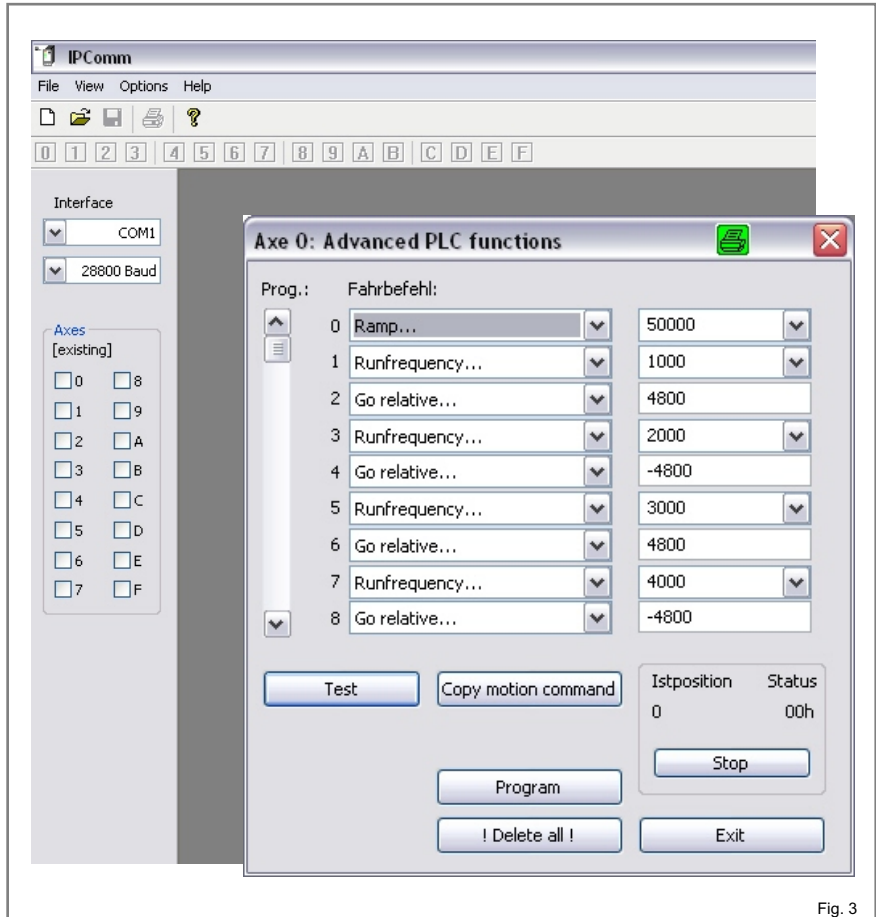


Fig. 3

Accessories

- Connector set included in delivery
- Fan 24 Vdc
- Mains transformer 230/115 V_{AC}
- PS 5-48 Power supply unit
- PS 10-24 Power supply unit

Ordering Code

GCD 93 - 70 MINI - H - 485

Type	GCD = Stepper motor power stage
Peak current	9 = 9 A
Current regulation	3 = 4-Quadrant-chopper current control
Motor voltage	70 = 70 V
Step resolution	MINI = Step resolution 1/1 to 1/8 step
Mounting kit	H = DIN rail mounting kit W = Wall mounting kit
Interface	232 = RS 232 Interface 485 = RS 485 Interface