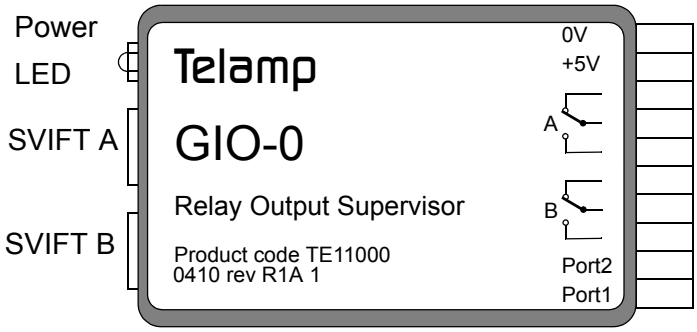
Highly configurable SVIFT supervision unit with alarm relay outputs.

- Supervises either a SVIFT loop or two individual chains and reports A or B alarm status on output relays.
- Configurable control of LEDs on unit causing alarm.
- Also adds 2 general purpose I/O ports .
- Powered either via jack or SVIFT signal interface - typ 12 mA consumption.
- Rich variety of mouniting options: DIN-rail, 19” rack, wall...
- Plus all the distinctive SVIFT features: self configured relative addressing, low cost daisy chain bus, open protocol, redundancy capability.


GIO0 is a very simple supervisor for SVIFT equipment, indicating alarm status in any of the connected units by activating its relays. Up to 8 units can be supervised, connected to both or one of its SVIFT interface jacks, as separate chains or in a loop configuration. It scans all connected units for ROFLB objects and handles its output relays according to the A- or B-alarm determined by these. It also optionally can handle the LEDs on the connected units to identify which unit causes the alarm.

GIO0 main intended application is as only supervisor, and it is thus default configured not to respond to messages nor to pass on messages between its two SVIFT interfaces. This behaviour is however configurable - it can also act as a normal IO adapter using its two general ports as inputs (digital or analog) or outputs. The following SVIFT protocol object are available when configured to respond to messages:

**Description by SVIFT protocol objects** (refer to SVIFT protocol documentation):

| Object | Name | Description |
|---|---|---|
| 4STCTL | StdLED | The LED at the SVIFT interface side of the unit. It is normally lit green when the unit has input power, but can change to red in four states: “Off”, “Slow flash”, “Fast flash” and “On”. |
| NVSTR | ProdIndivData | A 100byte non-volatile string for storage of arbitrary product administrative data. Its default contents is empty (zero bytes). |

| Object | Name | Description |
|---|---|---|
| ROFLB | IFLAGS | This flag byte has the following bits implemented:<br>“A_INV” and “B_INV”. These flags indicate that normal input voltage is missing at either the A or B side SVIFT interfaces.<br>“NOLOOP” Indicates there is no external loop from the A to B SVIFT interfaces.<br>“UNSTAB” Indicates GIO0 can not interpret the responses from the SVIFT interfaces - they appear unstable.<br>Only the UNSTAB is default configured as a B-alarm, the other bits as no alarm. |
| ROFLB | Inbits | All ports configured as digital inputs are visible here. The active state (active high or active low) can be configured as well as the A or B alarm state recommendation. The object name (“Inbits”) as well as each single port name (“Port1”,..) can be configured. This object is only visible if at least one port is configured as digital input. |
| OUTB | Outbits | All ports configured as digital outputs are available for control here. The active state (active high or active low) can be conbfigured, as well as the object name (“Outbits”) and and each singel port (“Port1”,..) name. This object is only visible if at least one port is configured as digital output. |
| 8ROSAN | Port1,... | Ports 1-2 can be configured as analog inputs, and if so appears as individual 8ROSAN objects using the configuarble names. For each of these objects, an offset value and its MULT, DIVI, EXP and TYPE parameters can be configured. The value presented i directly taken from an A/D converter connected to the port, and the offset value is first subtracted. A/D converter reference voltage, see electrical specifications. |

The default configuration of the unit defines all ports as inputs, active high, with no alarm recommendations. The ROFLB object name is “Inbits” and the individual ports are named “Port1”,”.Port2”.

The following behaviour is also configurable:

- Whether to respond to any requests to the above described objects - default disabled.
- Whether to pass on messages (not addressed to this unit) between the SVIFT interfaces like an ordinary IO adapter - default disabled.
- Whether to handle the LEDs of connected units - default enabled. And if enabled also which LED state corresponds to non-alarm, B-alarm, A-alarm - default Off, Slow Flash, On.
- Whether to handle its own LED - default enabled. And if enabled also which LED state corresponds to non-alarm, B-alarm, A-alarm - default Off, Slow Flash, On.

All configurations can be done using the freely available SVIFTerm GUI java application program. Maximum name length - for configurable names - is 9 characters. The configuration can be protected by use of password.

**Description by pin**:

| Pin | Description |
|---|---|
| Port1 | Default digital input. Reconfigurable as digital output or analog input. |
| Port2 | Default digital input. Reconfigurable as digital output or analog input. |
| B_NO | B-alarm normally (non-alarm state) open. |
| B_COM | B-alarm common. |
| B_NC | B-alarm normally (non-alarm state) closed. |
| A_NO | A-alarm normally (non-alarm state) open. |
| A_COM | A-alarm common. |
| A_NC | A-alarm normally (non-alarm state) closed. |
| +5V | Supply voltage for external adaption circuitry. Also the reference voltage of the internal A/D converter. |
| 0V | Ground reference of the unit. Same as the SVIFT interface Ground. |

**Specifications**

| | |
|---|---|
| Dimensions: | 85x50x27 mm |
| Operating Temp Range: | -10C ...+60C |
| Power Connector: | EIAJ RC-5320 type III |
| Port Terminal: | Max 1.5mm$^2$ Screw terminal |
| Power Supply Voltage: | 6..12V DC |
| Current consumption: | typ 12mA + output currents + 3mA per relay activated |
| Feed to SVIFT Interface: | max. 150mA (guaranteed limit <340mA) |
| Input Pullup (digital inputs): | typ 200uA (47kohm+/-1%) on ports 1-2 |
| Digital Output Drive Current: | 5mA (1kohm series res.) |
| +5V Output and A/D Accuracy: | +/-5% (tighter on request) |