Fortress Interlocks

Data Sheet

base modules:
connectors

eGard
Total Access & Control

eGard offers "Total access & control". The innovative modular design allows configurations of purely safety gate switches, purely trapped key interlocks, purely machine control stations or any combinations of all three.

description:

a selection of four base modules including a foot module to terminate purely mechanical configurations and three types of electrical connection module all incorporating quick disconnects.

connector options:

safety only connector
basic connection module for connecting safety circuits only. Cannot connect I/O "input/output". i.e. lamps, pushbuttons).

BS

safety & control connector
connects safety circuits and control circuits (I/O "input/output", i.e. lamps, pushbuttons).

BC (8 I/O)
BB (2 I/O)

AS-i safety & control connector
Standard 4 pin connector to suit AS-interface connectors

BA   (4 I & 4 O)

foot
For terminating purely mechanical configurations

BF

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C = This is a **Control** Module   **S** = This is a **Safety** Module

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Fortress Interlocks

Data Sheet   base modules:
connectors

technical specification

BS Safety Only Connector

Housing Material	PBT
Colour	Light Grey & Dark Grey
Ingress Protection	IP65
Ambient Temperature	-5°C to + 40 °C
Connection Type	4 - pin Micro Change M12
Current	200mA (*See note 1)
Voltage	24V DC

BC/BB Safety & Control Connector

Housing Material	PBT
Colour	Light Grey & Dark Grey
Ingress Protection	IP65
Electrical Life	1000000 Operations
Ambient Temperature	-5°C to + 40 °C
Connection Type	14 - pin Mini Change
Current	200mA (*See notes 1-3)
Voltage	24V DC

BA ASi Control & Safety Connector

Housing Material	PBT
Colour	Light Grey & Dark Grey
Ingress Protection	IP65
Electrical Life	1000000 Operations
Ambient Temperature	-5°C to + 40 °C
Connection Type	4 - pin Micro Change M12
Current	75mA
Voltage	24V DC

BF Foot

Housing Material	PBT
Colour	Light Grey & Dark Grey
Ingress Protection	IP65
Ambient Temperature	-5°C to + 40 °C

Head Cap & Actuator Input Outputs

Part Number	Module	Input (1)	Output (0)	Order of pin assignment from base to head	Module operates on safety circuits
BS	Safety Only	0	0	-	✓
BB	Safety & Control 2 I/O	Max 2 I/O		-	✓
BC	Safety & Control 8 I/O	Safety & Control 8 I/O		-	✓
BA	Safety & Control Asi	Max 4 I & Max 4O		-	✓

Notes

1. Hard wired safety circuit current ratings BC, BB & BS
The maximum current draw through each of the Safety Circuits is 200mA. These circuits are fully independent of each other AND of the Control System (i.e. the +24V DC supply).

2. **eGard** is a sourcing output requiring a sinking PLC input. When you press an **eGard** pushbutton you get a +24VDC from the output and to illuminate an **eGard** LED module +24VDC is required as an input into eGard.

3. BC & BB Current Ratings
The maximum continuous current drawn through the +24V DC supply pin is 200mA. Operation above this for any length of time will cause the internal thermal fuse to open. The fuses used are self resetting thermal fuses and can take a few seconds to reset once the over-current condition has been negated.

The +24V DC supply pin has to supply both the internal bus (stack) and any outputs that are active. The power for the modules, lamps and a solenoid are supplied via the internal bus. The internal bus current will obviously depend on the configuration of the **eGard** stack.

The current required by the BC or BB module is a little under 6.5mA. All push button modules (inc selector switches) require 0.2mA from the +24V DC supply, when illuminated. Finally, the solenoid modules require 50mA when energised.

With regards to I/O circuitry, the ON forward drop, when the pin is configured as an Output and it is high, is less than 0.7V at 180mA, up to 70 degrees Celsius.

The OFF leakage current, when the pin is configured as an Output and is off is less than 5uA up to 70 degress Celsius.

The input resistance is not purely resistive. On switching transitions the peak input current is +1mA & -2.5mA. The stable 'resistive' figures are 10uA off, - 1.8mA on. Note the negative current the input must sink, is a small current from the input I/O feed resistor.

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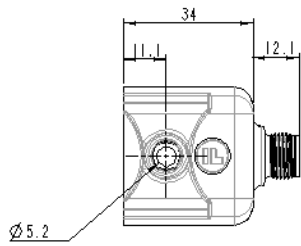**Fortress** Interlocks Ltd reserves the right to alter product specification and introduce improvements without prior notice.
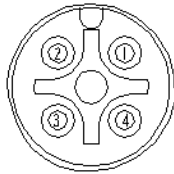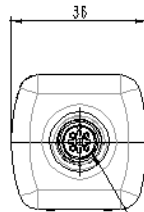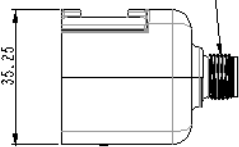
eGard

BS Drawing

34

12.1

Ø5.2

DETAIL A
SCALE 5.000

PIN	DESCRIPTION
1	SAFETY CIRCUIT 1
2	SAFETY CIRCUIT 2
3	SAFETY CIRCUIT 1
4	SAFETY CIRCUIT 2

M12 x 1mm PITCH THREAD

35.25

36

SEE DETAIL A

Screw Drawing

Ø8.5   5   30 MIN   M5

BB/BC Drawing

63

LED

Ø5.2

LED STATUS	MEANING
OFF	POWER FAILURE / FAULT
FLASHING AT 0.5 Hz	WORKING CORRECTLY
ON CONTINUOUSLY	FAULT
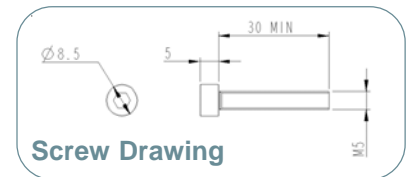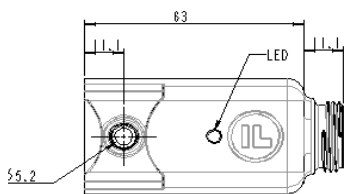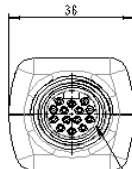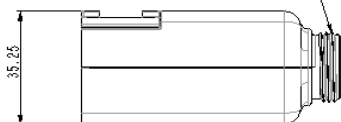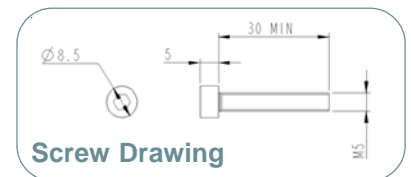
DETAIL A
SCALE 5.000

PIN	BC DESCRIPTION	BB DESCRIPTION
1	I/O 3	N/A
2	I/O 2	N/A
3	I/O 1	I/O 1
4	+24V	+24V
5	SAFETY CIRCUIT 2	SAFETY CIRCUIT 2
6	0V	0V
7	I/O 6	N/A
8	I/O 5	N/A
9	I/O 4	N/A
10	SAFETY CIRCUIT 1	SAFETY CIRCUIT 1
11	I/O 0	I/O 0
12	SAFETY CIRCUIT 2	SAFETY CIRCUIT 2
13	SAFETY CIRCUIT 1	SAFETY CIRCUIT 1
14	I/O 7	N/A

7/8" x 16 TPI THREAD

35.25

36

SEE DETAIL A
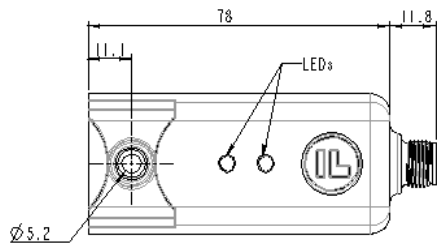
Screw Drawing

Ø8.5   5   30 MIN   M5

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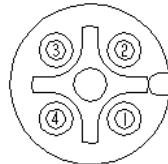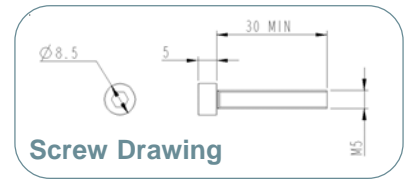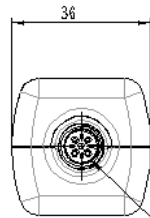
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BA Drawing

78   11.8

11.1

LEDs

Ø5.2

M12 x 1mm PITCH THREAD

35.25

36

SEE DETAIL A

DETAIL A
SCALE 5.000

PIN	DESCRIPTION
1	ASi +
2	
3	ASi -
4	

Screw Drawing

Ø8.5   30 MIN   5   M5

BF Drawing

34

11.1

Ø5.2

Screw Drawing

Ø8.5   30 MIN   5   M5

35.25

36

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