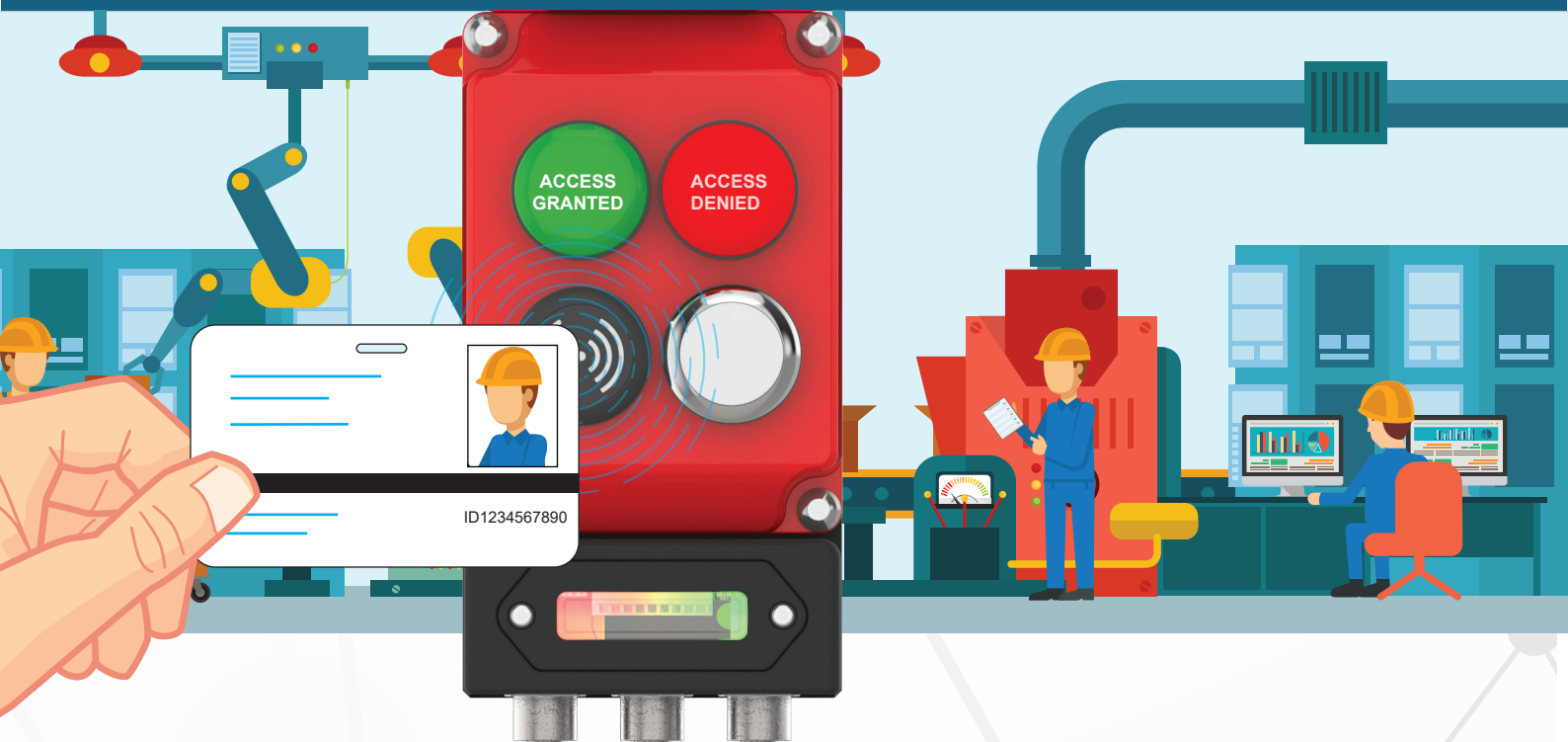


Protecting People, Protecting Productivity



Industrial Access Control



THE QUEEN'S AWARDS
FOR ENTERPRISE:
INTERNATIONAL TRADE
2018



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us EtherNet/IP



Access Control at the Interlock with **FRANK**

The **FRANK** Industrial Access Control Solution:

- Prevents unauthorised access and unauthorised line shut down.
- Simple installation and integration to a network, using your existing ID cards.
- Easy management of access permissions.

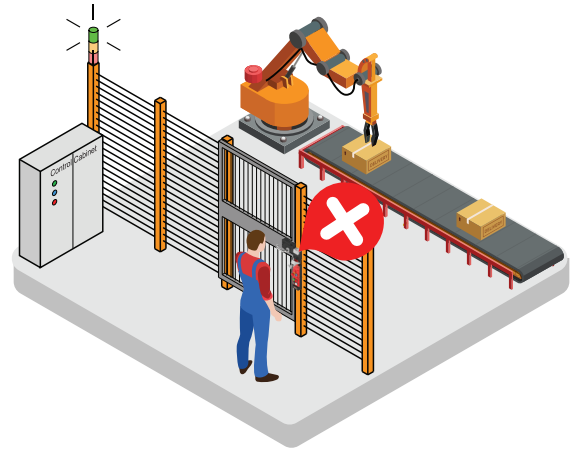


Prevents Unauthorised Shut Down & Maintenance

Unauthorised access to manufacturing areas can cause unnecessary machine downtime. Enforcing training plans reduces risk to valuable equipment.

Cell access is often uncontrolled allowing anyone to request to enter. Mechanical access keys require management.

FRANK ensures locations are only accessed by authorised personnel, protecting uptime in manufacturing. Existing ID cards can be utilised.



Productivity Insights

Without recording event information, identifying root cause and corrective actions is problematic.

It can be difficult to understand who accessed a controlled area and how long was spent resolving issues.

The **FRANK** software logs all access events. This allows reviews of time spent and enables productivity analysis. This can contribute to wider predictive maintenance.

FRANK can also be used to monitor other environments such as inspection areas when an audit trail is desired.

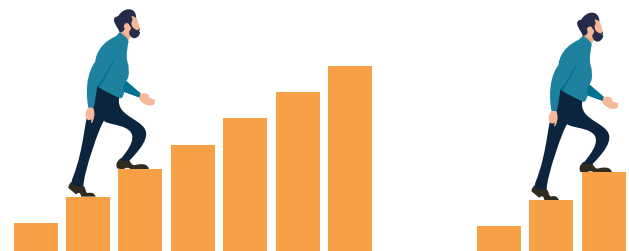


Simple Integration

Access control systems can be difficult to integrate into industrial environments and interlock safety systems.

External readers are often less robust for industrial environments, requiring additional wiring, and interfaces between the IT network or extensive reprogramming of the PLC.

With the reader integrated into the interlock, **FRANK** manages permissions through an industrial controller and then delivers simple inputs to the PLC, just like a pushbutton. Negating IT interfaces or complex system integration.



System Overview

Configurable Form Factors

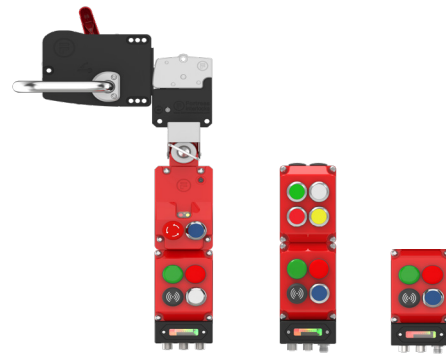
The **FRANK** RFID module can be located in any available slot, delivering all the configurability of a regular pushbutton. User can specify card type (e.g 125 Hz), to use existing ID cards and design outputs to visualise that access has been granted.

Monitor a Range of Environments

As well as monitoring the entrance and exit at a cell, **FRANK** modules can monitor for identification at any point of your process. Simple inputs to the PLC mean that access to a HMI can be granted or inspections can be tracked by associating users with button presses.

Without Compromising Safety

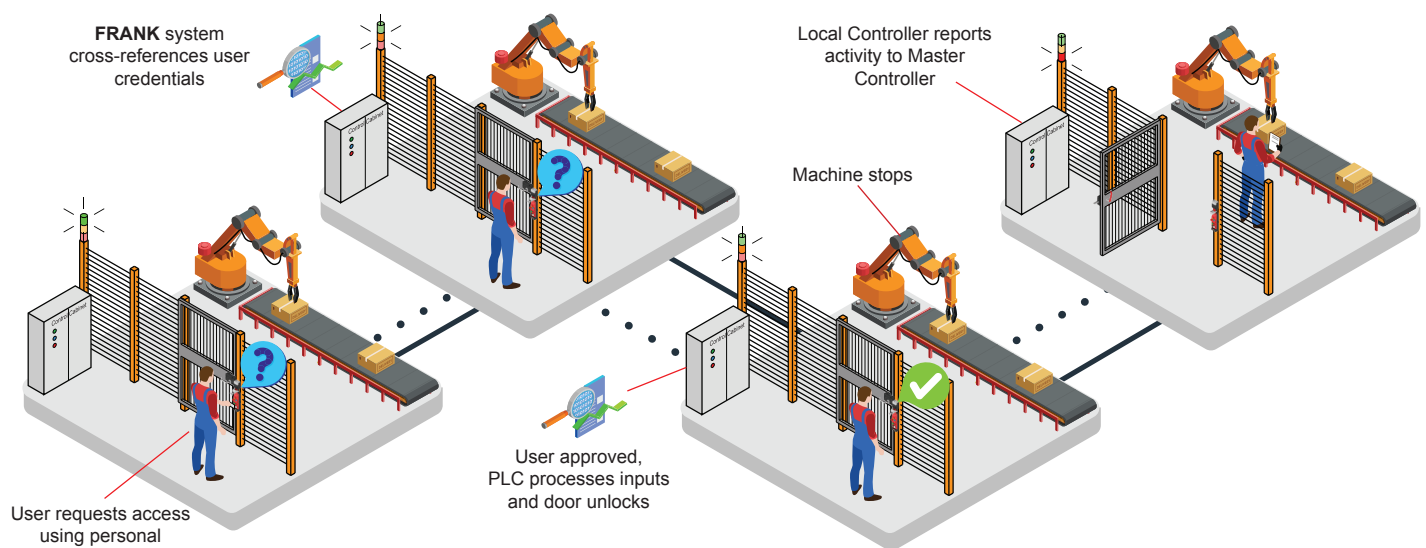
FRANK is separate from the safety inputs of the interlock. Using non-safety inputs to the PLC, just like a pushbutton. **FRANK** based procedures can be paired with Fortress' extracted key or other lock out tag out solutions when specified.



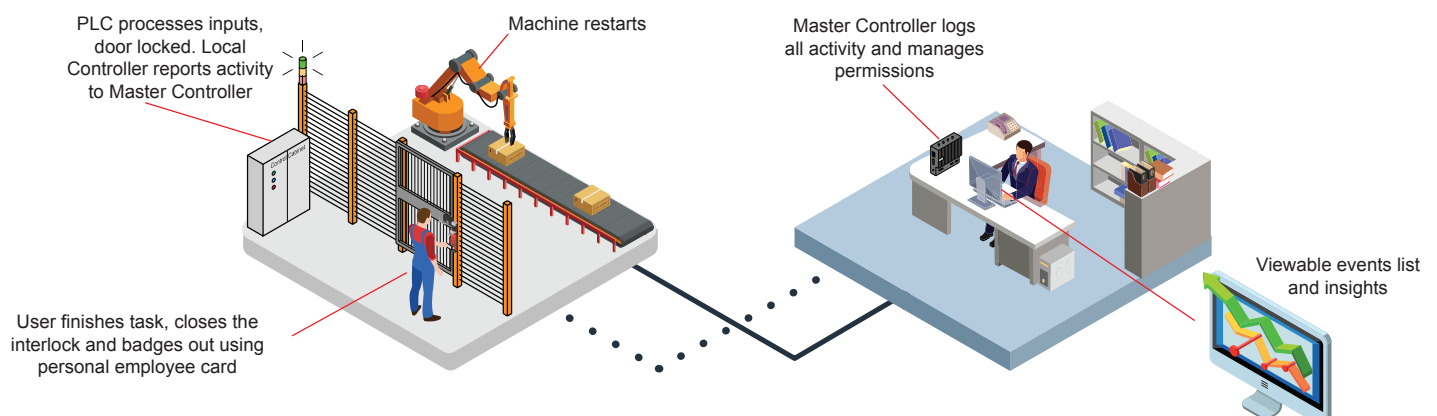
Simple PLC inputs

Non-Safety Inputs						Safety Inputs		
Existing			FRANK			Existing		
Lamp	Button	Other	Access Granted	Access Denied	Other	E-Stop	SC1	SC2

Control Access

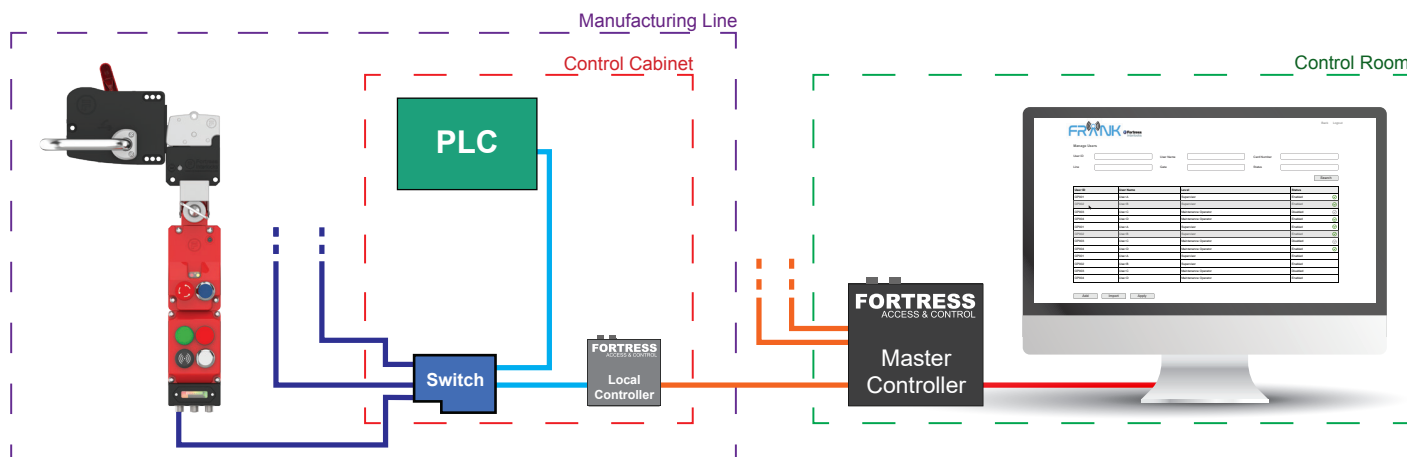


Manage Productivity



Implementation

Topology



Local controller provides robustness and line-side communication

Master controller syncs local controllers for central management

Bit Input Mapping									
Description		Bits							
		0	1	2	3	4	5	6	7
Non-Safe Inputs									
Byte 0	Bit is set when switch is pressed	[Button / Switch]	[Button / Switch]	[Button / Switch]	[Button / Switch]	-	-	-	-
Byte 1 to Byte 4	Reserved	-	-	-	-	-	-	-	-
Byte 5	Bit is set when tongue is removed from head	Head Monitor	-	-	-	-	-	-	-
Byte 6	Bit is set when gate is unlocked	Solenoid Monitor	-	-	-	-	-	-	-
Byte 7 to Byte 14	Reserved	-	-	-	-	-	-	-	-
Byte 15	Access Control	-	Access Granted	Access Denied	Cell Empty	-	-	-	-
Byte 16	Additional Permissions	-	-	-	-	-	-	-	-
Access control bits will pulse high for 100ms. If a user is authorised, Access Granted will pulse high. If a user is unauthorised, Access Denied will pulse high. When all users have badged out, Cell Empty will pulse high. Additional permissions can be set for custom inputs such as 'teach mode'.									

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Or visit www.fortressinterlocks.com

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