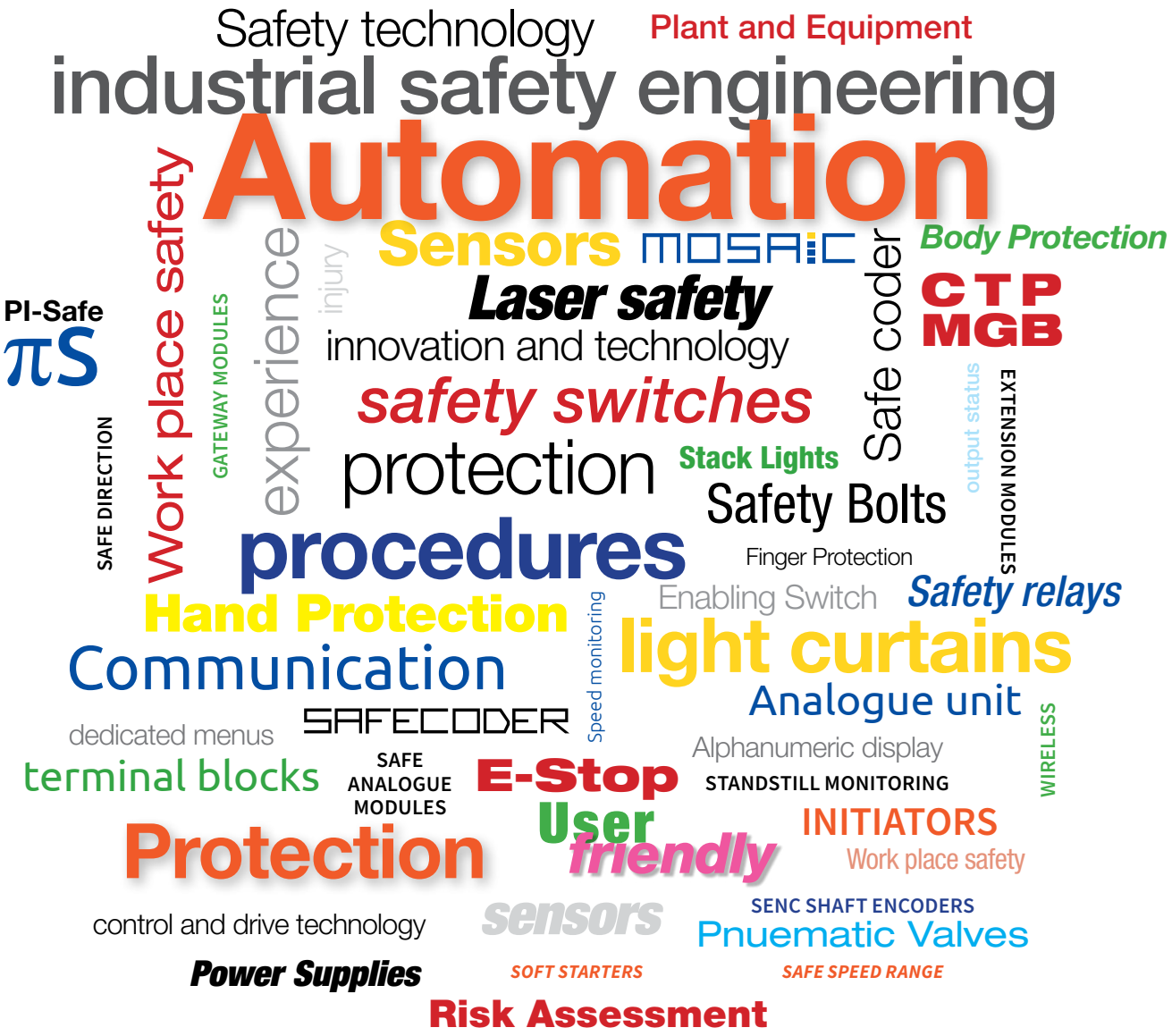
VENUS AUTOMATION



Volume 2

VENUS AUTOMATION

EUCHNER

EUCHNER is one of the world's leading companies in the area of industrial safety engineering.

With products from the three divisions Automation, Safety and ManMachine, EUCHNER has made a major contribution to its customers' business success. Euchner's characteristics is innovating strength and flexibility - and that of course with the highest possible quality.

Transponder-coded safety switches

Electromechanical safety switches without guard locking

Electromechanical safety switches with guard locking

Transponder-coded safety switches with guard locking

Transponder-coded read heads with external evaluation

Euchner Safety Bolts

Safety engineering with AS-Interface

Multiple Limit Switches

Emergency stop devices

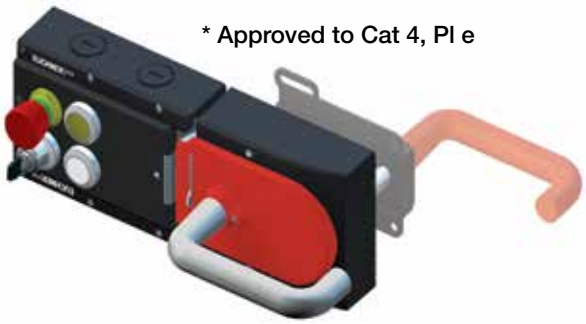
ESH Hinge Switch

Electronic-Key-System EKS

Joy Sticks

Hand-held pendant stations

Magnetically coded safety switches



MGB with emergency release handle

ZSM Enabling Switch

MGB-2 with communication interface

Safety switch CES-C07 and Bolt

CTP Guard Locking Switch | MGBS Guard Locking Switch

Safety Bolt | Rope Pull Switch

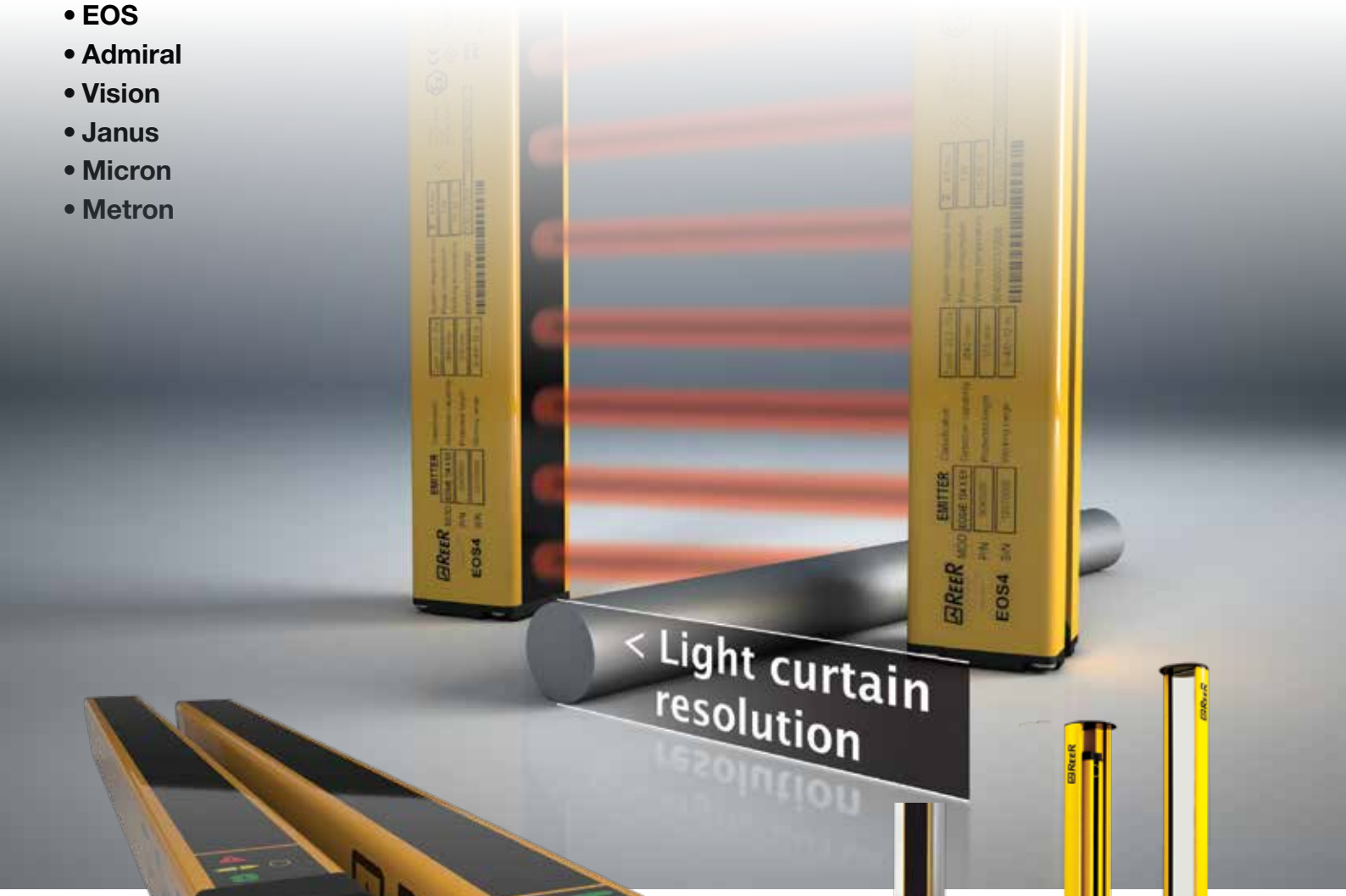
EKS with USB

* Approved to Cat 4, Pl e

CTP- Transponder coded- Atex Version

Reer was founded in 1959 in Turin, Italy, on the base of a strong vocation to innovation and technology. Reer's safety division is one of the world's leading companies in the design and manufacture of photoelectronic sensors for industrial safety.

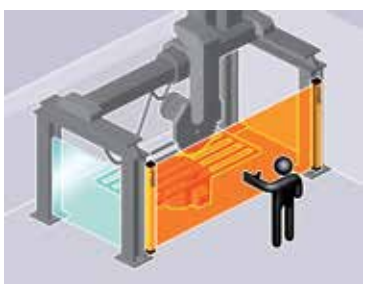
- **EOS**
- **Admiral**
- **Vision**
- **Janus**
- **Micron**
- **Metron**



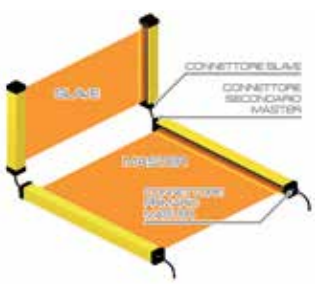
LC with IP 69K Housing

Finger Protection

Hand Protection



Body Protection



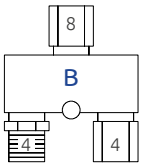
Master-Slave connection

MRFID S Series

Approved to Cat 4, Pl e
as per EN-ISO 13849-1.
Series wiring up to 30 sensors.

M12-8 Pin connector 15 cm pigtail (IP 67)

5 mt flying lead (IP 69)



Y Connectors for series connections of 2 or more sensors

Connection to Mosaic safety controller

Safety Controller

Transition time between Input and Output: 3 ms, the shortest in the market

MRFID B Series

Ilion Type 2 Safety Sensor

MGB

MG-M (M 30 Cylindrical)

PI-Safe πS

Inductive Safety Sensors (Up to Pl e, SIL 3)

VENUS AUTOMATION

MOSAIC

Connect up to 14 expansions... to the Master units

Communication

Speed monitoring

Safety relays

M1 M1S

MBx MCT

MV0/MV1/MV2

MOR4/S8 MR2/MR4

Analogue unit

Additional inputs

Additional outputs

Additional inputs/outputs

Additional status outputs

MI8/MI16/MI12T8

MO2/MO4/MO4L HC S8

MI802/MI804

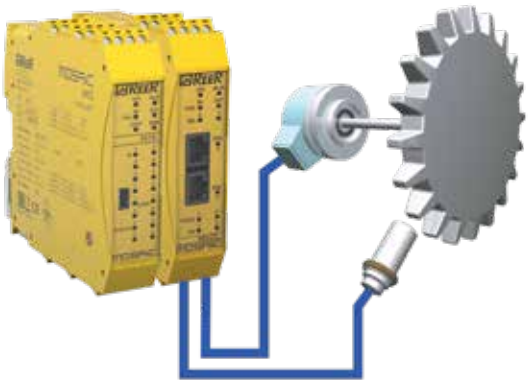
MOS8/MOS16

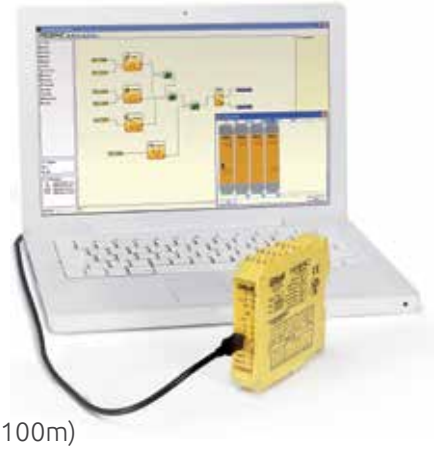
Safety Sin/Cos incremental encoder, together with Mosaic, comprise a SIL 3 certified safety function for speed monitoring. Available: Shaft or Hollow shaftversions.

SAFECODER

Shaft version

Hollow shaft version

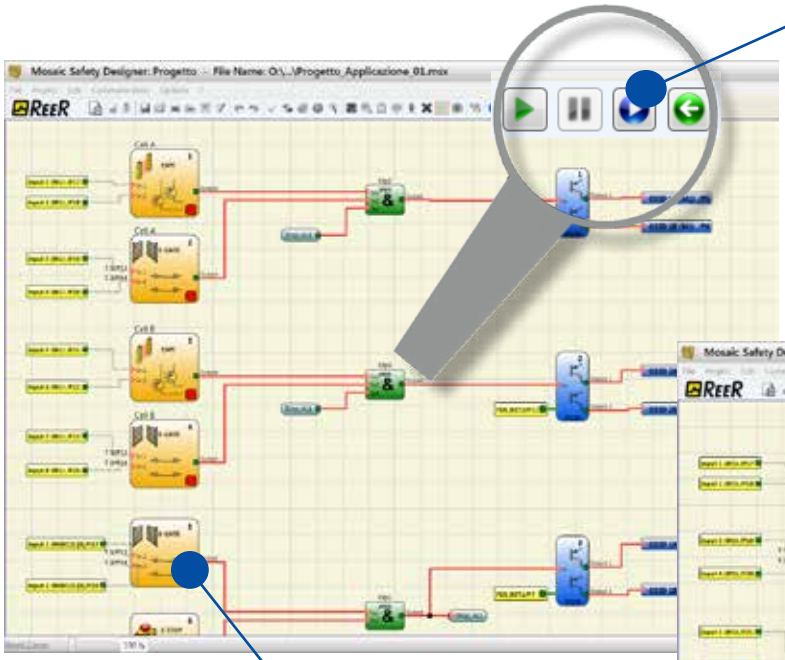




MCT- Distributed Safe Networking (up to 100m)

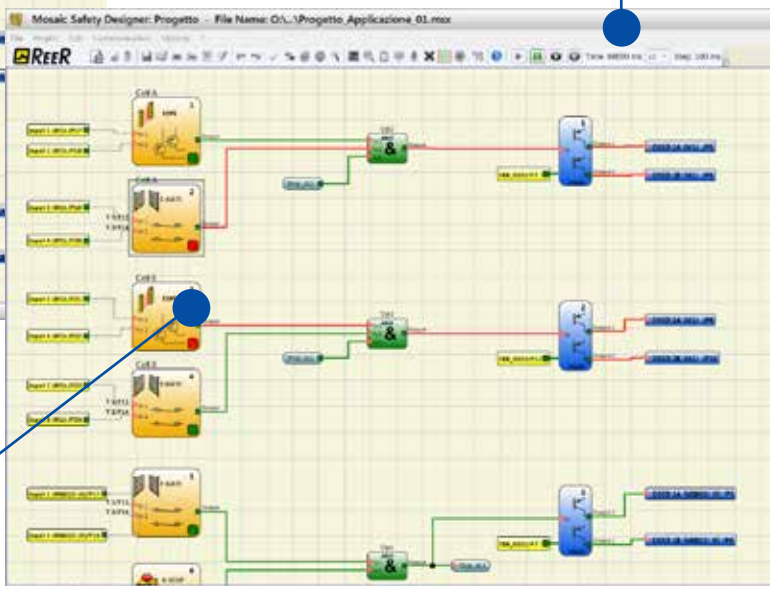
HM1- DISPLAY UNIT

Alphanumeric display. It displays the messages programmed using the HSD software.



Simulation can start, stop or restart via dedicated menu

Timings setting
When timer operators are included in the actual configuration



Clicking on the button on the lower right of each input block it is possible to toggle its output status

Likewise in the monitor function, also in this case the color of the line indicates the signal status: green means the signal is at LL1, red means the signal is at LL0

VENUS AUTOMATION

wieland

Safety relays of the **Wieland** safe RELAY series offer customized solutions for the safety of man and machine. Compact design, flexibility in application, and variable connectivity options are the decisive advantages of these devices, which are available for all safety functions.

SNO 4062K-A (2NO, 1NC 24VAC/DC)

SNA 4043K-A or SNO 4083KM-A (3NO, 1NC 24VAC/DC, 115-230VAC)

Safe OFF delay (KL)

Safe ON delay (KP)

SNV 4063 KL/KP-A (2NO Inst, 1NO Del, 24VDC)

SNV 4076 SL-A (3NO Inst, 3NO Del, 24VDC, 115-230VAC)

2-Hand Safety Relay

SNZ 4052 K-A (2NO, 1NC, 24VDC, 230VAC)

Expander module

SNE 4024K-A (2 x 2NO,1NC 24VDC)

Expander Module

SNE 4004K-A (4NO, 1NC , 24VAC/DC)

Expander Module

SNE 4028S-A (8NO, 2NC)

Expander Module

SNE 1 (2 Change over contacts, 24VDC)

Back EMF Standstill Detector

* SIL 3, Cat 4, Pl e approved

SVM 4001 K-A (2NO, 24 VDC)

Sensors of the **Wieland** sensor PRO series ensure the effective protection of people in machine building and system engineering. The sensor PRO series includes contactless safety sensors, such as transponder switches, solenoid switches, light grids, light curtains, and rotary encoders as well as mechanical safety switches, such as emergency stop buttons, position switches, and guard controls.

* M8 Connector
* 3 m flying lead

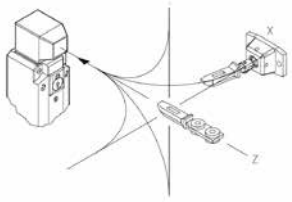
SMA 01## (2NC or 1NO/1NC)

* M8 Connector
* M12 connector
* 3/5/10 m flying lead
* with LED

SMA 02## (2NC or 1NO/1NC)

* M8 Connector
* 3 m flying lead

SMA 03## (2NC or 1NO/1NC)



SIN #### (Solenoid locking guard switch)

SMS #### Safety interlock

Wipos Power supplies (1.25 A to 40A)

SLS #### Position Switches

Flare Timers and Relays

Estop Enclosure (SNH 6001)

E-Stop Shroud & Key

E-Stop Illuminated

E-Stop Contact Block

VENUS AUTOMATION

wieland

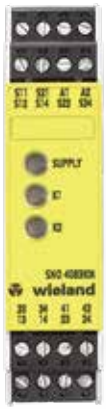
SAFETY - ALL IN ONE with SAMOS® PRO COMPACT

With the highest power in the smallest space, samos® PRO COMPACT sets new standards in the area of safe machine automation. Our all-rounder for all safety tasks, such as emergency stop, safety doors, light barriers, muting, presses, monitoring of speed, direction of rotation, and position, and so much more. Special libraries in the PLUS version offer outstanding added value for Motion, Presses, Muting, Analog and Combustion applications.

SP-COP 1 - X

SP-COP 2 - X

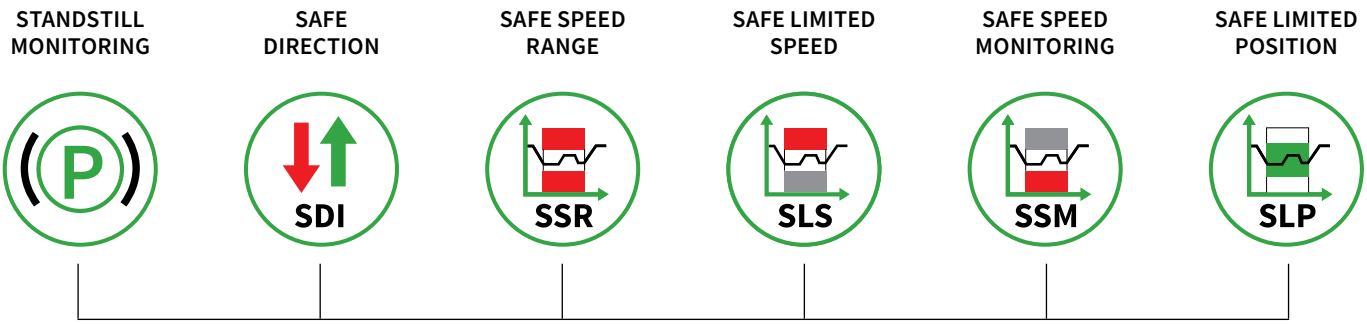
EXTENSION MODULES



SAFE ANALOGUE MODULES

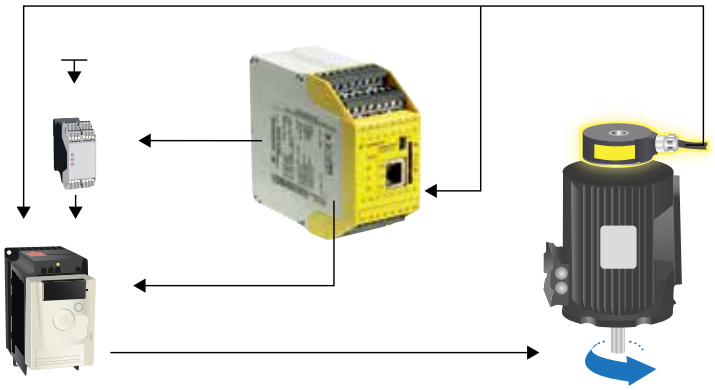
GATEWAY MODULES

SAFE MOTION WITH **SAMOS®** PRO COMPACT PLUS



SENC – SAFE HTL INCREMENTAL ENCODER.
SIL 3, CAT 4, PL E APPROVED.

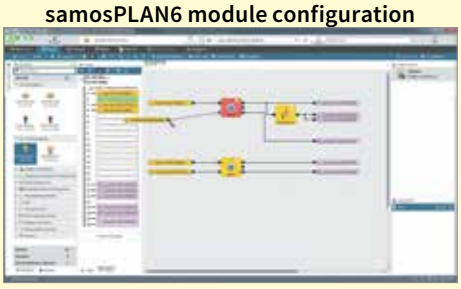
SENC HOLLOW ENCODER



INITIATORS

samosPLAN6 LOGIC COMPLEX

samosPLAN6 module configuration



samosPLAN6 simulation

UAM is world's smallest, safety area laser scanner from Hokuyo, Japan.
With 5 m safety, 20 m warning zone and 2 x 2 OSSD outputs, it is approved to SIL 2, Pl d, Cat 3 for AGV, vertical and horizontal guarding applications.

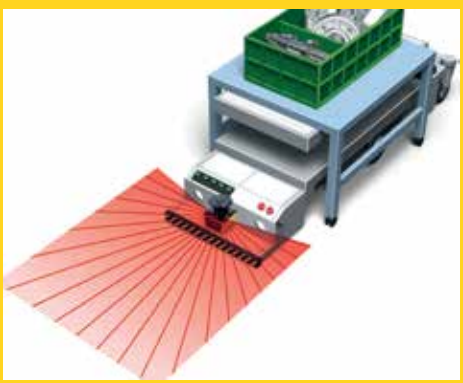
Compact design: 95 x 80 x 80 mm, 0,8 Kg

SAFETY LEVEL
TYPE 3
SIL 2
PL d - Cat. 3

Product number	Product number
UAM-05LP-T301 (3 m cable)	UAM-05LP-T301 C (connector)

Expands the range of safety applications

Collision prevention



32 safety area patterns to accommodate the AGV travel path for collision prevention

Presence detection

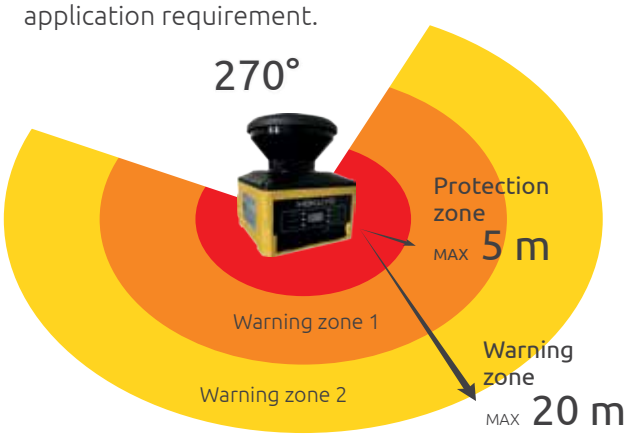
Detects humans or objects entering the hazardous area

Intrusion detection

Detects access into critical zone

Protection over a wide range

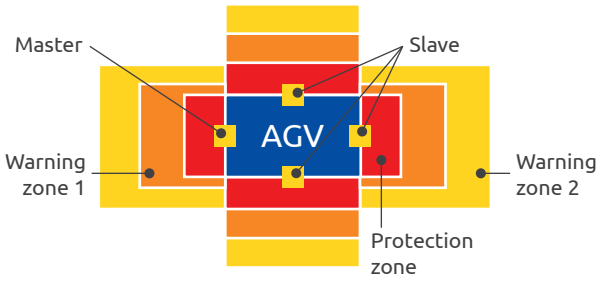
Up to 5 meters of protection zone and 20 meters of warning zone configuration to suit various application requirement.



2 operating modes
2 warning zones + 1 protection zone
2 simultaneous protection zones

Master-slave function

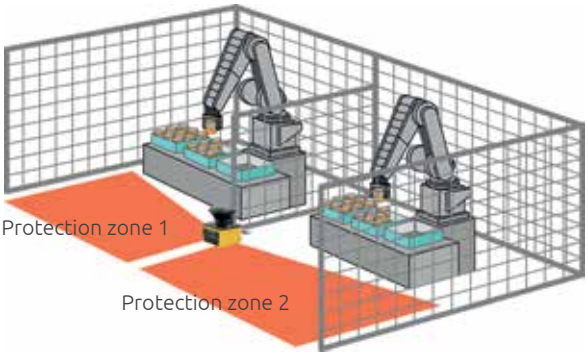
Maximum 4 units of UAM can be interconnected for Master-Slave operation when multiple units are required to guard the hazardous area. The system can be controlled by connecting the input and output signals to Master unit only[1].



[1] It is not possible to control the actuators via master-slave bus communication

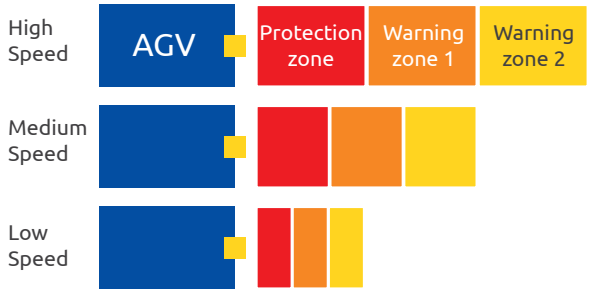
Dual protection mode

UAM can simultaneously protect two hazardous areas. Separate OSSD signals are triggered for the respective protection zones making it possible to guard two machines with a single UAM.



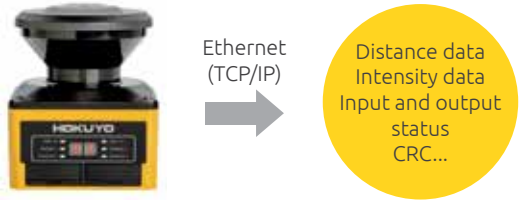
Encoder input

In AGV applications, area is switched depending on the vehicle's speed. Speed and direction of travel provided via encoders are constantly monitored to switch the area and stop the AGV during abnormal travel.



Data output via ethernet

Measurement data can be acquired via Ethernet with status of input/output signals and cyclic redundancy check code. Also supports command in SCIP2.0 protocol.



SD card for configuration

Configuration data can be saved in a SD card which in turn can be used for configuring the UAM without connecting it to a PC. The feature is useful while replacing the UAM or configuring multiple units with the same settings.

Nuova-Elettronica:
A family based innovative company based in picturesque Citta Delle Pieve of Umbria region of Italy have been in business for over 30 years. They are a leading Italian manufacturer of Laser safety system for press brakes.

DSP Laser System is Type 4, ESPE to EN 61496-1:2014 and EN 61496-2:2014. It is certified to Pl e, Cat 4 as per EN ISO 13849-1.

DSP Laser RX

DSP Laser TX

DSP Laser Support arm

Range 150 -2000 mm
Res: 5µm

Magnetic Linear Incremental Encoder- For Press Brakes.

Upto 5000 PPR
6/8/10 mm Shaft

PRI-50 Rotary Incremental Encoder- 50 mm

Upto 3500 PPR
4/6 mm Shaft

PRI-40 Rotary Incremental Encoder- 40 mm

The DOLD philosophy,
"Our experience. Your safety" constitutes their program: Offering solutions based on over 80 years of experience with a workforce of more than 400 employees, Dold manufacture high quality products using state-of-the-art production plant at our Furtwangen facility in Germany.

UH 5947

Standalone safe standstill and speed monitoring using Encoder/prox sensors: UH 5947. Certified to Cat 4, PL e to EN ISO 13849-1, SIL 3 to EN ISO 61508/62061.

UH 6937

Standalone Safe Frequency monitor for 1 phase/3 Phase AC motors: UH 6937. Certified to Cat 4, PL e to EN ISO 13849-1, SIL 3 to EN ISO 61508/62061.

Wireless Safety System with enable switch. BI 6910 with RE 6910. Certified to Cat 4, PL e to EN ISO 13849-1, SIL 3 to EN ISO 61508

Wireless Safety System with Emergency stop. BI 5910 with RE 5910. Certified to Cat 4, PL e to EN ISO 13849-1, SIL 3 to EN ISO 61508

UH 6900 Pair mode

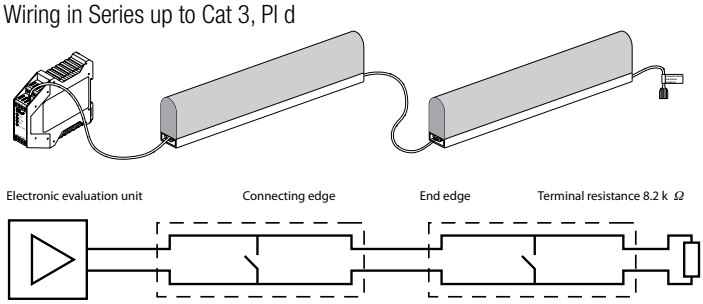
Wireless Safety system bi-directional radio-controlled system in pair mode: UH 6900

UH 6900 - group

Wireless Safety system bi-directional radio-controlled system in group mode: UH 6900

Established 35 years ago; **ASO Safety GMBH** is leading European manufacturer of safety edges, bump strips, safety mats and safety controllers. With wide range, huge stock and competitive pricing, Venus Automation is here to help with ASO products.

Wiring in Series up to Cat 3, Pl d



Sentir Plug and Play Safety edge

Safety mats

Sizes up to 2350 x 1350 mm

Elmon 41-322 Relay
Cat 3, Pl e

AL 25-14

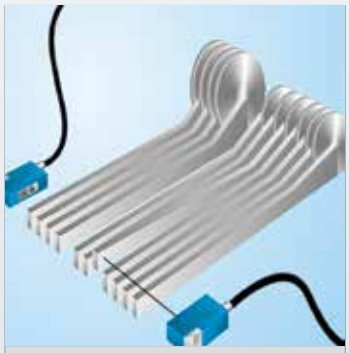
Aluminium Rail

Sentir 25.45 TTla

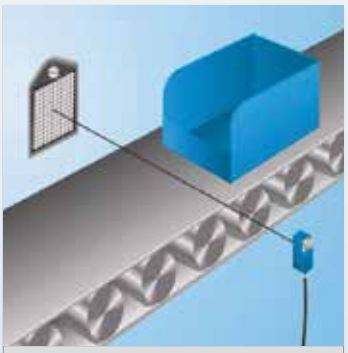
Sentir 25.45 TTLL

Sentir 25.45 TT

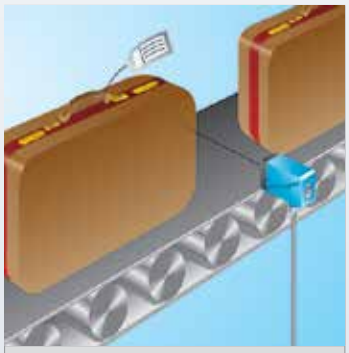
Balluff and **Wenglor** are leading German sensor manufacturers. **Venus Automation** offers the best product from these two manufacturers to suit your application.



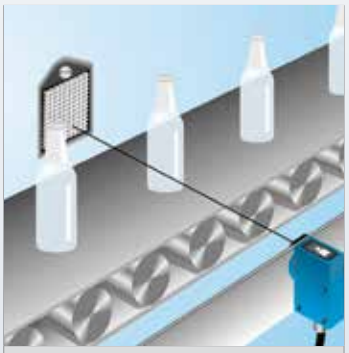
Through Beam Mode



Retro Reflex Mode



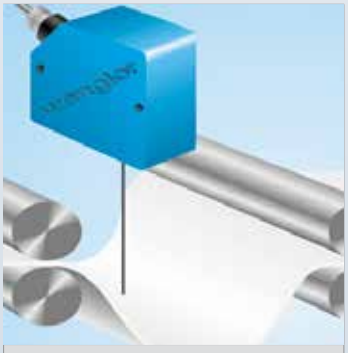
Reflex Mode



Senor for clear products

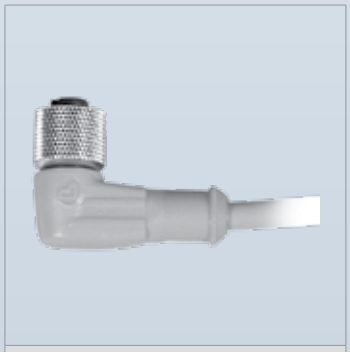
Reflex Sensor for Meausring Task

Print Mark Sensor

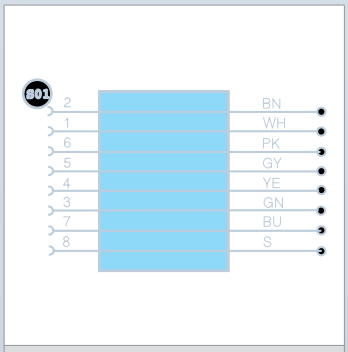


Transit Time for Measuring Tasks

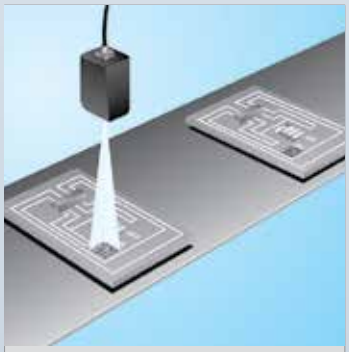
Ultra Sonic Sensor



Connecting Cable



Schematic



Bar Code Sensor

Colour Sensor

Transit Time Sensor

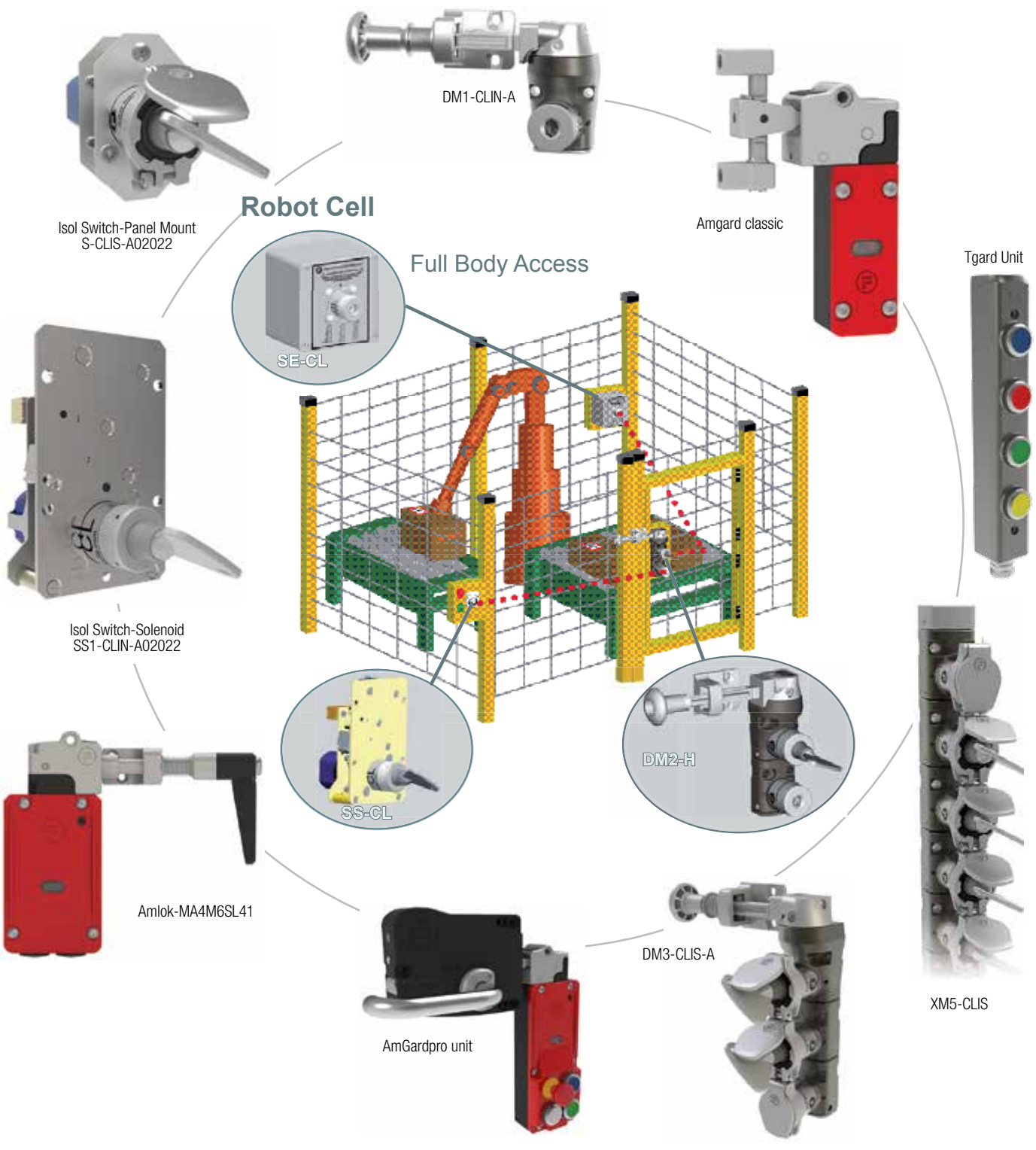
Vision System

Fluid Sensors

VENUS AUTOMATION

Fortress Interlocks

Fortress Interlocks is UK based company established 40 years ago. Product portfolio includes trapped key interlocks (mGard), heavy duty safety gate switches, with and without guard locking (amGard Pro) and standard duty interlocks with in-built control functionality (tGard).



The DOLD philosophy,
"Our experience. Your safety" constitutes their program: Offering solutions based on over 80 years of experience with a workforce of more than 400 employees, Dold manufacture high quality products using state-of-the-art production plant at Furtwangen facility in Germany.


10 Amp


50 Amp

Solid State Contactors - BF 9250 Series


4 Amp


12 Amp

Reversing Contactors - BH 9253 Series


BA 9010 - 5.5 KW


BN 9011-11 KW

MINISTART Soft Starters

From 1.5 to 7.5 KW
Softstart with softstop

MINISTART Softstarters UH 9018 Series


GI 9014

- 2-phase softstarter for asynchronous motors up to 110 kW (400 V)
- DIN rail mounting with devices up to 30 kW
- Communication interfaces for Profibus, DeviceNet, Modbus
- voltage range 3 AC 200 ... 575V

Softstart - Softstop Device - GI 9041 Series


IL 5882


IR 5882


ND 5016/024

Residual Current Monitors

- Single and 3 phase motors
- DC-Brake rectification upto 60 A

Motor Brake Relay - BI 9034 Series

Range
200 kΩ - 2 MΩ


BD 5877

Range
5-100 kΩ


MK 5880 N

Insulation Monitoring Relays

Application range up to category 4 and performance level (PL) e in accordance with EN ISO 13849-1

High switching capacity, currents of 25 A to 800 A (AC23)

Different designs available
- Mechanical
- Safety switch
- Safety switch with lock

Power Interlocking - ZRH01SLPR40

VENUS AUTOMATION

Ancillary Products

Venus Automation offer range of Industrial Automation products like,Energy chain and cables

- Multicore flexible cables
- Multipole connectors
- Glands and conduits
- Cable reels
- Festoon systems
- Cable trolleys
- Safety Contactors
- Safety pneumatic valves
- Safety wireless devices
- Modular safety fencing
- Stack light
- Sound/beacons/alarms
- Push buttons
- Muting lamps

Contactor

Safety Pnuematic Valve

Energy Chains

Multi Core Flexible Cables

Foot Pedal Switch

Stack Lights

Push Buttons

Emergency Stop / Legends

Power Supplies

Safety Fencing

Multipole Connector

COMITRONIC-BTI is a European manufacturer of machine safety and automation components. Range of products includes coded contactless safety switches, polyvalent safety modules, RFID uniquely coded switches, EX solution which covers zone 0 to zone 20, innovative contactless interlocking solution and dual colour touch sensitive buttons and lighting products.

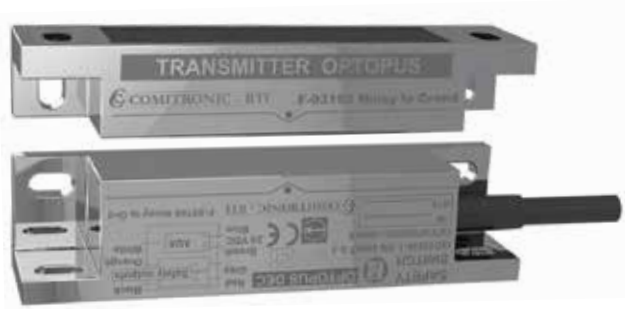
BTI-Comitronic products are well implemented into food industry- packaging, bottling industry etc.

* Cat 4, PI e approved

SM2 NDP OX (Electro magnetic locking)

* Holding force: 936N
* 316 Stainless Steel

SM2 (Power to unlock/lock version)



Optopus

Optopus Dec

*Holding force: up to 580 N
* INOX 316 L Mirror polished

SM1 (Power to unlock/lock version)

Holding force: up to 580 N

SM1 PL (Power to unlock/lock version)

Optopus Dec

-30°C to +110°C.

Trithon

Risk Assessment

Plant and Equipment

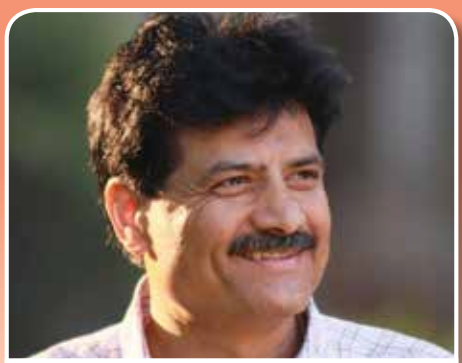
Plant Assessment	Plant assessment report will provide an "overview" of the current safety status of your company's production equipment.
Venus Provides	• An on-site examination of plant and equipment. • Analysis of primary hazards. • Evaluating existing risk reduction principles. • Comparison of machine compliance with existing regulations. • Priorty list (heirarchy of risk).
Risk Assessment	Risk assessment report will identify hazards, evaluate risk and provide comprehensive risk control recommendations complying with AS4024.1-2006 (machine safety standard) and OHS regulations.
Venus Provides	• On-site inspection • Consultation with all relevant personnel • Provide a detailed report documenting risk control recommendations
Safety Design	Safety design includes component selection, Hardware (Safety Schematics), Software development and customer training.
Venus Provides	• Safety requirement specification • Detailed electrical, mechanical, software and control system design • Component selection
Validation	Validation analysis complying with AS4024.1502-2006
Venus Provides	• Assessment of existing design against safety requirements • Evaluate selected components • Test of safety related hardware and software

Safety Services

- ✓ Technically qualified and TUV certified safety engineer and trainer.
- ✓ Professional Indemnity Insurance Cover
- ✓ More than 22 years experience in Machine Safety
- ✓ Bachelor of Electrical Engineering
- ✓ Chartered professional member of the Institution of Engineers Australia

Venus provides expert training for machinery and equipment safety.

Our training is based on AS 4024.1-2014 *Safety of Machinery* and Work Health and Safety Legislation. Venus Automation is a solution provider for all automation tasks. We support your safety personnel and engineers whilst implementing your requirements and help you to achieve safe automaton-economically and efficiently. With our applications and process knowledge, together with a comprehensive expertise in relevant safety standards, we can work with you to implement optimal automation solutions in any industry section. Topics covered for one day and two day training courses.



"***Safety first***" – *It's every employers responsibility* - Raju Kotecha

SAFETY Introduction (day 1)

This course has become very popular due to it's vast amount of information and value for money. It has been designed to provide basic knowledge on how to make machinery safe. The course has been updated to include the key points of machinery safety with reference to the new WHS legislation and Australian Standard AS 4024.1-2014 Safety of machinery.

SAFETY Advanced (day 2)

This newly developed course is a follow on from the Introduction Course and has been specially put together for technical staff who are given the very important task of building safety features into new machinery or upgrading the safety features on existing machinery. It delves into much more detail on the key aspects of mechanical and electrical safety design for machinery.

Customised courses.

We can create customised courses that cater for the specific needs of your organisation such as conveyor safety, Lock out tag out/energy isolation, risk assessment, machine guarding, safety control system design, etc.

Venus Machine Safety Training:

Introduction:

- Fundamentals of safety as per AS 4024.1-2014 (safety of machinery standard)
- Introduction to Workplace Health & Safety Act and Regulations
- Responsibility of stake holders incl. employers, designers, importers, manufacturers etc.

Risk Assessment

- Risk Assessment to AS 4024:1201:2014
- Step by step procedure for risk assessment based on real examples.
- Introduction to risk assessment using EN ISO 13849 and IEC 62061 Standard.
- Introduction to risk reduction using principles of AS 4024.1302-2014 & EN ISO 13849 (PI)

Guarding:

- Hierarchy of guarding as per relevant safety legislation.
- Hierarchy of controls as per relevant safety legislation.
- Type of guards, definitions and examples.
- Safety distance as per relevant sections of AS 4024.1302-2014. (safety of machinery standard)
- Advantages and disadvantages of fixed guards, interlocked guards, light curtains, two hand controls, safe timer devices.
- Introduction to hold to run devices
- Emergency stop devices requirements

Safety system design and Validation: (Topic of two day course)

- Introduction to Safety system design as per AS 4024.1501-2006 & AS 4024.1503-2014 and Validation as per AS 4024.1502-2006.
- Functional Safety as per EN ISO 13849 and Sistema: (Topic of two day course)
- Detailed review of EN ISO 13849-1 (Performance level)
- Practical example of risk assessment and validation using Sistema (free) software.
- Requirements of Hydraulic and Pneumatic systems for machine safety.

Customized Training Courses: (Tailored Course for your organization specific requirement)

Programming Safety controllers: (includes hands on wiring exercise)

- The available hardware for Programmable controllers and the maximum Input/Output configuration allowed (Options: Wieland-Samos PRO, Pilz- Pnoz multi, Reer- Mosaic controller)
- How the product is programmed
- How to upload and download a program to the controller.
- How to monitor a program's functionality.
- How to view a program's error messages and remedy any faults
- Additional topics such as standard communication, PMI/diagnostics display configuration and networking of safety controllers can be included as required.

Lock Out Tag Out:

- Detailed understanding of the requirements of LoTo (Lock Out Tag Out) in relation to machinery safety.
- Legal requirements and industry best practice.
- Know the responsibilities of those involved in Lock Out Tag Out Process.
- Have a clear understanding of the main procedures,documents and processes required to implement Lock Out Tag Out successfully.
- Be qualified to successfully and safely perform Lock Out Tag Out.

CESE – CERTIFIED ELECTRICAL SAFETY ENGINEER (SGS-TUV Saar).

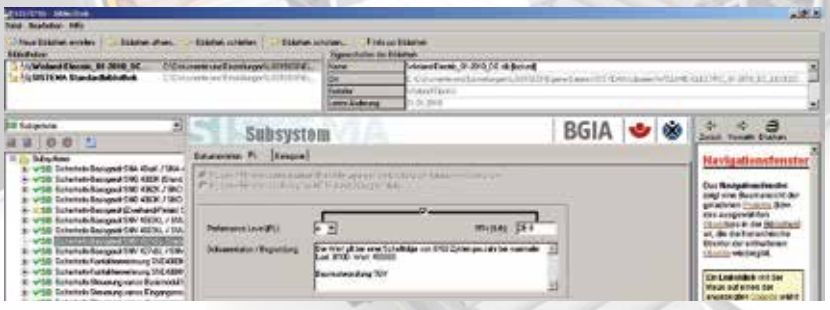
The seminar provides the necessary legal basics and understanding of standards to evaluate the safety of machinery and to design and calculate safety functions. The seminar is a co-operation between SGS-TÜV Saar and Wieland – Venus Automation. It covers the safety aspects of machinery with the focus on electrotechnical aspects.

Inform, Educate, Develop

Whether operations manager, machine designer or service technician-the safety of machinery and equipment affects everyone. That is why Venus Automation is offering the CESE Course for those interested. This focused course is held by qualified experts in different subjects such as liability issues, legal principles and technical or normative matters. We aim to help you gain an overview of functional safety! In these practical seminars, we provide you with up to date expert knowledge about laws, guidelines and standards in a concise form. You can keep up with developments without taking time away from concentrating on your core business.

Our training course is constructed to give you a professionally recognised qualification and become a competent practitioner and knowledgable in the key areas related to machine safety. Our expert trainer and support team will be able to directly address your questions and concerns throughout this course - and not only for questions in the legislative and standards issues but also for electrotechnical and software areas. At the same time, the conception, structure and delivery of our training corresponds to the relevant laws and general standards. This is why our 3-day CESE seminar is certified by SGS-TUV Saar.

Description	The course conveys the required legal and normative principles needed to properly evaluate the functional safety of a machine and to design and calculate safety functions. This is a cooperative course between Wieland and SGS-TUV Saar covering the safety-technical aspects of machinery and equipment with a focus on electrotechnology.
Contents	EU directives, laws and standards Risk assessment according to EN ISO 12100 Functional safety according to EN ISO 13849-1 and -2 Safety-related sensor, logic and electrics Realizing performance level PL Consideration and validation of safety-related entire systems
Schedule & Event location	Date: Please check www.venusautomation.com.au
Duration	• 3 days
Costs	• $3,000 including TUV examination and TUV certificate
Target group	• Designers • Developers • Maintenance personnel • Safety officers Safety responsibility holders in machine engineering
Requirements	At least 2 years' professional experience in the areas development, construction and maintenance of functional safety systems
Course size	Max. 10 people



For further information regarding these products and services please contact Venus Automation
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E: **info@venusautomation.com.au**