

• Process and temperature inputs

Volt ,mV, mA, sensor power supply, potentiometer, frequency, strain gauge, thermocouple, PT100)
(programmable in front face or with serial link)

• Circular strip light 55 Leds (choice of colors)

• 4 digits measure display

• Up to 4 relays output

• option : isolated analog output

RS485 Modbus/Profibus link

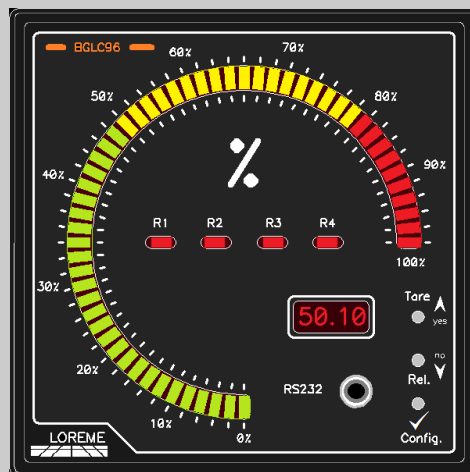
ETHERNET Modbus TCP link

• plug in terminals

• Ultra wide input power supply

• Applications : thermometry, weighing, frequency , process

signal conditioning, trip amplifier, control,



The BGCL96 is a compact digital bar-graph with dual display (ramp and digital)
for universal analog inputs, process and temperature. configurable in plain language (without manual)

DESCRIPTION:

Process inputs:

- Current with or without sensor power supply.
- Voltage.
- Potentiometer.
- Strain gauge
- Resistance
- Frequency and duty cycle
- Namur sensor

Temperature inputs:

- PT100 2 , 3 and 4 wires
- Thermocouple type : B,E,J,K,R,S,T,N, W3,W5,...
(all other thermocouple on request)

Calculation function:

- square root extraction
- Non linear scale (Multisegment Sector) 26 points

Front panel :

- circular ramp 55 leds 5 x 2mm (color on request)
- customizable front scale
- Digital measure display : 4 digits
- 3 push buttons : fully device configuration
alarm , measure, offset adjustment,
- 4 relay status leds

Analog output (option : /S)

- 1 isolated analog output configurable in
current or voltage: 0 ... 4 ... 20 mA ou 0...1...5...10 V
- adjustable response time and burn out value

Relays (option : /R)

- Maximum 4 changeover relay output usable in alarm,
regulation, sensor or input loop breaking detection.
- Threshold, direction, hysteresis and delay individually
adjustable on each relay (on & off delay)

Communication interface:

- Several communication protocol available
in option for measure reading:
- RS485 : Modbus , Profibus
- Ethernet : Modbus TCP

General characteristics:

- DIN panel : 96x96mm depth: 93mm
- plug in screw or spring loaded terminals up to 1.5mm²
- Ultra wide input switching power supply
- conformal coatings
- Protection Rating IP20 option up to IP65

Safety / Reliability:

- high noise immunity, superior to CE marking requirement.
- saving of the configuration parameters in FLASH,
safety of data holding > 40 years,
- watchdog supervising the program process,
- galvanic insulation input/output/power supply/communication
- reduction of drift effects thanks to the self-calibration of the
input circuit.

Configuration:

- Full device setting in front panel or via serial link
- USB configuration cable supplied separately.
- Firmware update possible through serial link
- Warning configuration serial link is not insulated from input

Version and order code :

BGCL96	Single strip light with display version
BGCL96/R1	+ 1 relay
BGCL96/R2	+ 2 relays
BGCL96/R3	+ 3 relays
BGCL96/R4	+ 4 relays
BGCL96/S	+ 1isolated analog output
BGCL96/C	+ MODBUS/PROFIBUS LINK
BGCL96/CMTCP	+ ETHERNET MODBUS TCP LINK

option : /R4 /S, /C, /CMTCP may not be combined

Input

(resolution : 14 bits process , 16 bits temperature ; reference 5 ppm)

Type	Range	Accuracy
Low levels voltage	- 250 à 2000mVdc	+/- 40 μ V
Input impedance	1 Mohms	à +/- 1 mV
<i>(on two calibers : 250mV and 2000 mV)</i>		
Differential voltage	- 50 à +50mVdc	+/- 10 μ V
Input impedance	1 Mohms	
High levels voltage	- 25 à 200Vdc	+/- 0.02 V
Input impedance	500 kohms	à +/- 0.8 V
<i>(on two calibers : 25 V and 200 V)</i>		
Courant	- 4mA à 40 mA	+/- 0.01 mA
Input impedance	50 Ohms	
Résistance 2, 3 wires	0 / 380 Ohms	+/- 0.2ohms
Measure current	< 700 μ A	
Pt100 2, 3 wires	-200.....800 °C	+/- 0.3 °C
Pt100 4 wires	-200.....800 °C	+/- 0.1 °C
Thermocouples :		
Tc B	+200.....1800 °C	+/- 2 °C
Tc E	-250.....1000 °C	+/- 0.3 °C
Tc J	-200.....600 °C	+/- 0.4 °C
Tc K	-200.....1350 °C	+/- 0.5 °C
Tc R	0.....1750 °C	+/- 1.5 °C
Tc S	0.....1600 °C	+/- 1.5 °C
Tc T	-250.....400 °C	+/- 0.4 °C
Tc N	-250.....1350 °C	+/- 0.5 °C
TC W3	0.....2300 °C	+/- 2 °C
TC W5	0.....2300 °C	+/- 2 °C
Compensation T°	-10 / 60 °C	+/- 0.2 °C
<i>current of breakdown thermocouple detection = 0.5 μA.</i>		

Frequency	0.25 / 100 000 Hz	+/- 0.2 %
duty cycle	50Hz.....5 KHz	+/- 0,2%
input résistance	100 kohms	
measurable range	4 à 50 V~ peak to peak	
with automatic suppression of dc voltage		
all type of sensor : NPN , PNP , NAMUR		

AUXILIARY

sensor power supply	22 Vdc +/- 5%	(50mA)
potentiometer reference	5 Vdc +/- 0.15%	(20mA)
digital input	dry contact / TTL / 24V/...	

ALIMENTATION

Wide ac-dc input: (2 versions: standard or low voltage unpolarized)
 standard : 21Vdc, 55Vac.....à.....265Vac/dc
 Low voltage : 12Vdc.....à.....30Vdc.
 consumption < 3 VA

Analog output (resolution 12 bits)

Type	Range	Accuracy
Courant	0 ... 4 ... 20 mA	+/- 20 μ A
Permissible load:	0.....800 Ohms	

Voltage	0 ... 10 V	+/- 10 mV
Output impedance :	500 Ohms (internal shunt 0.1%)	
Response time (programmable)		
process input	35 mS.....60 S	
temperature input	100 mS.....60 S	

RELAYS (/R)

Switching capacity 250VAC , 1A (250 VA)

COMMUNICATION (/C)

RS485 link dual protocol:	
Modbus	12kbds....38,4kbds.
Profibus-DP	9600..... 1.5Mbds.
Wiring	plug in terminals 2 wires.
Liaison Ethernet (RJ45)	10/100 M

RECOMMENDED OPERATING CONDITIONS

Operating temperature	-10 à +60 °C
Storage temperature	-20 à +85 °C
Drift	< 20 PPM / °C
Relative humidity	85 % (no condensed)
Weight	~ 180 g
Protection Rating	IP20
Dielectric strength	1500 Veff continuous

Electromagnetic compatibility

Generic standards: NFEN50081-2 / NFEN50082-2



EN55011	meet	group 1 / class A		
EN61000-4-2	no influence	B	ENV50140	< +/- 5 % A
EN61000-4-4	< +/- 5 %	B	ENV50141	< +/- 10 % A
EN61000-4-5	< +/- 5 %	B	ENV50204	no influence A
EN61000-4-8	no influence	A		
EN61000-4-11	< +/- 5 %	B	DBT	73/23/CEE

WIRING AND OUTLINE DIMENSIONS: