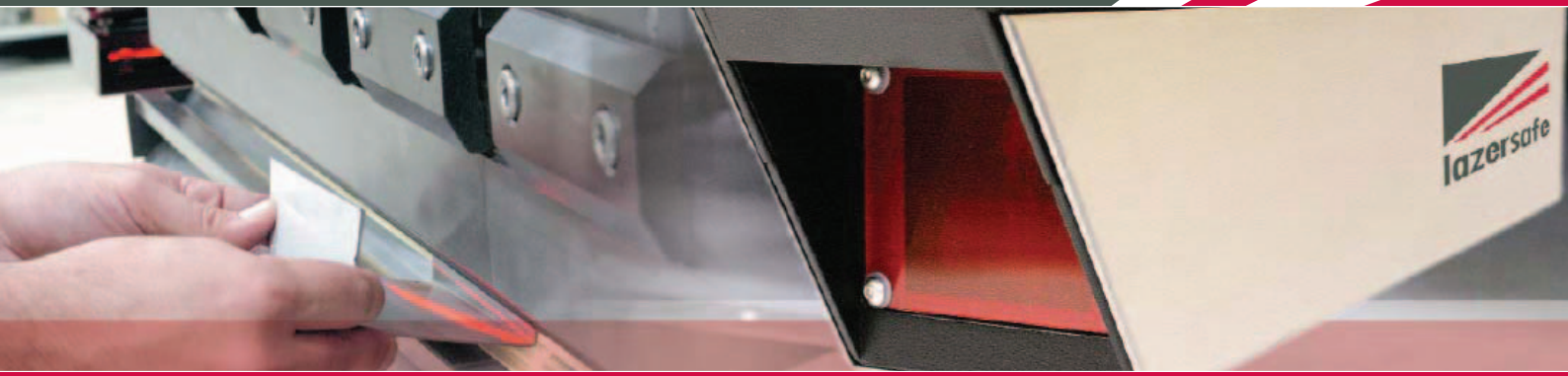


The Innovator in Functionality, Productivity and Safety for Press Brakes

# PCSS

Press Control Safety System



Streamlined management of productivity, safety and guarding for press brakes



# PCSS

## Press Control Safety System

The PCSS is a programmable control and safety system designed specifically to improve the performance and safety of press brakes. All press control, press safety and press operator guarding is handled directly by the PCSS. The PCSS also communicates directly with the press brake's CNC controller to achieve seamless operation and fully automated guarding system functions.

The PCSS completely replaces conventional contactors and general purpose safety PLCs currently used for the control of press brakes and associated guarding systems. A variety of inputs and outputs are available and are configurable for standard non-safety functions through to full Category 4 safety functions.

### PCSS Hardware

The PCSS is supplied as standard with the base module and input / output module. The GCM (guard counter module) option can be installed and supports the LZS-004 transmitter and receiver or the LZS-005 block laser and camera receiver or a third party light guard. As an additional option, the IMG-100 imaging package can be added to the LZS-005.

### PCSS Software

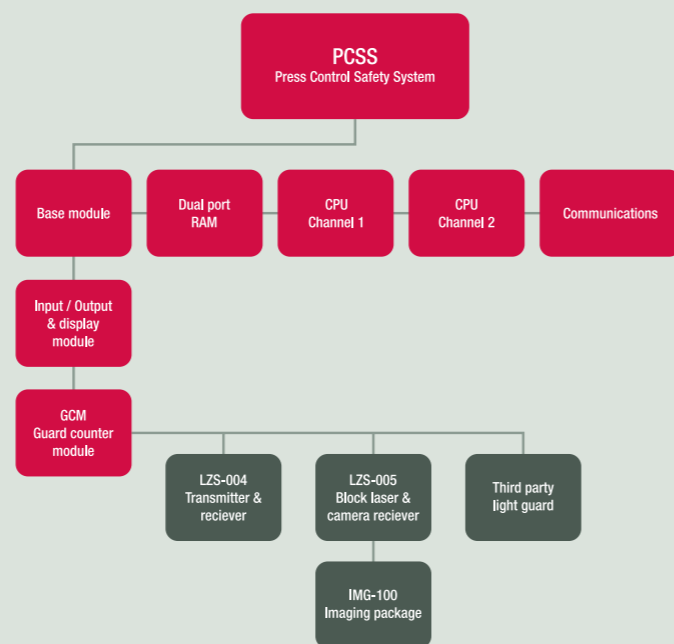
The PCSS software consists of two key elements: the kernel and the application software. The kernel has been developed by Lazer Safe to provide all required safety function modules for a press brake and forms part of the certification standard.

A special application interface provides a secure means to select the safety modules that apply to a specific press brake. This is an extremely efficient process and is ideal for finalising press brake certification quickly. The PCSS application software can be customised to suit the operation of the press brake using IEC standard methods of programming.

Unlike conventional PLC systems, the software blocks can be viewed in real time to assist in debugging or faultfinding. Special features or modifications implemented in software are easily loaded into the PCSS via the communications port.

### PCSS Communications

The PCSS communicates directly with third-party CNC controllers via a specially developed communications protocol. The protocol allows the PCSS to communicate with CNC controllers supplied by Cybelec, Delem, ESA and others. Commands, messaging and other information from the PCSS can be displayed on the CNC controller screen.



### The solution at a glance

#### Cost-effective

##### Centralised control

One system for operational and safety requirements.  
Modular design with flexible choice of inputs and outputs.

##### Reduced build cost

No relays or relay logic required.  
Reduced wiring and installation cost.  
Costs less than conventional safety PLCs.  
Standard Function Blocks supplied.  
Programmable logic - readily developed or modified using IEC standard methods of programming.  
With guarding system, no separate modules such as muting devices are required.  
Simplified fault finding and resolution.  
Machine control cabinet can be smaller.

##### Reduced operator guarding cost

LZS-004 or LZS-005 added to PCSS eliminates the need for any associated control or muting hardware.

##### Single supplier

A single supplier for press brake control, machine safety and operator guarding overcomes fault resolution conflicts.

#### Performance

##### Response time

Fast response time reduces the chance of operational faults and safety shutdowns.  
Operation is managed to produce faster and smoother transitions in change of speed, stopping and starting.

#### Reliability and machine safety

##### Overall design

Electronic design certified to Category 4.  
Specifically designed for press brakes.  
Fast response times - time critical signals less than 1 ms.

##### Fault finding

Error messages allow easy identification of problems.  
Ability to monitor and view software operation simplifies fault finding.  
Modular design permits individual card replacement.

#### Guarding system options with GCM (guard counter module)

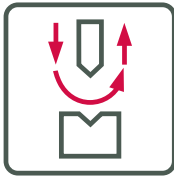
##### LZS-004 with transmitter and receiver or LZS-005 block laser and camera receiver

Low overall reaction time : LZS-004 4ms : LZS-005 3ms.  
Improves machine productivity by extending high speed distance and reducing low speed distance.  
Direct communication with CNC controller allows information transfer: mute point setting; positioning of laser; elimination of pressing speed discrepancies.  
Reduced conflict between operational, press safety and guarding system logic and their suppliers.

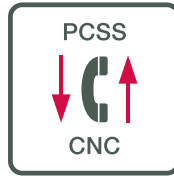
##### Light guard transmitter and receiver

Supports third party light guard.  
Response time 1ms plus that for light guard.

## Key Features



Press brake operation managed for smoother transitions



PCSS communications link



Advanced diagnostic functions



Supports Lazer Safe guarding and imaging system



Enhanced productivity



Supports third party light guards



Rapid response time



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