Instruction for GEXI04 and GEXI24
intrinsically safe field mounted loop powered indicators

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1. DESCRIPTION
The GEXI04 and GEXI24 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.

Caution installation in Zone 0:
When installed in a Zone 0 potentially explosive atmosphere requiring EPL Ga apparatus, the instrument shall be installed such that even in the event of rare incidents, an ignition source due to impact or friction between the aluminium label and iron/stainless steel is excluded. No special conditions apply when the indicator is installed in Zone 1 or in Zone 2.

2. INSTALLATION
The GEXI04 & GEXI24 indicators have robust IP66 glass reinforced polyester (GRP) enclosures incorporating an armoured glass window & stainless steel fittings. They are suitable for exterior mounting in most industrial environments.

They are surface mounting, but may be pipe mounted using one of the accessory kits.

Step 1
Remove the terminal cover by unscrewing the two ‘A’ screws.

Step 2
Secure the instrument to a flat surface with M6 screws through the two ‘B’ holes. Alternatively use a pipe mounting kit.

Step 3 and 4
Remove temporary transit blanking plugs and install appropriate IP rated cable glands, conduit fittings or blanking plugs and terminate field wiring. Finally replace the terminal cover and tighten the two ‘A’ screws.

The indicator’s earth terminal is connected to the carbon loaded GRP enclosure. If this enclosure is not bolted to an earthed post or structure, the earth terminal should be connected to the plant potential equalising conductor.

A bonding plate is provided to ensure electrical continuity between the three conduit / cable entries.

Terminals 8, 9, 10 & 11 are only fitted when the indicator includes optional alarms.

Terminals 12, 13 & 14 are only fitted when the indicator includes an optional backlight.

The GEXI04 & GEXI24 are CE marked to show compliance with the European Explosive Atmospheres Directive ATEX 2014/34/EU and the European EMC Directive 2014/30/EU.

3. OPERATION
The indicators are controlled and configured via four push buttons located behind the instrument control cover, or via an optional keypad on the outside of the cover. 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 conditioned. 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 4mA 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 20mA 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 + ↑  When optional alarms are fitted provides direct access to the alarm setpoints if the ‘ACS’ access setpoints in display mode function has been enabled.

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

* Only the GEXI24 has a bargraph
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 4 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.

CAL and Set functions are extended when 16 segment lineariser is activated. See full instruction manual for details.

Only in GEX24 menu

Function
- or - to select function of indicator
'STD': Linear relationship
'root': Sq root extraction
'16n': 16 segment lineariser

Resolution
- or - to select resolution of least significant digit may be set to 1, 2, 5, or 10 digits

Decimal point
- or - to select position of dummy decimal point or turn it off

Calibration using external current source (Preferred method)
With accurate 4mA input current set required zero display by pressing - or - and move to the next digit
Similarly, using accurate 20mA input current set required span display
Note: Input current must be adjusted to required value before zero and span functions are entered by pressing P
Any current between 4 and 20mA may be used providing difference is > 4mA

Calibration using internal reference (Input current may be any value)
Using ZerO function set required display at 4mA by pressing - or - and 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 - or -
- 'LEFT' Left end of display
- 'CENT' Centre of display
- 'RIGHT' Right end of display
- 'ALARM' Only with alarms
- 'OFF' Bargraph disabled

Function of P button in display mode
Press - or - to toggle between input current and % span

Tare Function
Press - or - to turn on or off

Define Security Code
Enter by pressing - or - & - to move to next digit

Reset indicator configuration
Press - or - to select Conf. to reset indicator or LAMB to reset lineariser to default configuration.

Confirm selection by entering Sure by pressing - or - to move to next digit

Manuals, certificates and data-sheets can be downloaded from www.georgin.com

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