# STG-700

## CAN Mini-PLC Stepper Motor Controller

| | | | |
|---|---|---|---|
| **2** ANALOG INPUT | **2** DIGITAL INPUT | **4** POWER OUTPUT | **1.5A** BIPOLAR STEPPER |
| **CAN** BUS | TTL-232 | SOLID STATE | miCon-L |
| 8..32V= | °C -40/+50 | **IP66** SPLASH PROOF | SHOCK PROOF |

## FEATURES

- **Tiny CAN Logic Stepper Motor Controller**
- **2 analog Inputs 0 to 30 VDC, 12 bit ADC**
- **2 digital Inputs up to 1 kHz**
- **4 Power Outputs up to 1.5 A**
- **Power Stepper Motor Output 1.5 A**
- **1 CAN 2.0A/B Interface**
- **Reliable Solid-State Outputs**
- **Fail Safe Oscillator**
- **Programmable Status LED**
- **TTL-232/USB Connection to PC**
- **Intuitive graphical Programming Capability**
- **Wide Operating Voltage Range 78to 32 VDC**
- **Wide Operating Temp. Range -40 to +50°C**
- **Vibration resistant and rugged Sealing**
- **Aluminium Diecast Housing IP66**
- **Engineered and manufactured in Germany**

## APPLICATIONS

- **Industrial Automation**
- **Building Automation**
- **Automotive Technology**
- **Process Control**

## DESCRIPTION

The brandnew STG-700 integrates a powerful stepper motor controller with an ultrcompact Mini-PLC in a spashproof aluminium diecast housing.

The graphical programming capability, universal I/Os and a CAN interface open up a variety of industrial and also battery-powered 12/24V applications.

For example, the STG-700 is able to control a large format display using a bipolar stepper motor converting an analog or digital input signal to a corresponding motor angle.
Also x-by-wire systems can be realized using the STG-700 as both control and power unit.

As the STG-700 is fully integrated in a splasproof aluminium diecast housing, additonal housings will be not necessary. This fact makes the Mini-PLC ideal for applications within harsh environment.
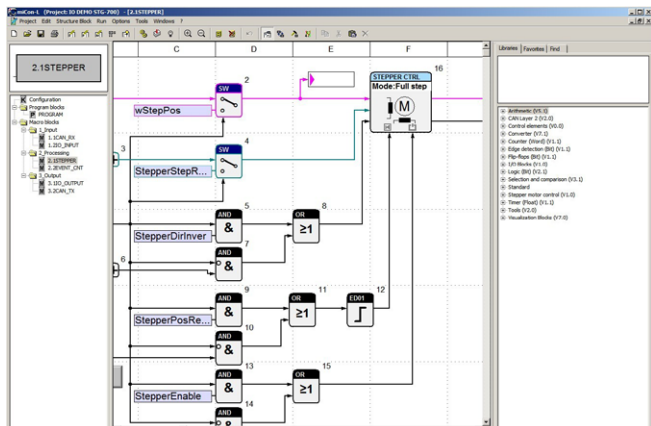
The STG-700 is also available as customer-tailored OEM version.

**BARTH** Elektronik GmbH

# STG-700

## PROGRAMMING WITH MICON-L

Without learning a difficult programming language the Mini-PLC can be easily programmed using simple and vivid graphical function blocks. This block design meets graphical standards of the latest graphical programming languages.
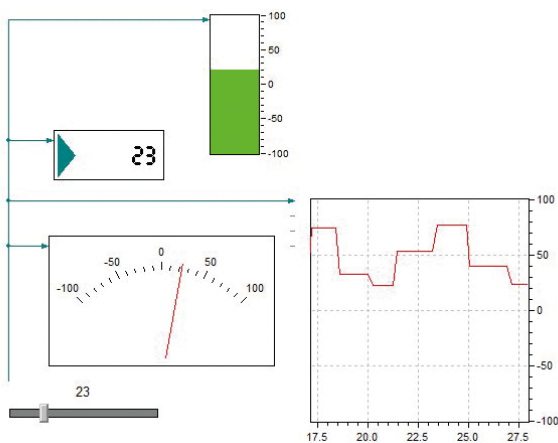
The miCon-L software suite features programming, simulation and test in one unique software design tool. The flexible programming option offers a variety of possibilities in industrial, automotive and maritime applications.



Programming the STG-700 follows using the USB port of your PC with installed miCon-L software suite and the VK-16 USB Connection Cable.

The miCon-L Software supports full simulation and visualisation operation modes.

miCon-L provides a variety of visualisation blocks and interactive elements to control and debug the Mini-PLC.



## SPECIFICATIONS

| | |
|---|---|
| **Operation Voltage** | 8 to 32 VDC |
| **Current Consumption** | 5.6 A max. |
| **Fusing** | 6 A max. (external) |
| **CAN** | CAN 2.0A (11 bit ID)<br>CAN 2.0B (29 bit ID),<br>100, 125, 250, 500 kbit |
| **Digital Input IN3 - IN4** | $U_{IN}$ = 0 to 30 VDC, $R_i$ > 30 kOhm<br>$U_{LOW}$ <= 5 VDC, $U_{HIGH}$ > 5VDC<br>$f_{IN}$ <= 1 kHz, $t_{IN}$ >= 1 ms |
| **Analog Input IN1 - IN2** | $U_{IN}$ = 0 to 30 VDC, $R_i$ > 11 kOhm |
| **Accuracy ADC** | ± 1% (< 0,2 VDC) 12 Bit |
| **Digital Output OUT1 - OUT4** | $I_{OUT}$ <= 1.5 A (resistive load)<br>@ $f_{OUT}$ = 0 to 100 Hz<br>$U_{OUT}$ >= $U_{IN}$ -0.45 V, $I_{TOT}$ <= 4 A |
| **Stepper Motor Output A1, A2, B1, B2** | Motor Type: bipolar<br>Motor Current: 0,1..1,5 A (adjust.)<br>Step Modes: 1/1, 1/2, 1/4, 1/8 |
| **Security Features** | Watchdog (WD)<br>Fail safe oscillator (FSO)<br>Brown out detection (BOD)<br>Power up timer (PUT) |
| **Conformity** | 2004/108/EG<br>2004/108/EC<br>2014/30/EU |
| **Electrical Connection** | plugable screw-type connectors<br>0.25 to 1.5 mm² |
| **Operation Temperature** | -40 to +50 °C (IEC 60068-2-1/2) |
| **Storage Temperature** | -40 to +70 °C (IEC 60068-2-1/2) |
| **Shock Resistance** | min. 100 m/s² (10G) |
| **Vibration Resistance** | min. 50 m/s² (5G) @ 10 to 100 Hz |
| **Protection Grade** | IP 66 |
| **Housing Material Potting Material** | Aluminium Diecast<br>Polyurethane Resin, UL: V0 |
| **Weight** | 180 g |
| **Dimensions** | 58 x 64 x 34 mm (LxWxH) |
| **Ordering Information Mini-PLC** | Mini-PLC STG-700<br>Art.-No. 0850-0700<br>GTIN 4251329400132 |
| **Ordering Information Accessory** | Connection Cable VK-16 USB<br>Art.-No. 0091-0016<br>GTIN 4251329400187 |

## DOCUMENTS, VIDEOS & SOFTWARE

[www.barth-elektronik.de](www.barth-elektronik.de)

[www.micon-l.de](www.micon-l.de)

**BARTH** Elektronik GmbH