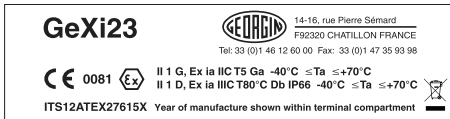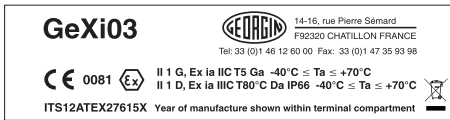# 1. DESCRIPTION

The GeXi03 and GeXi23 are field mounting, intrinsically safe digital indicators that display the current flowing in a 4/20mA loop in engineering units. They are loop powered but only introduce a 1.2V drop into the loop.

The two models are electrically similar, but have different size displays.

Model	Display
GeXi03	4 digits 34mm high
GeXi23	5 digits 29mm high and 31 segment bargraph.

This abbreviated instruction sheet is intended to assist with installation & commissioning, a comprehensive instruction manual describing safety certification, system design and calibration is available from the GEORGIN sales office or may be downloaded from our website.

Both models have ATEX intrinsic safety certification for use in flammable gas and combustible dust atmospheres. The certification label, which is located on the top of the instrument enclosure show the certificate numbers and the certification codes. Copies of certificates may be downloaded from our website.

GeXi03

GEORGIN
14-16, rue Pierre Sémard
F92320 CHATILLON FRANCE
Tel: 33 (0)1 46 12 60 00 Fax: 33 (0)1 47 35 93 98

CE 0081 (Ex)
II 1 G, Ex ia IIC T5 Ga -40°C ≤ Ta ≤ +70°C
II 1 D, Ex ia IIIC T80°C Da IP66 -40°C ≤ Ta ≤ +70°C

ITS12ATEX27615X   Year of manufacture shown within terminal compartment

GeXi23

GEORGIN
14-16, rue Pierre Sémard
F92320 CHATILLON FRANCE
Tel: 33 (0)1 46 12 60 00 Fax: 33 (0)1 47 35 93 98

CE 0081 (Ex)
II 1 G, Ex ia IIC T5 Ga -40°C ≤Ta ≤+70°C
II 1 D, Ex ia IIIC T80°C Db IP66 -40°C ≤Ta ≤+70°C

ITS12ATEX27615X   Year of manufacture shown within terminal compartment

Special conditions for safe use

When used in Zone 0 indicator must be installed such that ignition source due to impact between aluminium label and iron/steel is excluded.

2. INSTALLATION

The GeXi03 & GeXi23 indicators have robust IP66 glass reinforced polyester (GRP) carbon loaded enclosures incorporating an armoured glass window & stainless steel fittings. They are suitable for exterior surface mounting in most industrial environments, or pipe mounting using one of the accessory kits.

If the enclosure is not bolted to an earthed post or structure, the earth terminal on the cable entry bonding plate, which may be assembled on the inside or outside of the enclosure, should be connected to local earthed metalwork or to the plant's potential equalising conductor.

Terminals 8, 9, 10, 11, 12, 13 & 14 are only fitted when the indicator includes optional alarms and a backlight. See full manual for details.

The GeXi03 & GeXi23 are CE marked to show compliance with the European Explosive Atmospheres Directive 2014/34/EU and the European EMC Directive 2014/30/EU
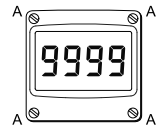

Step A
Unscrew the four captive 'A' screws and separate the indicator assembly and the back-box.
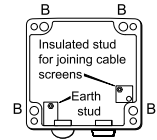
Step B
Secure the enclosure back-box to a flat surface with M6 screws through the four 'B' holes. Alternatively use a pipe mounting kit.
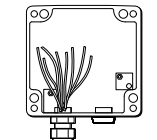
Step C
Remove the temporary hole plug and install an appropriate IP rated cable gland or conduit fitting. Feed the field wiring through the cable entry.
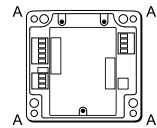
Step D
Terminate field wiring on the indicator assembly. Replace the indicator assembly on the enclosure back-box and tighten the four 'A' screws.

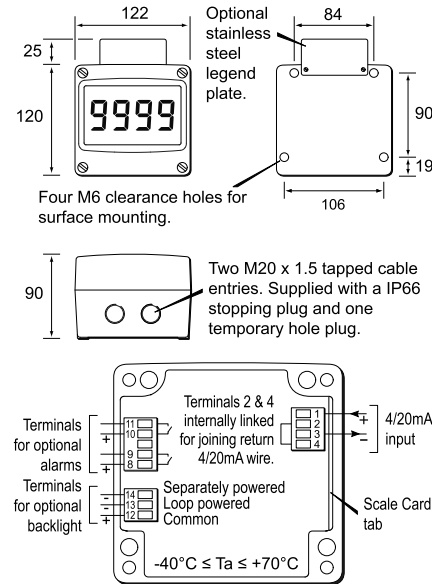Fig 1 GeXi03 & GeXi23 Installation procedure

Abbreviated Instruction for

GeXi03 and GeXi23 intrinsically safe
field mounting loop powered indicators

Four M6 clearance holes for surface mounting.

Two M20 x 1.5 tapped cable entries. Supplied with a IP66 stopping plug and one temporary hole plug.

Optional stainless steel legend plate.

Terminals for optional alarms

Terminals for optional backlight

Terminals 2 & 4 internally linked for joining return 4/20mA wire.

Separately powered Loop powered Common

4/20mA input

Scale Card tab

-40°C ≤ Ta ≤ +70°C

Fig 2 Dimensions and terminal connections

EMC

For specified immunity all wiring should be in screened twisted pairs, with the screens earthed in the safe area.

Hazardous area   Safe area

GEORGIN Zener barrier bzg 787+

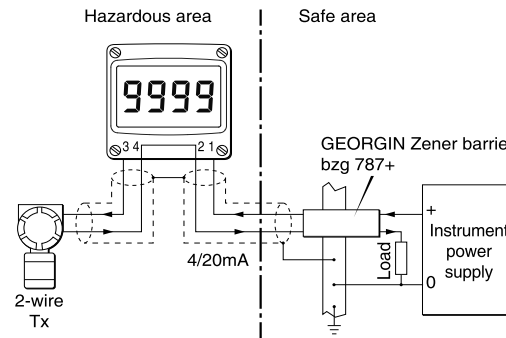Instrument power supply

4/20mA

2-wire Tx

Fig 3 Typical measurement loop

Scale card

The indicator's units of measurement and tag information are shown above the display on a slide-in scale card. New instruments are fitted with a scale card showing the information requested when the instrument was ordered, if this is not provided a blank scale card will be fitted which can easily be marked on-site.

To remove the scale card, carefully pull the tab perpendicularly away from the rear of the indicator assembly. See Fig 2 for the location of the scale card tab.

To replace the scale card carefully insert it into the slot on the right hand side of the input terminals which is shown in Fig 2. Force should be applied evenly to both sides of the scale card to prevent if twisting. The card should be inserted until about 2mm of the transparent tab remains protruding.
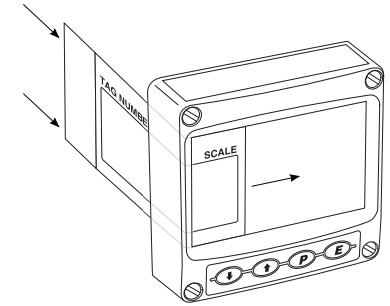

Fig 4 Inserting scale card into the instrument assembly.

3. OPERATION

Both models are controlled and calibrated via four front panel push buttons. In the display mode i.e. when the indicator is displaying a process variable, these push buttons have the following functions:

P   While this button is pushed the indicator will display the input current in mA, or as a percentage of the instrument span depending upon how the indicator has been configured. When the button is released the normal display in engineering units will return. The function of this push button is modified when optional alarms are fitted to the indicator.

▼   While this button is pushed the indicator will display the numerical value and analogue bargraph* the indicator has been calibrated to display with a 4mAΦ input. When released the normal display in engineering units will return.

▲   While this button is pushed the indicator will display the numerical value and analogue bargraph* the indicator has been calibrated to display with a 20mAΦ input. When released the normal display in engineering units will return.

E   No function in the display mode unless the tare function is being used.

P + **▼**   Indicator displays firmware number followed by version.

P + **▲**   Provides direct access to the alarm setpoints when the indicator is fitted with optional alarms and the ACSP access setpoints function has been enabled.

P + **E**   Provides access to the configuration menu via optional security code.

Note   * GeXi23 only
Φ If the indicator has been calibrated using the CAL function, calibration points may not be 4 and 20mA.

4. CONFIGURATION

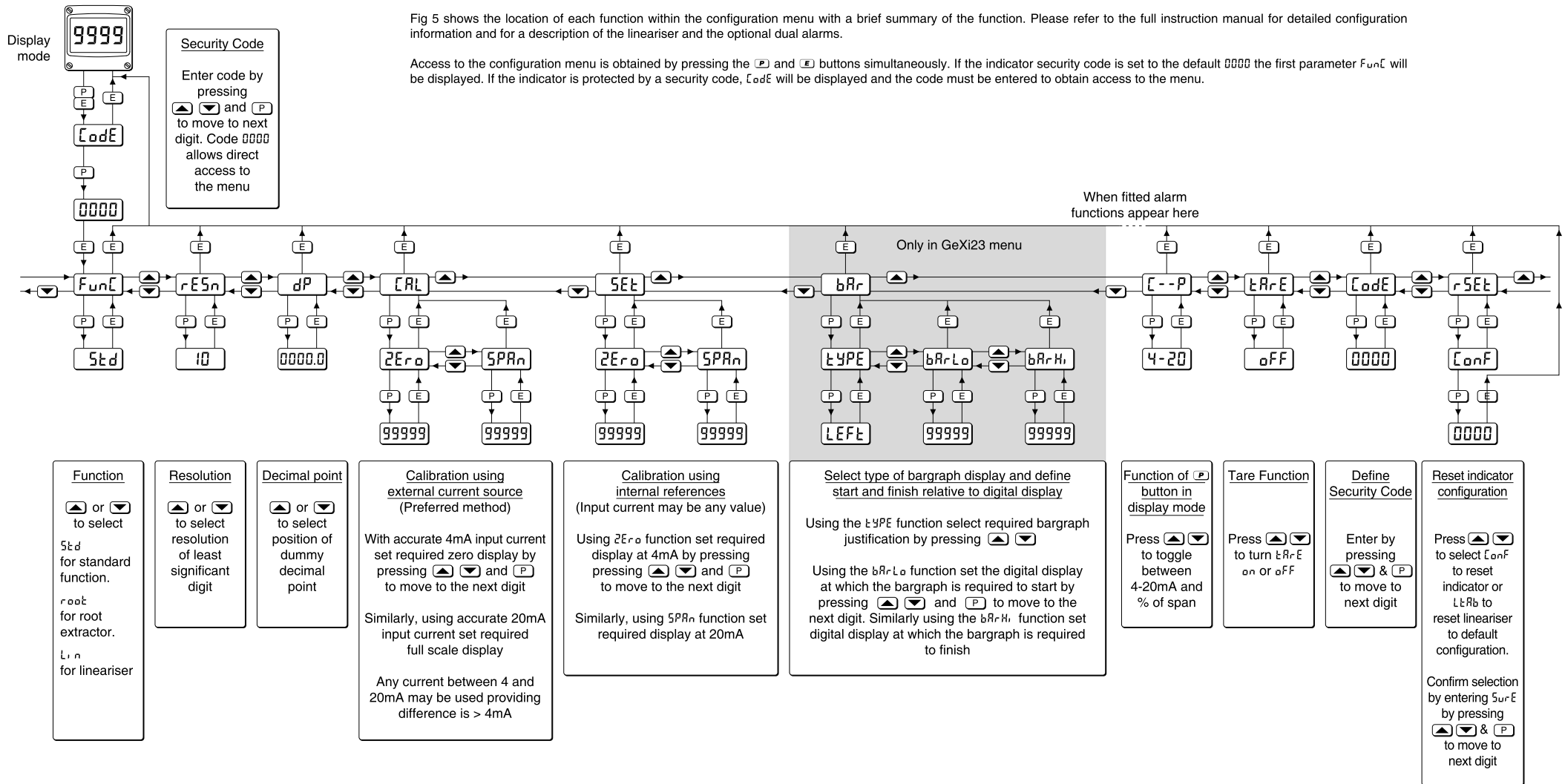Indicators are supplied calibrated as requested when ordered, if not specified default configuration will be supplied but can easily be changed on-site.

Fig 5 shows the location of each function within the configuration menu with a brief summary of the function. Please refer to the full instruction manual for detailed configuration information and for a description of the lineariser and the optional dual alarms.

Access to the configuration menu is obtained by pressing the [P] and [E] buttons simultaneously. If the indicator security code is set to the default 0000 the first parameter FunC will be displayed. If the indicator is protected by a security code, CodE will be displayed and the code must be entered to obtain access to the menu.

Display mode

9999

[P][E] [E]

CodE

[P]

0000

Security Code

Enter code by pressing [▲] [▼] and [P] to move to next digit. Code 0000 allows direct access to the menu

When fitted alarm functions appear here

Only in GeXi23 menu

FunC — rESn — dP — CAL — SEt — bAr — C--P — tArE — CodE — rSEt

Std | 10 | 0000.0 | 2Ero — SPAn | 2Ero — SPAn | tYPE — bArLo — bArHi | 4-20 | oFF | 0000 | ConF

99999 | 99999 | 99999 | 99999 | LEFt | 99999 | 99999 | 0000

Function

[▲] or [▼] to select

Std for standard function.

root for root extractor.

Lin for lineariser

Resolution

[▲] or [▼] to select resolution of least significant digit

Decimal point

[▲] or [▼] to select position of dummy decimal point

Calibration using external current source (Preferred method)

With accurate 4mA input current set required zero display by pressing [▲] [▼] and [P] to move to the next digit

Similarly, using accurate 20mA input current set required full scale display

Any current between 4 and 20mA may be used providing difference is > 4mA

Calibration using internal references (Input current may be any value)

Using 2Ero function set required display at 4mA by pressing [▲] [▼] and [P] to move to the next digit

Similarly, using SPAn function set required display at 20mA

Select type of bargraph display and define start and finish relative to digital display

Using the tYPE function select required bargraph justification by pressing [▲] [▼]

Using the bArLo function set the digital display at which the bargraph is required to start by pressing [▲] [▼] and [P] to move to the next digit. Similarly using the bArHi function set digital display at which the bargraph is required to finish

Function of [P] button in display mode

Press [▲] [▼] to toggle between 4-20mA and % of span

Tare Function

Press [▲] [▼] to turn tArE on or oFF

Define Security Code

Enter by pressing [▲] [▼] & [P] to move to next digit

Reset indicator configuration

Press [▲] [▼] to select ConF to reset indicator or LtAb to reset lineariser to default configuration.

Confirm selection by entering SurE by pressing [▲] [▼] & [P] to move to next digit

Fig 5 Configuration menu