Sonix™ 2Mx

PA/GA control and matrix switching unit

Overview

The Sonix™ 2Mx matrix unit provides an integral backbone for the base structure of the Sonix™ PA/GA system, housed within an ergonomic and compact 1U chassis. Connectivity of this unit is via colour coded, rapid fit RJ45 receptacles, to ensure simple installation and ease of servicing. Highly visible front panel status is provided with system activity and status along with external GUI status for remote users.

Features

- Highly configurable, hybrid network with fibre-optic compatibility
- Compact efficient 1U design
- Up to 12 address zones (expandable up to 30 on request)
- Control of up to 32 (350w) amplifiers per system (expandable on request)
- Interface with up to 24 fully monitored safe & Ex area Hmi access panels
- Internally monitored, self-healing RJ45 data networks
- Rapid fit RJ45 connectivity
- For speedy construction and maintenance
- PABX connectivity via 2 wire, 2 wire E&M or SIP interface
- Duplicate system real time synchronisation with auto switch over
- Configurable via Sonix™ Software
- Enhanced distribution of inputs to second 2Mx systems (A+B Plus)
- Comprehensive alarm tone library (expandable on request)
- Zoned alarms available on request

The 2Mx internal data bus and field wiring is fully monitored; multi broadcast on a hybrid RS422 network. The operation on internal and external self-healing rings ensures stable and secure service. With 12 address zones, 6 manual alarm tones, the 2Mx unit provides a comprehensive set of powerful, flexible and secure field alterable features.

Real-time continuous monitoring of the PA/GA system and peripheral connectivity is performed and managed within the 2Mx unit. Hmi access panel audio and data signals are independently monitored, loudspeaker networks are monitored with an inaudible integrity signal and beacon networks are monitored with a very short duration test signal designed to not trigger typical beacons. Status reporting and logging of all units activity and faults via Sonix™ Administration Software

In a fully duplicated architecture, the 2Mx unit allows for auto switch over of all signals between A & B systems in the event of a local fault. This ensures that under a single system 2Mx outage condition, 100% of its audio and visual output signals are re-routed from the operational system and then on to all loudspeakers and flashing beacons, resulting in zero loss of broadcast signal whilst maintenance is completed. This is achieved without overloading the remaining operational system.

In addition to this, the 2Mx unit can propagate input signals to a second 2Mx unit over the sync bus (A+B Plus). It allows a single input, Hmi access panel or PABX input etc, to activate all appropriate loudspeakers and beacons. This provides full coverage from a fault, on an access panel for example, or by intentional design with an non-fully duplicated system.

The Sonix™ 2Mx allows for varied input output connections. Please refer to Sonix™ Io Tu, MS12 & Pbx datasheets for further details.

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Certifications	
Certification	CE, Environmental and EMC (IEC60945)

Specifications	
Mechanical/environmental	
Fixing	1U 19" industrial mounting
Weight	2 Kg max
Dimensions (W x D x H mm)	482 x 306 x 43
Material	Casing black anodised aluminium
Operating temp	0ºC up to +55ºC
Operating relative humidity	20 to 95% non-condensing
Service location	Safe internal location
Connectors	DC & fault: PA/PBT push fit, shake proof plug & outlet. Mating: Phoenix Contact 1803578. Configuration: PA/PBT Push fit, shake proof plug & outlet, Mating: Phoenix Contact 1803578 8P8C (RJ45): CAT6A modular jacks
Ingress protection rating	IP30
Electrical	
Power supply	48 Vdc regulated from Pm10
Consumption quiescent	200 mA
Consumption max	250 mA
Electrical protection	On board single-use fuse 500 mA
General	
Fault contact	Volt free (max. 60 Vdc/30 Vac) normally closed, open on fault (latching), remote reporting
Status indicator	High visibility LEDs
Certification	CE, Environmental and EMC (IEC60945)
Connectivity (all internal connectivity can be radial or self-healing loops as standard)	
Hmi bus	4 x RJ45, 2 independently monitored loops allowing for up to 24 Hmi panels via 4-6 x Hmi Tu units (see Hmi Tu, Hmi 5 & Hmi 26 datasheets)
Amp bus	2 x RJ45, 1 independently monitored loop allowing for up to 32 (350W) amps per 2Mx to be controlled (see Amp 350-d datasheets)
Io bus	2 x RJ45, 1 independently monitored loop allowing for management and control of Io Tu, MS12 and Pbx (see Io Tu, MS12 and Pbx datasheets)
Beacon bus	2 x RJ45, 1 independently monitored loop allowing for up to 6 Vw2 beacon devices (12 independently controlled loops) (see Vw2 datasheets)
Power bus	2 x RJ45, 1 independently monitored loop allowing for status reporting of voltage and current loading within the PA/GA system (see Pm10 datasheets)
Global bus	2 x RJ45, 1 RS422 based port for connectivity to Sonix Administration Software, 1 port reserved for future expansion
System sync bus	2 x RJ45, 1 independently monitored loop allowing for command synchronisation between 2Mx matrix units ensuring beacon, Amps and data is controlled in a bi-directional basis
DC Input	2-way Terminal block, accepting up to 1.5mm^2 solid or with suitable ferrule
Fault Output	2-way Terminal block, accepting up to 1.5mm^2 solid or with suitable ferrule
Configuration Input	2-way Terminal block, accepting up to 1.5mm^2 solid or with suitable ferrule

Ordering requirements

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box

Model

Sonix-2Mx