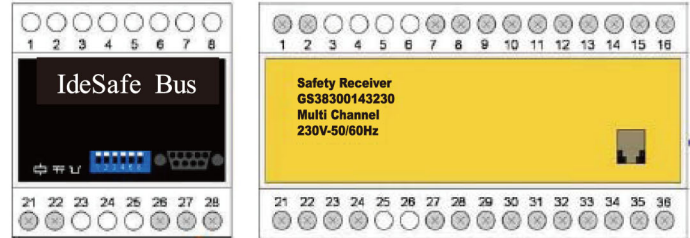


IdeSafe Bus System - 2 Wire Safety Communication for Rope Switches

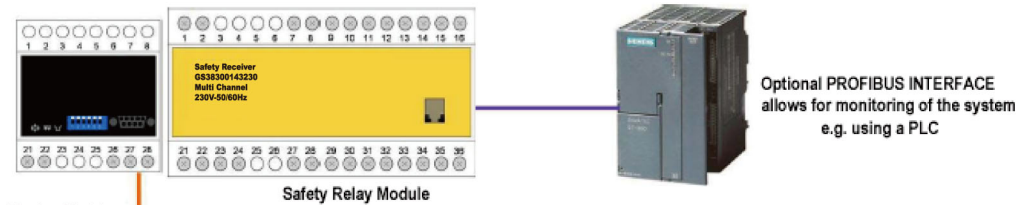
2 Wire Bus System for use with Rope Switches

- Programmable 2 wire Safety Bus system
- Satisfies highest safety levels using a 2 wire connection bus
- DIN rail mounting
- Monitored or Auto reset
- High Flexibility – easy to expand the system
- Communication capabilities – can be interfaced to most Text displays
- Profibus connection Module available for Diagnostic connection to PLC



Master Module

Safety Receiver (and Safety Relay module)

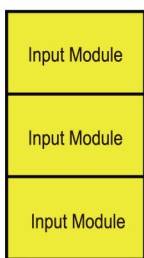


Optional PROFIBUS INTERFACE allows for monitoring of the system e.g. using a PLC

Master Module

Safety Relay Module

2 wire connection only



Input Modules are address programmable and are incorporated within switches

The Safety Relay will open the contacts if it does not receive a valid "input contact closed" signal from all the input modules which it has been configured to monitor.

Diagnostic information via PLC, PC or Text Display

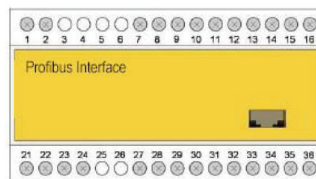
Up to 63 Safety signals (switches) on one Ide Safe bus

EN 954-1 Cat.4 EN61508 SIL3 TUV Approved

Input modules are incorporated within Safety Switches



Accessories



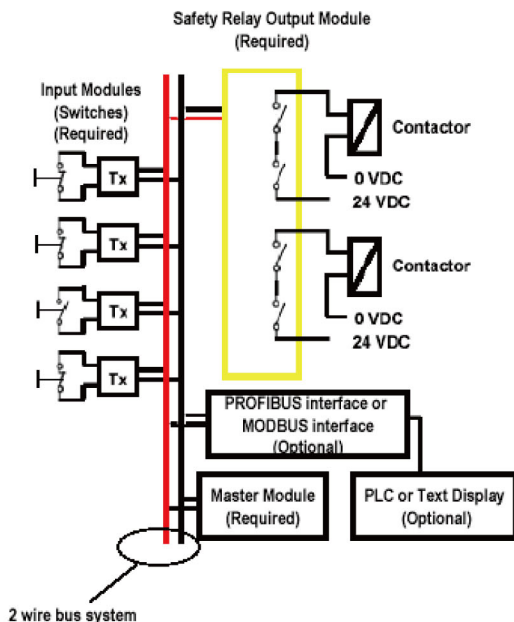
Profibus Interface



ModBusGateway



Text Display



2 wire bus system

Sales Number	Type	Supply Voltage
182001	Master Module – Channel Generator	24V.dc
182002	Master Module – Channel Generator	110V/ 230V.ac
182003	Safety Relay Module (Receiver)	110V/ 230V.ac
182004	ModBus Gateway Text Display Interface	
182005	Text Display	
182006	Profibus Interface	110V/ 230V.ac
182007	Programming Module / Interface	
Switches with Address Modules		
182101	GLHD Rope switch M20	Die Cast - PaintedYellow
182102	GLHD Rope switch 1/2" NPT	Die Cast - PaintedYellow
182103	GLHL Rope switch M20	Die Cast - PaintedYellow
182104	GLHL Rope switch 1/2" NPT	Die Cast - PaintedYellow
182105	GLHR Rope switch M20	Die Cast - PaintedYellow
182106	GLHR Rope switch 1/2" NPT	Die Cast - PaintedYellow
182107	GLHD-SS Rope switch M20	Stainless Steel 316
182108	GLHD-SS Rope switch 1/2" NPT	Stainless Steel 316
182109	GLHL-SS Rope switch M20	Stainless Steel 316
182110	GLHL-SS Rope switch 1/2" NPT	Stainless Steel 316
182111	GLHR-SS Rope switch M20	Stainless Steel 316
182112	GLHR-SS Rope switch 1/2" NPT	Stainless Steel 316

IdeSafe Bus System - 2 Wire Safety Communication for Rope Switches

2 Wire Bus System for use with Rope Switches

Description:

Bus powered Address 'modules' are integrally fitted within the Rope Switch housings and protected IP67.

They monitor the positively operated switch contacts to provide a 2 wire (channel) safety signal output which is monitored by the Safety Receiver Relay. The 'safe state' signal is transmitted continuously by each switch to the Safety Relay as long as the switch contacts are closed and the module self check is positive. Short circuit and open circuit faults are detected along the 2 wire continuous connection.

Mode of operation:

The Safety Receiver is used to monitor the NC positively operated switch contacts. The status of the switch contact is continuously transmitted on the IdeSafe Bus using a dynamic signalling principle over two channels (wires). A Master Module (Channel Generator) is always used in conjunction with a Safety Receiver and can monitor up to 63 modules (switches) all connected to the same IdeBus. If one or more modules fail to send the 'safe state' signal then the Safety Receiver contacts will release and open.

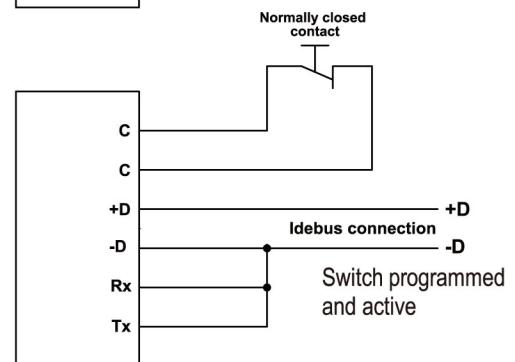
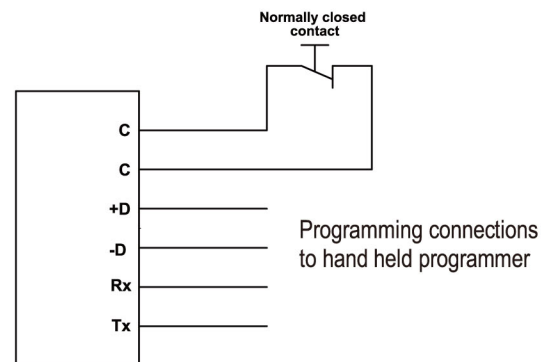
Addressing:

For addressing each module (switch) the hand held Programming Module is used to assign 3 pieces of information which identifies the individual address of the module (switch) – the Synchronisation Channel, Safety Transmit 1 and Safety Transmit 2. (Refer to operating manual for the Programming Module). The Synchronisation Channel is used by the Safety Receiver to send out a synchronisation signal to each input module on the IdeBus, therefore all modules and the Safety Receiver must be coded for the same synchronisation channel. Each module must be coded for a unique channel pair not used by any other switch.

The Safety Transmit 1 and Safety Transmit 2 channels are used by each module to transmit the switch status in such a dynamic way ensuring redundancy, diversity and continuous updating.

Terminal Connections inside switch:

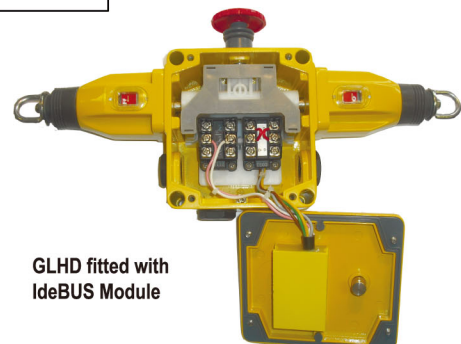
- C - Switch contact – positive break (internally pre-wired)
- C - Switch contact – positive break (internally pre-wired)
- +D - Idebus line - external connection
- D - Idebus line – external connection
- Rx – Connection for programming only – otherwise common with -D and Tx
- Tx – Connection for programming only – otherwise common with -D and Rx



Standards	IEC61508 EN954-1
Supply	from Master Module
Current consumption	1.0mA
Connection Cable type	Any 2 core or twisted pair
Open loop voltage	2.5V.dc
Short circuit current	100 microamp
Dielectric voltage	None
Power ON delay	< 5s.
Degree of protection	IP67
Operating temperature	-25 +50C.
Humidity (non condensing)	20 – 80%

Safety Receiver (Relay output)

Power Supply	230V ac or 115V.ac	+ / - 10%
Output Contact Switching Voltage		250V.ac/dc
Switching Capacity		6A. AC-1 at 230V
		3A. AC-15 at 230V
		5A. DC-13 at 24V.
Status Outputs		1 PNP transistor output 30V.dc 5mA max.
5 Status LED's		Green -Power
		Yellow - Idebus status positive
		Red- Relay Status
		Red- Manual Start Ready
		All flashing – configuration mode
Response time closed		600 ms
Response time open		300 ms



GLHD fitted with IdeBUS Module