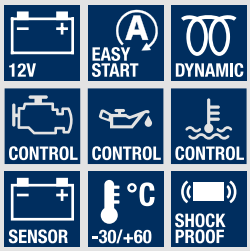
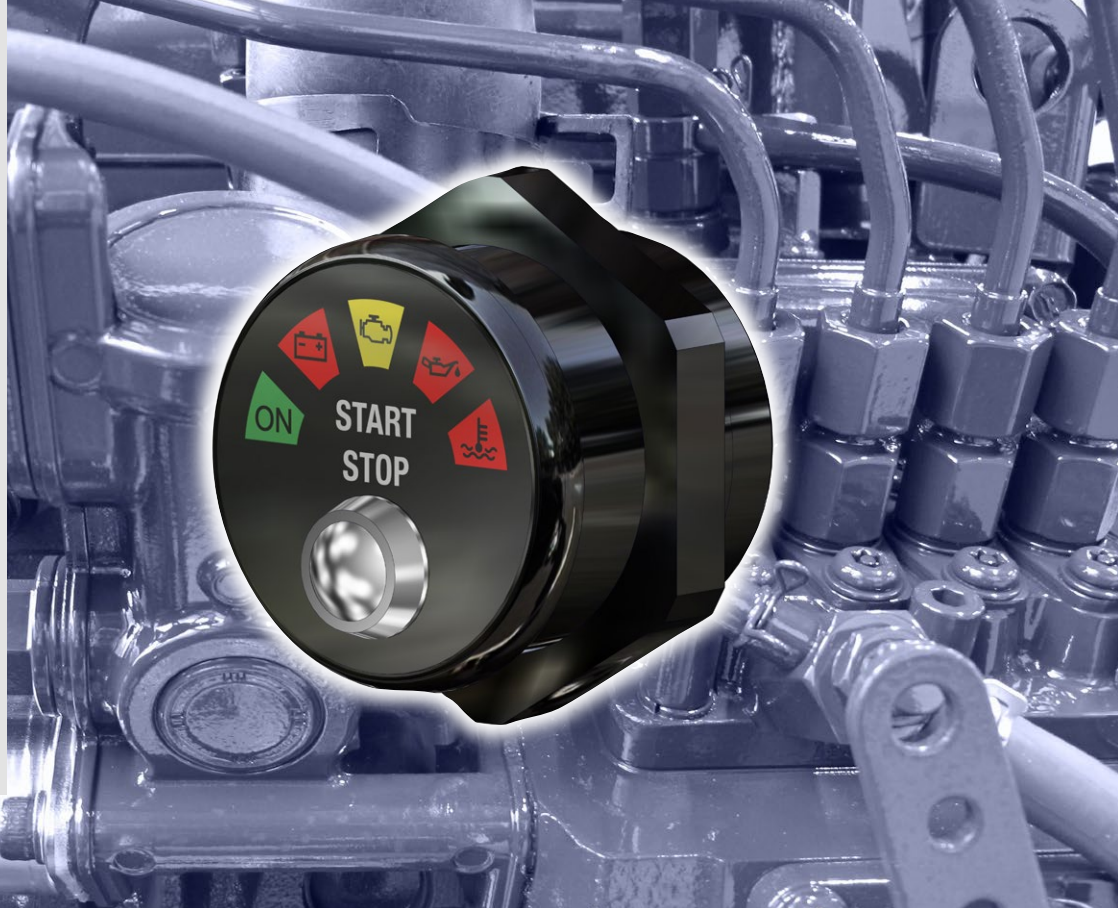
STG-125

intelligent
Diesel Engine
Controller





FEATURES

- Engine START/STOP by one Push Button
- Automatic dynamical Preheating Control
- Self-acting Starter Motor Control
- Ignition Mode provides low-battery Cut-Off
- Generator Control and Starter Inhibition
- Oil Pressure Control & Cable Break Detection
- Temperature Control
- Automatic Failure Emergency Stop
- Entirely splashproof Housing IP 65
- Suitable for Outdoor Use in harsh Environment
- Fully protected against Sand, Ice and Rain
- Compact panel mount Housing
- Wide Operating Voltage Range 7 to 16 VDC
- Operating Temperature from -30 to +60°C
- Wiring Harness for KUBOTA® 03-M- and 05-Engine Series available

APPLICATIONS

- Construction Machines
- Agriculture Machines
- Exavators and Diggers
- Diesel Generator Sets

DESCRIPTION

The STG-125 is an innovative and comfortable Diesel Engine Controller with outstanding monitoring functions suitable for all KUBOTA® Diesel Engines out of the 03-M- and 05-Series.

Thanks to the high integration grade the STG-125 replaces vintage ignition switches and panel-mounted indicator lights by one powerful and reliable unit.

As a result you save precious space and wiring effort and won´t get affected by broken or corroded mechanical ignition switches.

The controlled preheating and engine start procedures ensure in combination with the automatical failure engine stop functions the longest possible engine life.

In addition BARTH® offers the wiring harness KB-900 and KB-901 suitable for the STG-125 Engine Controller providing direct connetion to all KUBOTA® Diesel Engines out of the Super-Mini, 03-M- and 05-Series.

For bulk buyer BARTH® supplies the STG-125 also as OEM product in customer-tailored versions.

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STG-125

FUNCTIONS

ON IGNITION / START / STOPP

Activating the STG-125´s button for a short time (less than 1 second), switches the ignition relay output which powers up all ignition loads without starting the engine.
This mode features a battery monitor which cuts-off all ignition load in case of battery undervoltage.
Activating the STG-125´s button for longer than 1 second, the engine start procedure will be initiated.
First of all the STG-125 checks wether or not preheating will be necessarily. In the second step the starter motors gets powered up until the engines idle speed is reached.
Any malfunction during the engine starting procedure will time-limit each starter motor runtime to 5 seconds to get a secure protection against starter overheating.
Activating the STG-125´s button a second time the engine will be immediately beeing stopped.

BATTERY / GENERATOR

The STG-125 controls and monitores all generator functions (charging voltage and frequency).
Malfunction will be indicated by the red LED.

ENGINE FAILURE

Failed engine starting procedures, a broken sensor or cable break will be indicated by the yellow LED.

OIL PRESSURE INDICATOR

Low oil pressure leads to an immediate engine stop.
The STG-125 also checks proper cable connection to the oil pressure sensor before start-up.
Any malfunction inhibits the engine start procedure and lights up the red LED.

TEMPERATURE INDICATOR

An overheated engine is indicated by the red LED and also initiates an immediate engine stop.

SPECIFICATIONS

Construction	Round, rugged, fully sealed, splash-proof panel mount housing
Operating Voltage	7 to 16 VDC, nominal voltage 12VDC
Current Consumption	< 5 mA
Fusing	5 A (externally)
Input Temperature Switch	Digital, low-active, fully ESD/TVS Protection
Input Oil Pressure Switch	Digital, low-active, Cable break Detection, fully ESD/TVS Protection
Input Generator ‚W‘	Analog, 0 to 32 VDC, Frequency Counter
Solid-State Outputs Ignition Preheating Starter Motor	I_{OUT} <= 1.5 A (resistive Load) I_{OUT} <= 0.5 A @ L <= 50 mH U_{OUT} >= U_{IN}-0.5 V, I_{TOT}<= 3 A
Security Features	Push Button Control Cable Break Detection Low Battery cut-off Starter Motor Inhibition Emergency Stop
Conformity	2006/95/EG, 2004/108/EG EN60730-1, EN61010-1, EN50081-1, EN50082-1 EN 60068-2-78: 2002 EN 60068-2-6: 2008 ISO 16750-3: 2007
Electrical Connection	M12-Connector, 8-way
Operating Temperature	-30 to +60 °C (IEC 60068-2-1/2)
Storage Temperature	-30 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
IP Protection Class	IP 65 (all around)
Housing Material	Polyoxymethylen (POM)
Weight	200 g
Dimensions Panel Mount Diameter	56 x 47 mm (DxT) 51 to 52 mm (D)
Ordering Information Engine Controller	Engine Controller STG-125 12V Art. No. 0850-0125
Ordering Information Accessory	For Kubota® 03-M and 05: Wiring Harness KB-900 Art. No. 0125-0900
	For Kubota® Super-Mini: Wiring Harness KB-901 Art. No. 0125-0900

DOCUMENTS

Detailed documents and videos:

www.barth-elektronik.de

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