

Railway Signalling Data Logger



SA380 datalogger

Datalogging is now a standard technique within railway signalling engineering for both safety and performance management purposes. However, many of the systems currently in use are based on old technology, and, whilst beneficial, do not offer the functionality and cost benefits that the industry requires for the future.

The SA380 has been developed specifically to meet these requirements. Specified functionally by signal engineers it is the ideal solution for level crossing, interlocking and bespoke monitoring applications.

Simplicity

All data acquisition cards and associated electronics are contained within one enclosure, resulting in a compact yet modular solution. The number of channels per installation is configurable depending on customer / site requirements.

Networking and data access

The SA380 is enabled with the global networking standard TCP/IP and features a built-in web server. It can be remotely accessed over Ethernet or a dial-up link.

Event recorder for relay – based interlockings

48 – 3000+ digital inputs

Suitable for mounting in location cases

Built in web server

Scalable from level crossing to major interlocking

Network Rail approved to RT/E/S 11304



Touchscreen LCD allows fault teams to access recent data on site

Recorded data can be accessed using a standard web browser. For advanced remote analysis and diagnostic features (such as slow moving point alarms or SPAD investigations), a software plug-in has been developed for the Balfour Beatty Rail AssetView system.

In addition, the SA380 has a touchscreen LCD to allow maintenance technicians to access data directly on site. This removes the need for an inconvenient laptop computer or separate handheld terminal.

Reliability

Contained within the unit is a fully functional Uninterruptible Power Supply giving six hours of battery backup in the case of mains failure.

Low power consumption means that no cooling fan is required, which in turn means there are no dust filters to clean or moving mechanical parts to fail. If maintenance is required, the entire unit can be removed simply by disconnecting the input leads and a mains plug.

Safety

The SA380 has been designed specifically to meet the stringent safety requirements of railway signalling applications. All digital and analogue input channels are opto-isolated to a minimum of 1kV.

Usability

The SA380 is easy to install and use, with all functionality integrated into one compact unit.

A breakout board is available to enable simple connection to signalling relays. It is designed to fit the standard bars found in relay rooms and location cases.

Both the logger and its configuration software have been designed with ease of use as top priority. The unit will begin logging straight out of the box as soon as it is switched on.

Data storage

The SA380 uses a simple RAID system, duplicating data to both its internal storage and a removable USB disk. This duplication enables the USB disk to be removed and used in incident investigations without affecting data stored on the logger.

Cost savings

The deployment of the SA380 is the most cost-effective datalogging solution, from level crossing to major interlocking schemes. Key savings are offered from:

- Ease of installation
- Low maintenance
- Integration of UPS, modem, display and input cards

At the most compact end, a 48 or 96 channel unit will monitor a level crossing. For larger installations up to 8 units can be connected together, enabling 3072 channels to be monitored simultaneously. All systems use the same common platform resulting in economies of production.

Specifications

General

Dimensions	427 x 190 x 120mm
Digital inputs per unit	48 - 384
Maximum digital inputs in single installation	3072 (8 units)
Analogue inputs per unit	8 - 32
Processor	133MHz
RAM	64Mb
Internal flash storage	1Gb **
USB disk	1Gb **

Communications

Networking	10baseT / 100baseTX
Internal modem	33.6K or GSM *
Protocols	TCP/IP, PPP, HTTP
Digital inputs	
Input isolation	1kV

Logging

Timestamping precision	10ms
Events stored	>10 million**

Power supply

Power supply isolation	1kV
Power consumption average (384ch unit)	28W (0.25A at 110V)
Internal UPS	6 hours

* Optional

** Can be upgraded if required

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