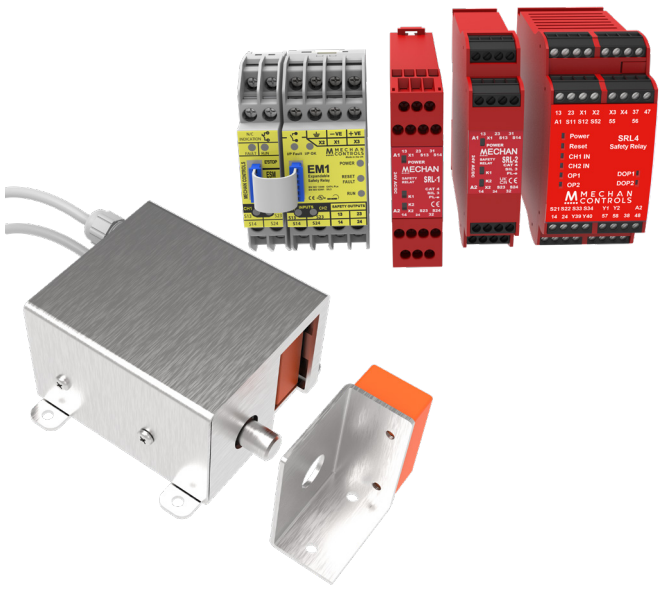
Installation Instructions for PLU2 Pneumatic Locking Unit



Description

The Mechan stainless steel PLU2 Air operated Locking unit is a complete, fail-safe system designed to lock a Gate or Access Lid securely with a 3000N holding force, until it is safe to enter. This can be determined either by a Motion Stop detector or an off delay safety relay.

It incorporates a dual redundancy system (Bolt Position Sensor Switch and a Mechan Guard switch) to sense when the locking bracket is in position. The bolt must be in the out position and the locking bracket in place before the machine can be restarted.

The unit is designed to work in the roughest of environments and is easy to access should maintenance ever be necessary. Units such as the one shown have been in operation on, for example, Concrete Mixer Lids for many years now with total reliability. See Technical Specifications below or contact Mechan Controls for further information.

The PLU2 pneumatic locking unit will operate with the SRL1, SRL2, SRL4, EM1 or any other safety relay.

KEEP THIS GUIDE FOR FUTURE REFERENCE

The information is designed to help suitably qualified personnel install and operate Mechan Controls safety equipment. Before using this product, read this guide thoroughly along with any relevant European and/or National Standards E.g. Machinery Directive 2006/42/EC and its Amendments, Provision and Use of Work Equipment Regulations. Further information can be obtained from Mechan Controls Ltd.

Technology	RFID
Coding	Individually Coded (4 Billion Codes)
Electrical Data of Safety Outputs	
Safety Contact outputs	2 NO
Maximum Current per Output	500mA, max
External Protection Fuse	400mA Fast Acting
Electrical Data of Auxiliary Output	
Operating Voltage	24Vdc
Output Type	1 NC
Maximum Current per Aux Output	500mA max
External Protection Fuse	400mA Fast Acting
Power Supply Electrical Data	
Supply Voltage Options	24Vdc (+/- 15%)
Overvoltage Category	III
Gernal Information	
Construction	316 Stainless Steel
IP Rating	IP65
Operating Temperature	-25°C to +60°C
Fixing	4 X M4 Security Screws
Connection	Pre-Wired
Mechanical Data	
Mechanical Endurance	1 million operating cycles
Max. holding force	3000 N

Safety Related Data			
B10d	2,000,000	PFH	6.52×10^{-8}
TM (Mission Time)	> 20 Years	PFHd	4.3×10^{-8} See Note 1
DC	99%	SFF	98%
MTTFd	High > 100 Years (Based on usage rate of 360 Days/Year, 24 Hours/Day, 10 Operations/Hour)		

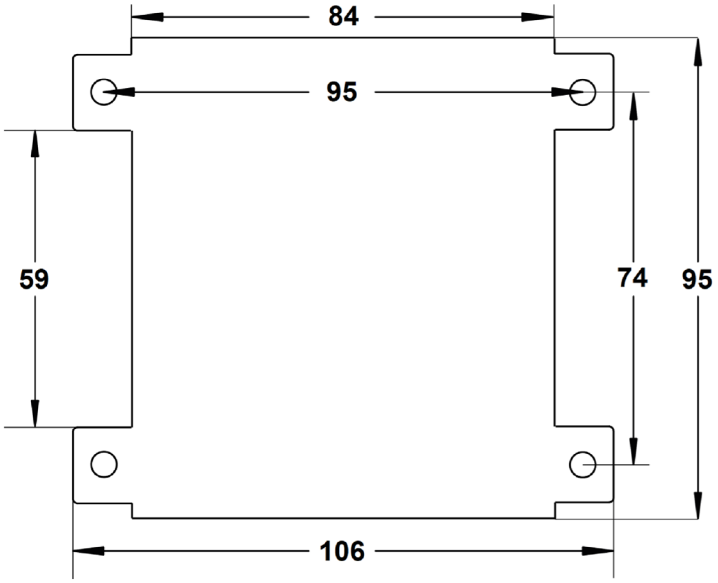
Note 1: Based on dual channel wiring according to CAT 4. Diagnostic coverage provided by downstream control logic. DC - medium, MTTFd = 100 Years. Suitable for performance level applications PLe according to ISO 13849-1. (SIL 3 according to IEC 62061)

Safety Standards	
International Directives	Machinery Directive 2006/42/EC, Low Voltage Directive 2014/35/EU; EMC Directive 2014/30/EU, RoHS Directive 2011/65/EU
International Standards	EN 12100 Safety of Machinery. General principles for design.
	EN ISO 14119 Safety of Machinery. Interlocking devices associated with guards. Principles for design and selection. EN ISO 13849 Safety of Machinery. Safety related parts of control systems.
	EN ISO 62061 Safety of Machinery. Functional safety of safety related electrical, electronic and programmable electronic control systems
	EN 60204 Safety of Machinery. Electrical equipment of machines.
	EN 60947-5-1 Low-voltage switchgear and controlgear.
	EN 60947-5-3 Low-voltage switchgear and controlgear.

Dimensions

PLU2 Dimensions

BOTTOM VIEW



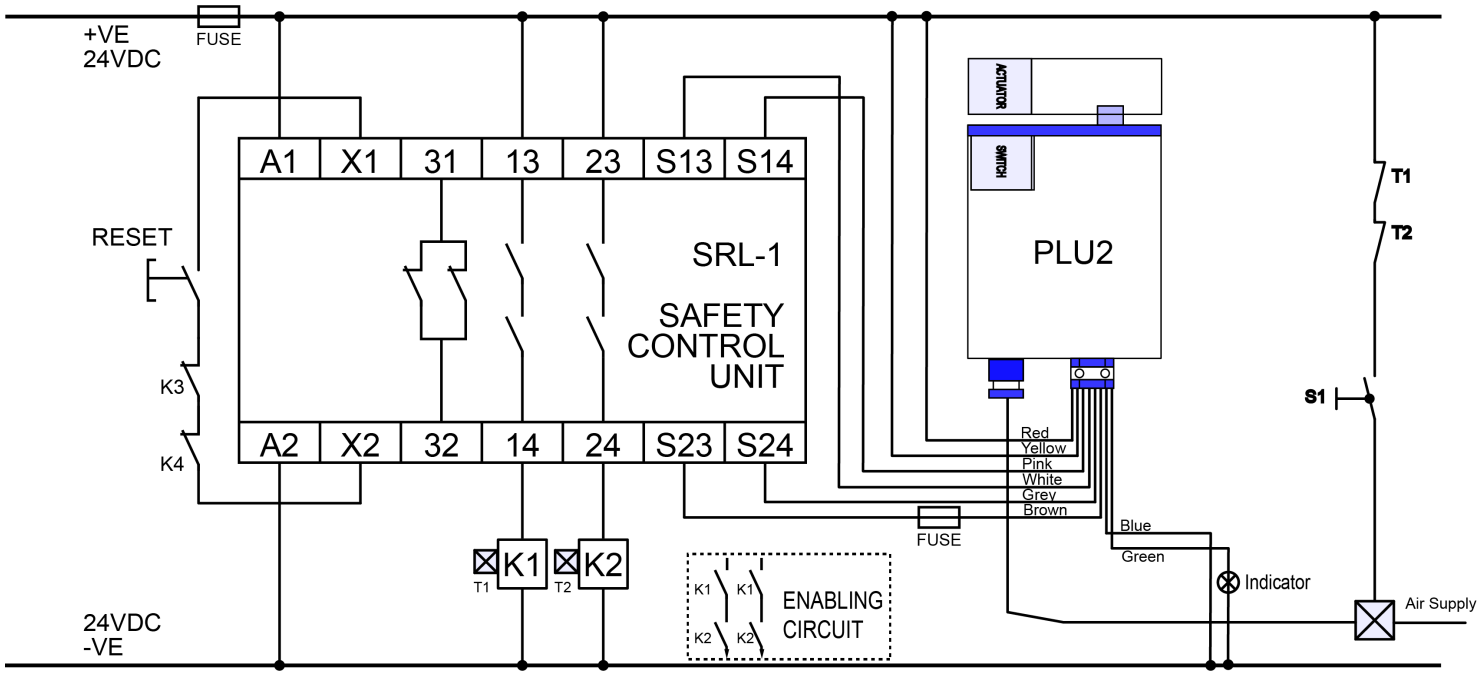
REQUIRES 4 OF M4 SECURITY SCREWS
ALL DIMENSIONS IN MM

Operation

The Mechan Pneumatic Locking Unit (PLU2) is connected to the Safety relay input and a timed air supply as shown on the wiring page.

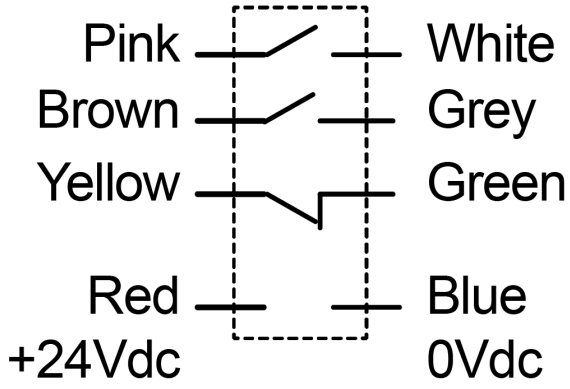
When the guard is closed, the Mechan Safety Switch & Actuator are aligned and the pneumatic bolt is fully extended locking the bracket in position, the control output safety module relays (13/14 and 23/24) can be energised by pressing the reset button, providing the reset circuit is complete.

When the stop command is pressed, the outputs K1 & K2 will switch off. After the timed delay has elapsed, T1 & T2 contacts will close and the supply to the solenoid valve will be present via a momentary switch S1. By pressing S1 the solenoid valve will energise and the air will be supplied to the PLU2 allowing the guard to be opened.

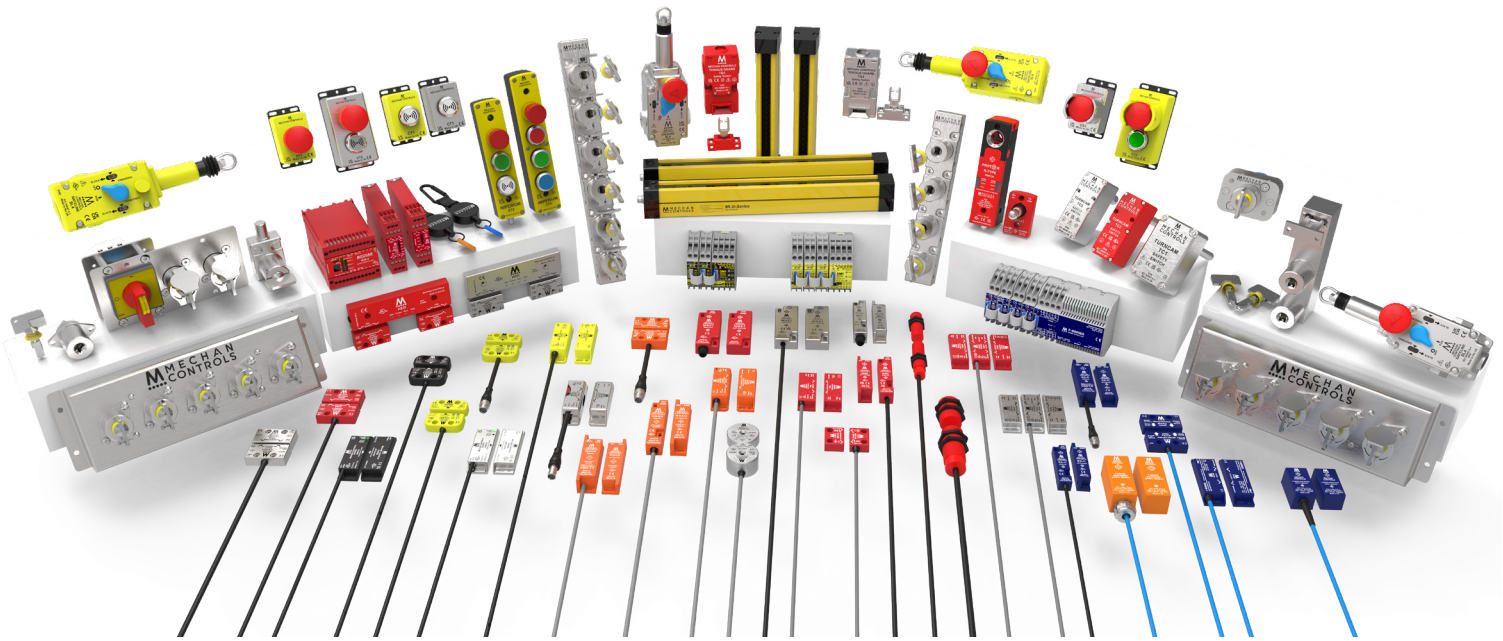


PRE-WIRED

PLU2



Installation Instructions for PLU2 Pneumatic Locking Unit



IMPORTANT
A**ll control contacts should be externally fused.**
Recommended Safety Control Unit Mechan Part Number: SRL-1 24VAC/DC, SRL2, SLR4 or EM1 & ESM
Maintenance
It is recommended to check the safe operation of the switches and look for signs of damage or excessive wear on a weekly basis. Damaged units should be replaced or returned to the manufacturer for repair where practical.
Notes
In the interest of product development specifications are subject to change without notice. It is the responsibility of the user to ensure compliance with any acts or by-laws in place. All information regarding Mechan equipment is believed to be accurate at the time of printing. Responsibility cannot be accepted for errors or omissions.

Contact Details
Mechan Controls Ltd, 14/16 Seddon Place, Stanley Industrial Estate, WN8 8EB, United Kingdom, Tel: +441695722264, Web: www.mechancontrols.com