

# Jaguar Land Rover

## Total solution for a robotic training cell

Segment: Automotive  
 Application: Robotic training cell  
 Customer: Jaguar Land Rover



### Customer and application description

Jaguar Land Rover is well known car manufacturer that produces Jaguars at Castle Bromwich in UK. In the production ABB robots are used and at the facility there is a robot cell for on-site staff training on the robots.

### Problem and requirements

The training cell should allow staff to practice working and programming the robot without risk of injury. A fence surrounding the robot is required with a door allowing access. The door must be locked during operation and only allow access while the robot is standing still. Open areas into the robot needs to be guarded and e-stops must be available for safe stop of the cell.

### Solution

A fence solution was designed with a door guarded by the Knox safety lock. The open end of the cell is guarded by an Orion light curtain and two Smile emergency e-stops are placed on the cell. All sensors are supervised by a Vital safety controller and a BT51 expansion relay is used to increase the number of safe outputs and give a safe stop signal to the robot.

In the electrical cabinet an ABB power supply feeds the safety controllers, a mini contactor relay, a mini circuit breaker and an interface relay module – all products from ABB, connected using ABB terminals.

## Products used

Type	Order code
Orion 1-4-30-075-B	2TLA022302R0000
Knox 1A-R v2	2TLA020105R5000
Knox 2A v2	2TLA020105R2200
Smile 11RA	2TLA020054R1100
Smile 11 EA Tina	2TLA030050R0000
Vital1 Safety controller	2TLA020052R1000
BT51 Expansion relay	2TLA010033R2000
RT6 Safety relay	2TLA010026R0000
IRB 120 Industrial robot	
IRC5C Compact Robot controller	
ABB Power supply	1SVR427034R0000
ABB Trunking	
ABB Cable sets	
ABB Terminals	
KC6-22Z-01 mini contactor relay	GJH1213001R0221
S201M-C4 miniature circuit breaker	2CDS271001R0044
RB122A-24VAC interface relay module	1SNA630011R2100



### Safety and protection

Highest level of safety enables the staff to focus on training task



### Cost effective solution

A cost effective solution with minimum number of components



### Speed up your projects

A total solution with compatible products from a single source helps speed up the project

### Conclusion

With a complete range of products for robot solutions – including safety, control and connection products – ABB can offer competitive aesthetic total solutions that are cost effective and speed up your projects.

### Note

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