JM Concept
une vision d'avance

GK 3000D1

REDUNDANCY

- GK3000D1 transmitters are particularly designed, with their 2 analog and their TOR inputs, to provide solutions for redundancy problems.

- Its unique programming principle on front face or by digital output (RS485 or TCP/IP) is easy to use.
  The many available functions ensure complementary needs for signals treatment.
  GK3000D1 are supplied in JM Concept unit that can be unplugged from its RAIL DIN base, one channel plate or multichannel plates.

- GK3000D1 use the universal JM Concept power supply

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Remember the problem

Two API (A1 & A2) with analog cards have to pilot an analog actuator. If te API A1 is master, actuator has to be piloted by the API A1, otherwise, the API A2 has to pilot actuator.

Rocking is created by a default API module. Rocking from the A1 to A2 or on the contrary, when one of the two API is out of work, is identified by AON 1 signal (0 or 24V) sent by A1 and by AON 2 signal (0 or 24V) sent by A2. Rocking is not instantaneous, it is necessary to keep active last value during a certain time.

To solve problems, JM Concept has designed the transmitter GK3000D1.

GK3000D1 INPUTS

Analog input 1	4 / 20mA
Analog input 2	4 / 20mA
AON input 1	On opto-coupler 30V maximum
AON input 2	On opto-coupler 30V maximum

GK3000D1 OUTPUTS

Current ouput	4 / 20mA
Digital output	RS 485 isolated from the input Modbus, Jbus. Digital output ensures the GK3000D1 programming and recovery of all the measurements

GK3000D1 FUNCTIONNING

The AON1 input comes from the API A1. When it is 1, the voltage delivred by A1 is 24V
When it is 0, the voltage delivred by A1 is 0V

The AON2 input comes from the API A2. When it is 1, the voltage delivred by A2 is 24V
When it is 0, the voltage delivred by A2 is 0V

TOR inputs functionning table

TOR 1	1	0	1	0
TOR 2	0	1	1	0
MEASURE	Measurement on A1	Measurement on A2	Last right measurement	

When the TOR inputs changes from 1 to 0 or from 0 to 1, transmitter saves the last measurement taken before the rocking during the TB time, programmable on transmitter from 0 to 1 second by 10ms resolution.

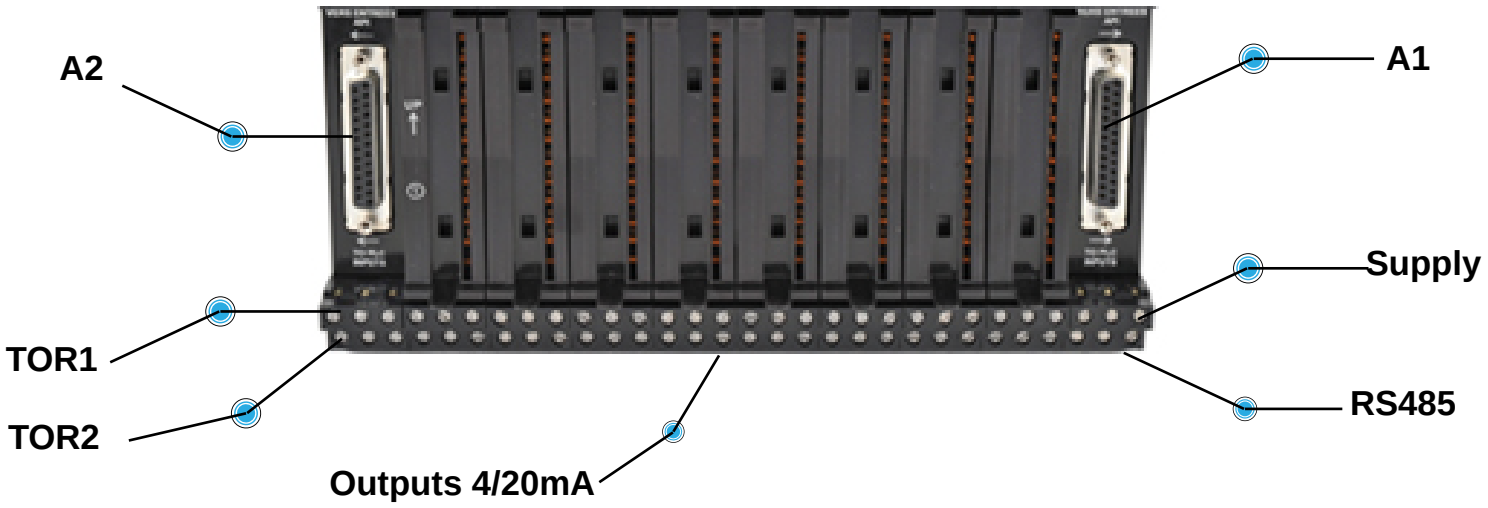
When the two TOR inputs have the same value (both are 1 or both at 0), transmitter saves last right measurement as long as there is no rocking instruction that ensures to have the two TOR inputs at different values (1 & 0 or 0 & 1). When there is a rocking instruction, process before described is operating.

When the API analog output is wrong, that means that :
- Output value is below a programmable value (taken between 0 and 21mA)
- Output value is above a programmable value (taken between 0 and 21mA).

Transmitter saves the last right measurement as long as there is no rocking instruction. When there is a rocking instruction, process described before is operating.

Tansmitter plugging

Transmitters are plugged on a plate referenced BL10GRV and described in following scheme :



GK3000D1 transducers are plugged on a plate reference BL10GRV and every output to the actuator is independent and isolated.

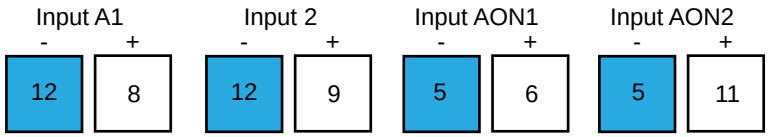
GK 3000D1

INPUT IMPEDANCE	
Current input	4,75Ω
Input permanent overload	100mA
Input max measurable	1.10 x measuring scale
AON input	Umax 30V
OUTPUT IMPEDANCE	
Current output	< 950Ω
Output max measurable	1.10 x output scale
OUTOUT RIPPLE	
Sortie courant	< 20 µA
PRECISION CLASS	< 0.10%
THERMAL DRIFT	< 50ppm
RESPONSE TIME	< 250ms

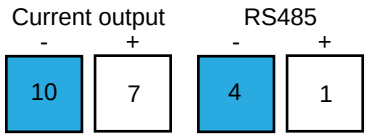
ISOLATION	
Power supply / Input	4000Vdc or 2500Vac -1mn - 50Hz
Power supply / Output	4000Vdc or 2500Vac -1mn - 50Hz
Input / Output	1500Vac - 1mn - 50Hz
Analog output / Digital output	Without isolation
CONSUMPTION	< 4Va
AUXILIARY SOURCE	
Universal power supply	20Vdc/370Vdc & 80Vac / 256Vac
Option	20Vac/60Vac
TEMPERATURE	
Operating consumption	-10°C / +60 C
Storage temperature	-25 C/ +80 C
OPTION	Tropicalization 225

Wiring, Dimensions and Terminals

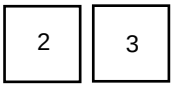
Inputs



Outputs

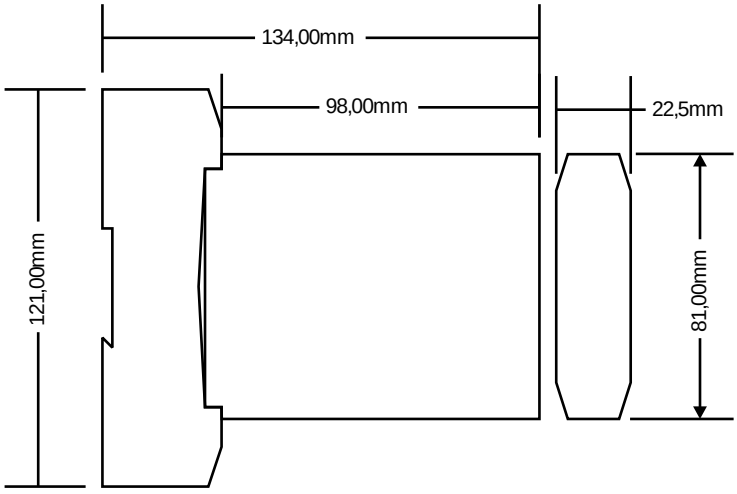


Aux. source



without polarity

Dimensions



Terminals