

AP100-01EX

PAGA / MBS MICROPHONE ACCESS PANEL



DS-327 Issue 04

Thank you for your interest in Zitel - we are a UK based manufacturer of PAGA and Intercom products. Our systems are mainly designed for use in the Hazardous Oil, Gas and Petrochemical industries. AP100-01 Ex is an industrial microphone access unit designed for safe operation in a Zone 1 and 2 hazardous area and is ATEX certified accordingly. The unit works in conjunction with a standard safe area located Exi dual shunt barrier (which limits energy into the hazardous area to a safe level). Connectivity to central equipment is by a non specialised single pair cable.

HAZARDOUS AREA ATEX ACCESS UNIT

Industry standard keypad design - *Compliance with NORSOK regulations*

A+B dual VU meters – *Active visual feedback ensure optimum broadcast capability*

Single-pair field cable - *Low cost simple installation – no special or multi core cables required*

Audio compression and limiting – *highest speech intelligibility*

Single / N + 1 / Dual A + B PAGA architectures – *highly secure, designed specifically for critical applications*

The Zitel ZEST AP100-01Ex series intrinsically safe access units are 3U high, industry standard 19inch rack/console mount access panels designed to allow operator live voice broadcast / alarm tone initiation and control from a hazardous area. The unit consists of a robust steel panel which carries a flush fitting tactile operator keyboard and either singular or dual noise cancelling flexible gooseneck mounted microphone assemblies (AP100-01 Ex – single system operation AP100-01 Ex A + B for dual system operation). Single or duplicated electronics and microphones are fitted depending on criticality of application, for example A+B or 2N+1 dual redundant high security system architectures. The microphone-s can be supplied fixed or goose neck mounted.



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Dual VU meters aid efficient microphone technique ensuring consistent high quality speech broadcast.



Critical control keys are guarded to prevent accidental operation. (note the cover guard material is stainless steel to eliminate static discharge risk)

The membrane key pad incorporates unique multiple switching elements ensuring long, trouble free, reliable through-life service. Dual indicator arrays are fitted which feature raised dome embedded LED technology enabling high visibility and again reliable service in continuous duty applications.

Connectivity between host central equipment rack and access unit position is implemented by a single shielded twisted-pair intrinsically safe cable circuit which also carries the excitation voltage thereby eliminating multi core cables and dependence on local power supply sources.

To ensure highest integrity each access unit position is discreetly cabled by a dedicated radial field circuit; where a dual system architecture is specified duplicated A+B cables are assigned to obviate common mode failure possibility.

The AP100-01 Ex series access unit incorporates signal processing aids which include the following:

- Microphone signal compression and limiting; this ensures efficient use of available amplifier power, prevents damage to loudspeakers due to signal over shoots/clipping and compensates for poor microphone technique.
- Tamper-proof 'hi' and 'lo' frequency response adjustment; allows the engineer to maximize speech intelligibility on a 'per access unit' basis.
- Microphone sensitivity control, again tamper-proof, to allow the unit to be operated efficiently in a wide range of service conditions.

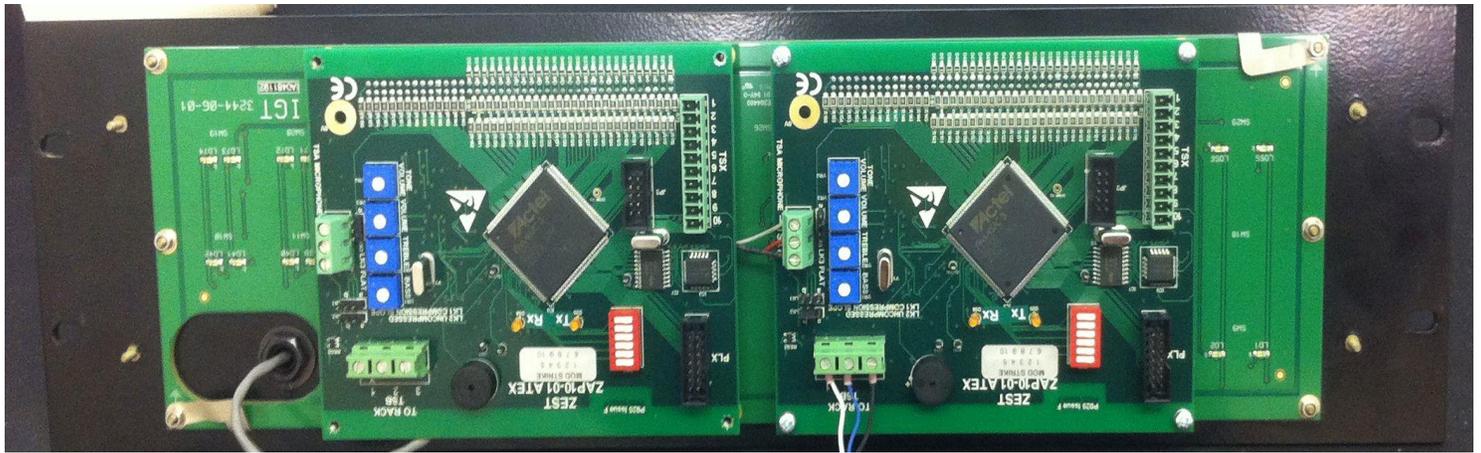
Dual A+B VU level meters are incorporated which provide positive feedback to the operator ensuring that correct microphone technique is maintained.



Please note that the AP100-01 can be supplied with custom legends / layout and text to client specification.

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Above rear view of AP100-01 Ex A + B shows duplicated transceivers fitted for secure N + 1 or A + B applications

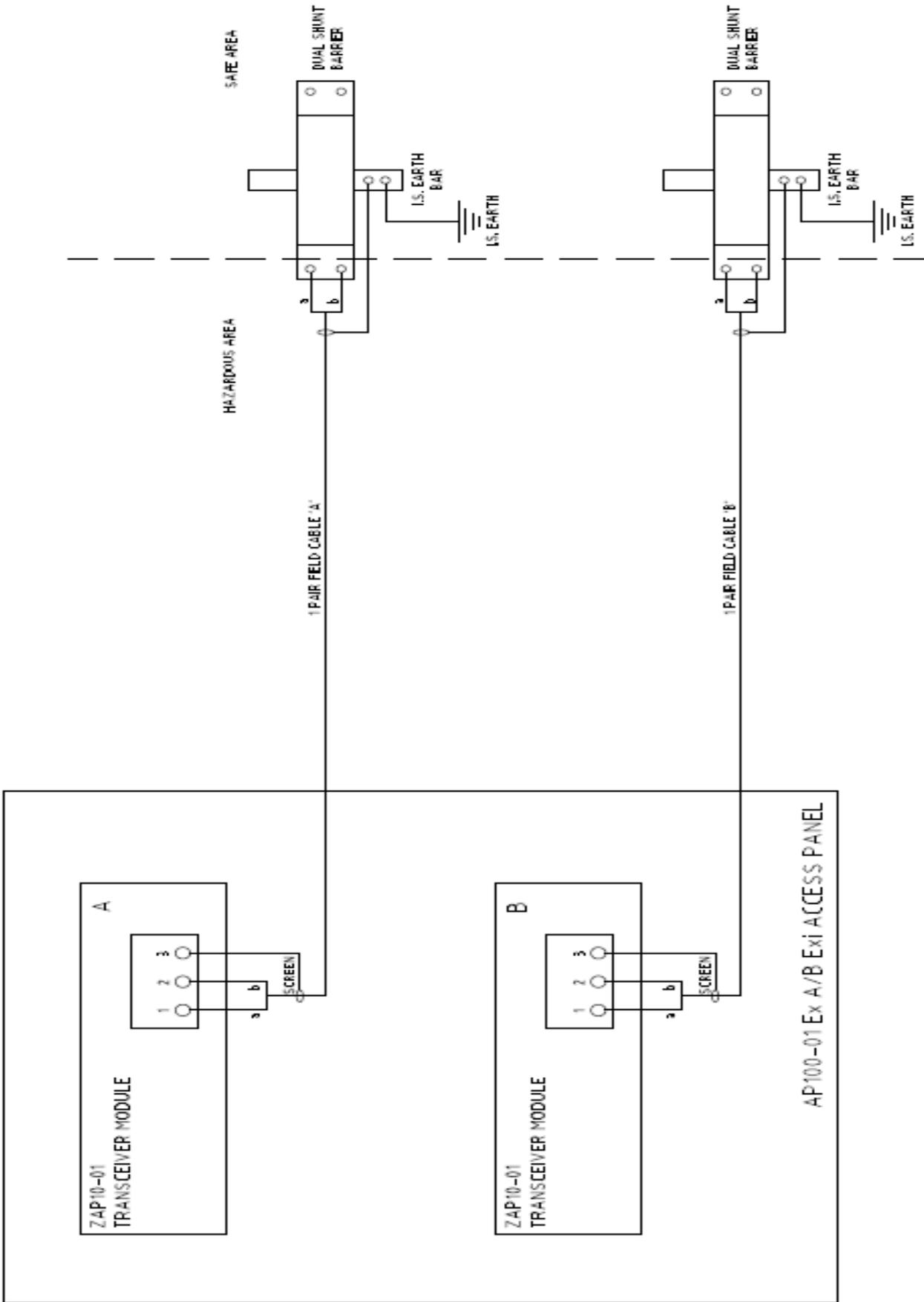
Warning potential explosion hazard – this product must only be installed in accordance with the requirements of the respective ATEX certification documentation and EN60079-14. No modifications, changes or repairs are permitted. If in doubt please contact Zitel Ltd www.zitel.com for all queries concerning the installation and operation of this product.

Technical Specification	
Power Supply Voltage	Nominal 5V DC (via approved shunt safety barrier)
Power Supply Current	100 mA maximum
Selectable Zones	16
Alarm Initiate buttons	5
Alarm Mute buttons	1
Alarm Cancel buttons	1
Emergency Speech buttons	1
'Press To Talk' buttons	1
Lamp Test buttons	1
Fault / Warning Accept buttons	1
Frequency Response	150Hz – 16kHz
Termination	Up to 2.5 mm 2 CSA single pair field cable with overall shield, note any spare conductors and the shield must be bonded to the IS earth bar located in the safe area.
Protection	Intrinsic safety – must not be operated without the approved IS barrier in place under any circumstances. (if in doubt ask Zitel)
Weight	~3Kg
Dimensions	133mm high x 70mm deep x 483mm wide
Mounting practice	19 inch rack mount 3 Units high
Microphone	250 mm goose neck mounted 400 mm long reach goose neck mounted - L
	Fixed - F
Operation Temperature Range	-40°C – +60°C
Service Location	Internal safe area
Connectivity	Single pair copper cable
IP rating	IP 22
Location	Zone 1 IIC T4

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