

G2X



6 digit - frequency meter, revolution meter, production counter, meter counter, liter counter - DIN 96x48

REEL TORINO data sheet

DL3UK0003A0

SPECIFICATIONS

- ✓ **Frequency measuring range: from 0,001Hz up to 10 KHz**
- ✓ **Measuring rate conversion selectable: rate per second, minute hour**
- ✓ **Easy programmable scale range**
- ✓ **Versions: 2 or 4 relays**
- ✓ **Double analog outputs 4..20mA & 0..10Vdc**
- ✓ **Serial communication: Field bus type MODBUS RTU (RS485) or double RS232 ports**

VERSIONS

The following versions are available:

- Indicator (4 alarm thresholds max): G2X__
- Indicator with double analog output (4 alarm thresholds max): G2X__T
- Indicator with MODBUS RTU port (4 alarm thresholds max): G2X__D
- Indicator with RS232 double serial port (4 alarm thresholds max): G2X__R.

APPLICATION & PERFORMANCE

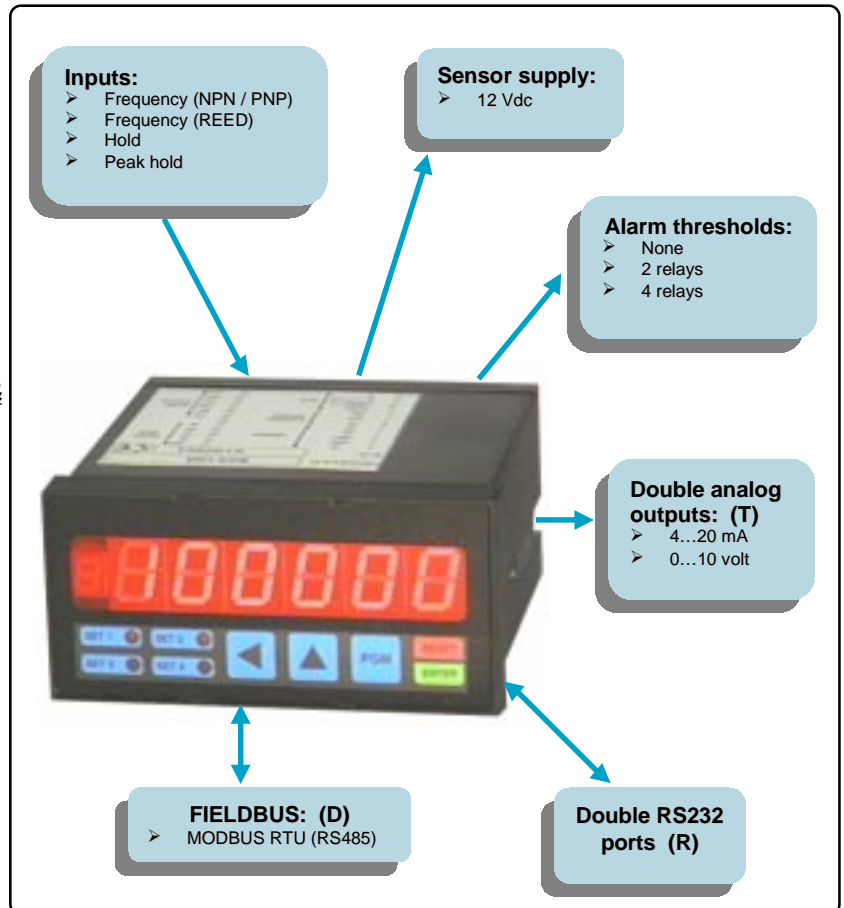
G2X indicators have a wide field of application for speed (linear and angular), flow rate and flow measurement and control. They can be applied in the sector of plastic materials (extruders), in water distributions, paper factories, merry-go-round factories, mechanical and food industries (pasteurizing systems), etc.

Through the programs available, it is possible to easily select the use of the device as a frequency meter (reading of pulses in a constant time interval); revolution counter (number of revolutions of a shaft in the preselected unit of time); meter counter (speed of a film); production counter (i.e. measurement of the production per hour); litre counter (direct flow rate).

The survey is made through the measurement of the period or frequency of pulse signals coming from industrial sensors such as photoelectric cells, proximity switches, monodirectional incremental encoders, reed contacts.

The resolution may be chosen for $\times 0,01$ – $\times 0,1$ – $\times 1$.

A simple programming by a 4-key touch-panel keyboard and an efficient LED display make the device easy to use.



OPERATING PRINCIPLE

According to the selected programs, the device works in one of the following modes:

- Period meter Mode

The device measures the period elapsing between two subsequent pulses, then executing speed calculation, according to the programs selected.

Thanks to this principle, it is possible to carry out acquisitions at very low frequencies (even lower than 1 Hz). It is therefore advisable to use this kind of acquisition for frequencies not higher than 1000 Hz.

If the device is matched to a phonic wheel, make sure that the notches are equidistant.

- Frequency meter Mode

The device counts the pulses getting to the input in a time interval (programmable within a range 0,001...999,999 seconds).

The reading scale can be freely chosen through a factor of division and a factor of multiplication of the input frequency. It is advisable to use this type of acquisition if the input is more than 1000 Hz or in systems that are not perfectly stable.



Reliability

G2X

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TECHNICAL DATA

PACKAGE

Case: panel mount 96x48 mm frontal IP54
 Cutout dimension: 92x45 mm; depth: 100 mm
 Case material: Noryl
 Keyboard: 4 membrane push buttons
 Connections: by extractable terminal block

DIGITAL INPUT

Signal: NPN or PNP configurable
 Voltage: 10...30Vdc; impedance: 2200 ohm
 Sensor supply: 12 Vdc – maximum 60 mA
 IN1: count input maximum 10KHz speed
 IN2: count input maximum 10Hz speed
 RST1: hold input
 RST2: peak-hold input

COUNTER AND DISPLAY

Display (red led): 6+1 digit, max displayed value 0...999999
 Character high: 12,5 mm
 Resolution: x 100; x 10; x 1; x 0,1; x 0,01
 Zeroing: 0,5...999 seconds
 Counter: 31 bit
 Resolution time: 800 ns

POWER SUPPLY

Power supply: 24, 115, 230Vac, 24Vdc [1], 24VDCI [2]
 Consumption: max 3,3 VA (3,3 W)
 Tolerance: ± 10 %; frequency (AC): 50/60 Hz
 Data storage memory: EEPROM static memory

AMBIENTAL CONDITIONS

Operating temperature: -10 ÷ 50 °C
 Relative humidity: 0...95% not condensing
 Storage temperature: -25 ÷ 70 °C

[1] 24Vdc power supply not galvanically insulated version: negative input signal short-circuit to negative power supply.

[2] 24Vdc power supply galvanically insulated version.

PROGRAMMABLE PARAMETERS

Pulses per revolution: 1...999999
 Time unit: seconds, minute, hours
 Length unit: mm, cm, dm, m
 Wheel diameter: 0,01...9999,99 mm
 Correction parameter: 1...999999

ALARM THRESHOLDS AND OUTPUTS

Alarms: 2, 4 relays 5A/250V
 Differential: 1...999999

DOUBLE ANALOG OUTPUT (T option) [3]

Proportional to display value; start of scale and end of scale position programmable
 Signals: 0-10Vdc (minimum load 1Kohm)
 4-20mA (maximum load 250 ohm)

Resolution: 2000 points
 Accuracy: 0,01 %;
 Linearity: 0,0025 %

RS485 SERIAL PORT - MODBUS (D option) [3]

Communications protocol: MODBUS RTU
 Profile: all parameters
 Baud rate: 300...19200 baud
 Address: range 1... 247 (0 – broadcast)
 Configuration: 8 bit data; parity none; 1 stop bit

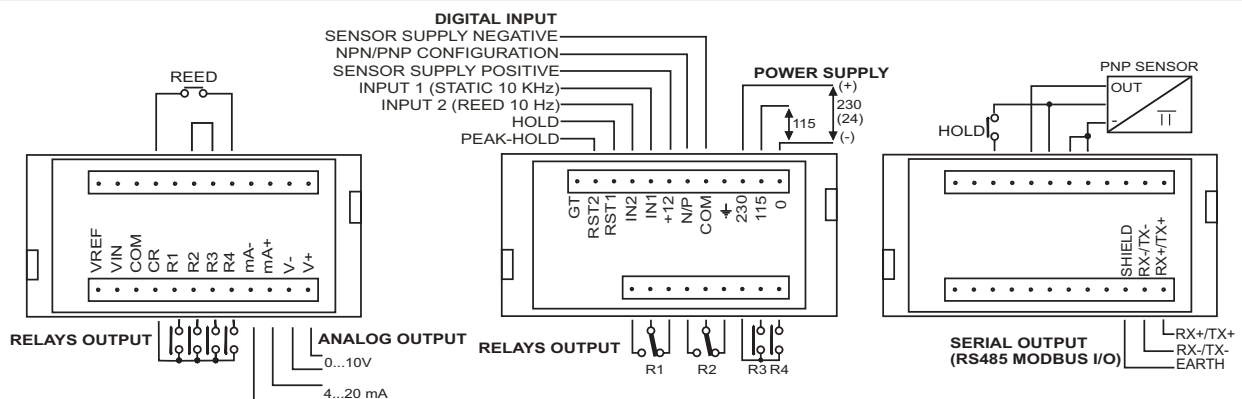
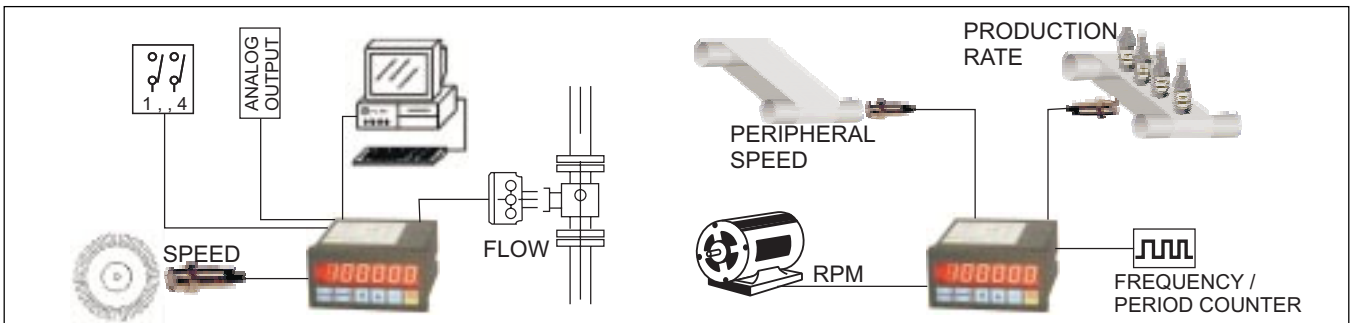
DOUBLE RS232 SERIAL PORT (R option) [3]

Protocol: reading / writing internal register
 Baud rate: 150...9600 baud
 Address: range 1... 254
 Configuration: 8 bit data; parity none; 1 stop bit

CONFORMITY TO CEE GUIDELINES

Directive: CEE 93/68
 CEE 89/336 (EMC)
 CEE 73/23 (BT)

[3] the above mentioned technical references are related to the G2X versions chosen.



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