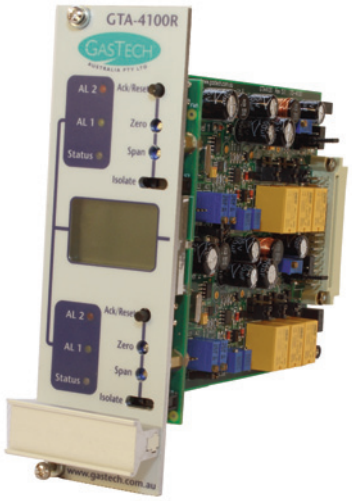
19″ Rack (4100R)

Dual processor controller card



Two Channels per card

Dual processors

Universal inputs

2 individual alarms per channel

1 fault alarm per channel

Analogue output per channel

Individual Channel isolate

Local or global Accept/Reset

Common alarms

Internal amplifier

Back lit graphical display per channel

Constant individual channel indication

High speed response

Simple set-up

Hot swap compliant

GasTech Australia has released the new generation of controller cards. Our customer requirements were a simple dual channel controller card with a high level of reliability. One processor per channel, so if a processor fails only one channel will be affected. Minimal shared components increase reliability. Minimal training for commissioning and calibration maintenance. Minimal add-on options to complicate things. A simple reliable system with all the features we need.

What our engineers have developed is a duel channel duel processor card. This card has two separate circuit with only a High-resolution display being shared. The display is a non-critical component, which does not influence the operation of the system. Basically if the display fails both channels will still operate correctly.

The High Resolution Graphical LCD component has been selected due to it's unique dual write feature. This allows both processors to write to the display at the same time. Top half for the top channel and the bottom half for the bottom channel. If one channel has the processor fail the display will continue to operate just displaying the other channel.

Card layout has been set up so the user can easily identify each channels circuity and adjustments. We have used a number of switches, which allows the user to set up the card to suit a number of different applications and field devices. A basic graphical display on the PCB shows the different settings allowing minimal documentation for set-up.

The “Isolate” feature allows a channel to be easily taken off line for calibration or modification, without actuating alarms or shutdown. The analogue output drops to 1.5mA while the channel is in isolate mode. The operator is alerted to a channel being in isolate mode by the inverted LCD, but still indicating the current reading. We have provided for a no “time out” option on this system. Being designed capable for "critical action" (Shutdowns), if a channel times out half way through a calibration procedure, an unwanted shutdown or deluge system could be activated. Also, a channel under maintenance for a long period, will continue to indicate to the operator that channel is off line. Simply turning off the channel is not acceptable, as the fault might never be rectified if there is no indication on the panel.

A common module has been designed to handle the synchronisation of all the cards. Basically this is cosmetic so all the alarm LEDs flash at the same time. This also holds the panel buzzer and the common relays. This has a feature to zone the top channels together and the bottom channels together giving you common alarms to the top channels and common alarms for the bottom channel.

GASTECH AUSTRALIA

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Dual processor controller card specifications

Standard specifications	
Range	Adjustable to 2000 Reads %LEL, ppm, % Vol, PPMm, LELm and blank
Inputs	Two 1.4 to 24 VDC 4 to 20 mA analogue signal inputs, source or sink type, two or three-wire. 3 wire catalytic, 0-1V, 0-5V, 0-10V, 0-24V. 24V Digital, and resistance.
Analogue Outputs	One 4 to 20mA source for each channel 1000 OHM maximum @ 24 VDC input
Relay Outputs	Individual low AL1, high AL2, and Fault for each channel: Programmable for latching/non-latching. Each relay rated at 1A/24 VDC Common relay low AL1, high AL2, and Fault can be zoned top and bottom channels each relay rated at 5A/24 VDC
Operating Voltage	18 to 30 VDC, 24 VDC nominal
Power Consumption	0.75A per charnel maximum fused at 1A
Low Alarms	Independently adjustable from below zero to full scale. Audible/visual indication. Can be acknowledged. Can be activated on a rising/falling level.
High Alarms	Independently adjustable from below zero to full scale. Audible/visual indication. Can be acknowledged. Can be activated on a rising/falling level.
Channel Isolate	Individual channel indicated by inverted display and 1.5mA output on the analogue output.
Operating Temperature	-20^{O}C to +55^{O}C
Operating Humidity	0 to 95% non condensing
Rack Height	3U
Rack Width	8E
Mounting Options	Half rack, full 19 inch rack, panel mount, optional NEMA 4X wall mount
Weight	200 grams
Overall Dimensions	41mm W x 173mm H x 240mm D
Area Classification	General purpose
Warranty	Two year materials & workmanship
Part Number	**73-4100**

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