

INDUSTRIAL AUTOMATION: THE ROLE OF THE AUTOMATION ENGINEER

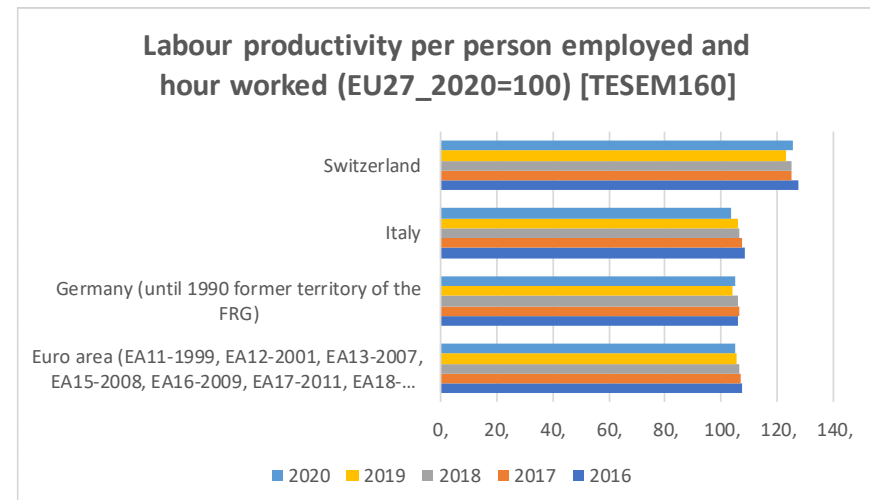
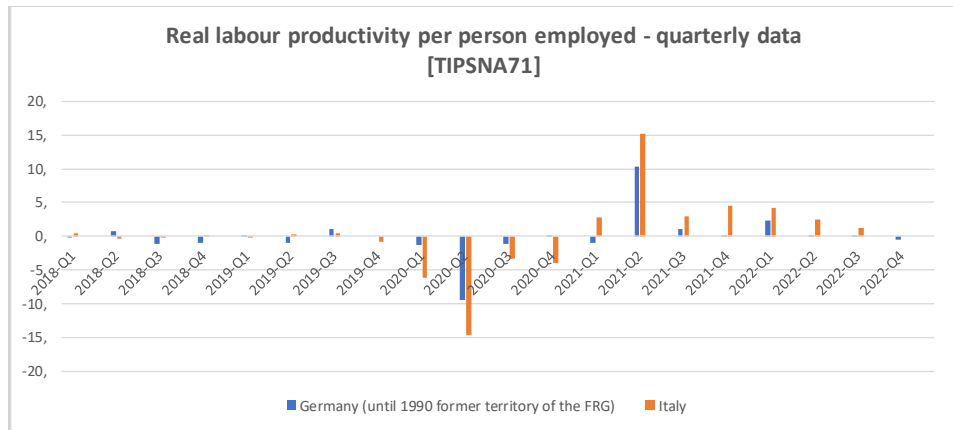
FEBRUARY 15, 2023



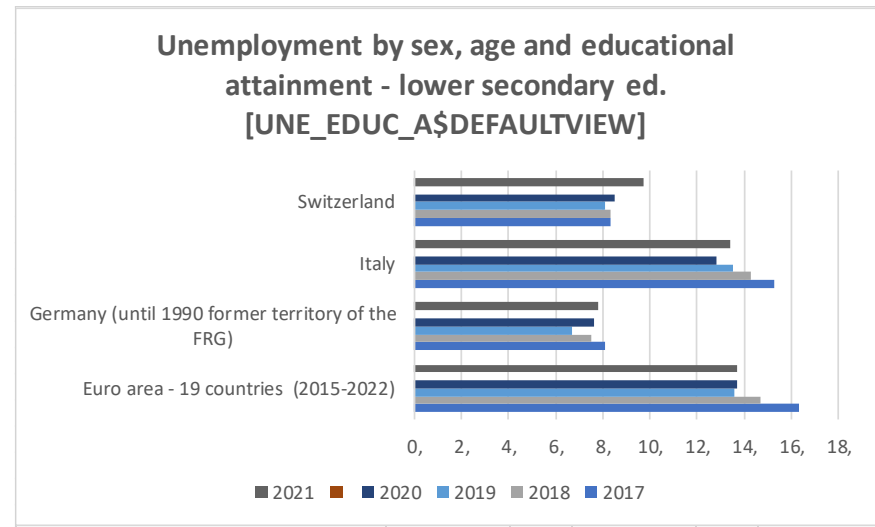
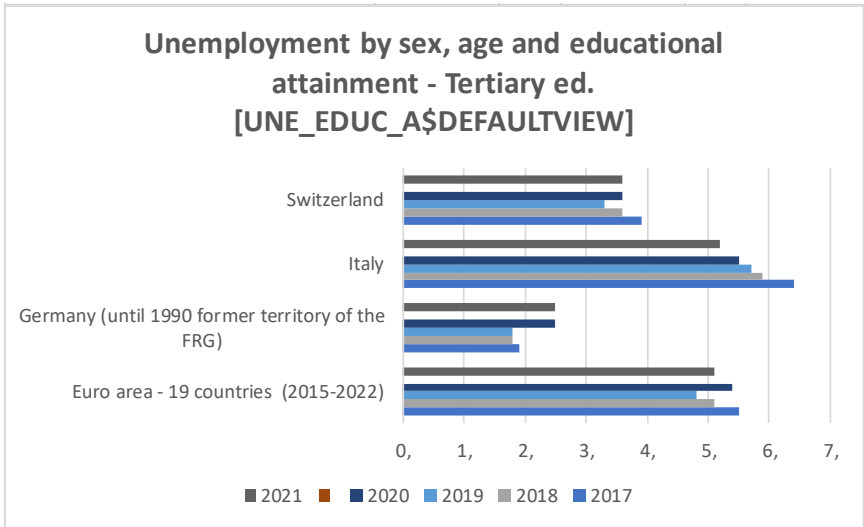
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This is about you

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Expat statistics

Cittadini italiani iscritti all'AIRE nell'ultimo anno per solo espatrio per genere, classi di età e incidenza. Valori assoluti e percentuali. Anno 2016.

Età	Sesso		Totale	% su totale	% Femmine su tot	% Maschi su tot
	Femmine	Maschi				
0-9	6.658	7.149	13.807	12,8	48,2	51,8
0-14	2.820	3.026	5.846	5,4	48,2	51,8
15-17	1.298	1.433	2.731	2,5	47,5	52,5
18-34	17.930	21.480	39.410	36,7	45,5	54,5
35-49	10.986	16.706	27.692	25,8	39,7	60,3
50-64	4.302	7.169	11.471	10,7	37,5	62,5
65-74	1.747	2.189	3.936	3,7	44,4	55,6
75-84	1.017	982	1.999	1,9	50,9	49,1
85+	399	238	637	0,6	62,6	37,4
Totale	47.157	60.372	107.529	100	43,9	56,1

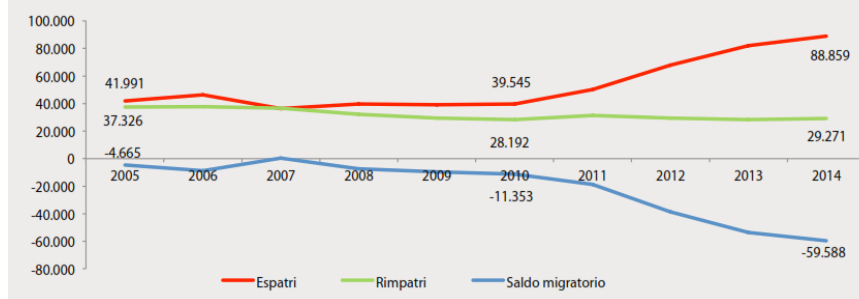
Fonte: Migrantes-Rapporto Italiani nel Mondo. Elaborazione su dati AIRE.

Cittadini italiani iscritti all'AIRE per solo espatrio, per i primi 15 paesi di residenza e genere. Valori assoluti. Anno 2016.

Paese	Totale	Femmine	Maschi	Regione	Totale	Femmine	Maschi
Germania	16.568	7.309	9.259	Lombardia	20.088	8.566	11.522
Regno Unito	16.503	7.321	9.182	Veneto	10.374	4.605	5.769
Svizzera	11.441	4.808	6.633	Sicilia	9.823	4.387	5.436
Francia	10.728	5.075	5.653	Lazio	8.436	3.721	4.715
Brasile	6.046	2.616	3.430	Piemonte	8.199	3.638	4.561
Altri Paesi	46.243	20.028	26.215	Altre regioni	50.609	22.240	28.369
Totale	107.529	47.157	60.372	Totale	107.529	47.157	60.372

Fonte: Migrantes-Rapporto Italiani nel Mondo. Elaborazione su dati AIRE.

Iscrizioni, cancellazioni anagrafiche da e per l'estero e saldo migratorio di cittadini italiani. Serie storica. Valori assoluti. Anni 2005-2014.



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**technically,
the glass is always
full.**

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MISSION – VISION

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We «do» interesting things

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STRATEGIC DEVELOPMENT SAFETY SYSTEMS AND SOLUTIONS FROM A SINGLE SOURCE






Extensive product program (with more than 18.000 products) as a basis for machine safety systems and solutions.

Support from initial contact though to installation and commissioning:

- Guidance in selecting standard-compliant protective devices
- Safety analysis & hazard assessments
- Design and implementation of safety solutions

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Safety products	Safety solutions	Safety services / tec.nicum
		
Guard door monitoring	Elevators and escalators	academy: knowledge transfer
Optoelectronic safety devices	Packaging	consulting: consultancy services
Command devices with safety function	Food	engineering: technical project planning
Safety-oriented tactile safety guards	Machine tools	integration: execution and assembly
Safe signal processing	Heavy industry	
Command devices and indicator lights	Automobile and automotive	
AS-Interface Safety at Work		
EX switchgear		

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Safety switches with separate actuator



Position switches



Safety switches for hinged safety guards



Safety sensors

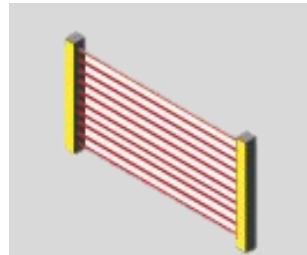


Solenoid interlocks

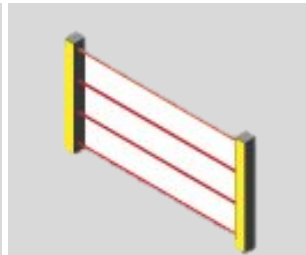


Door-handle actuators

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Safety light grids



Safety light curtains

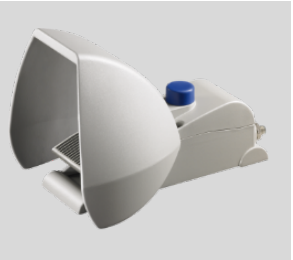


Safety light barriers

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Pull-wire
emergency-stop
switches



Safety foot switches



Emergency stop
pushbuttons



Enabling switches

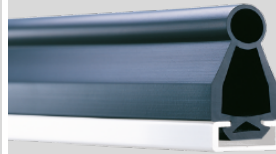


Two-hand controls

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Safety mats



Safety edges



Safety bumpers

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Programmable
safety control
systems



Compact safety
control systems



Safety relay
modules



Output expander
modules



Input expander
modules



Fail-safe standstill
monitors



Fail-safe delay
timers



Connection to
higher-level control
systems

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Operating panels



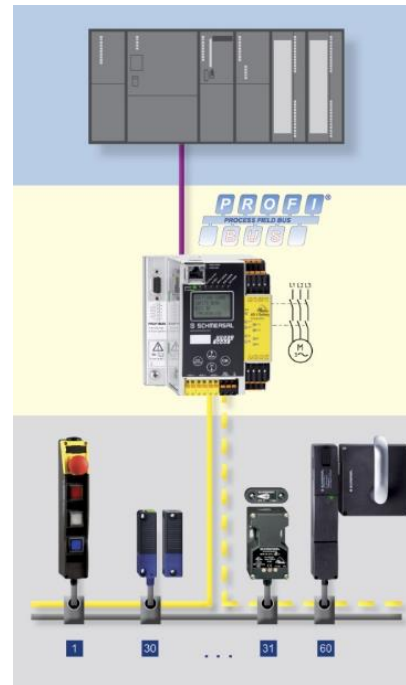
Command devices
and indicator lights



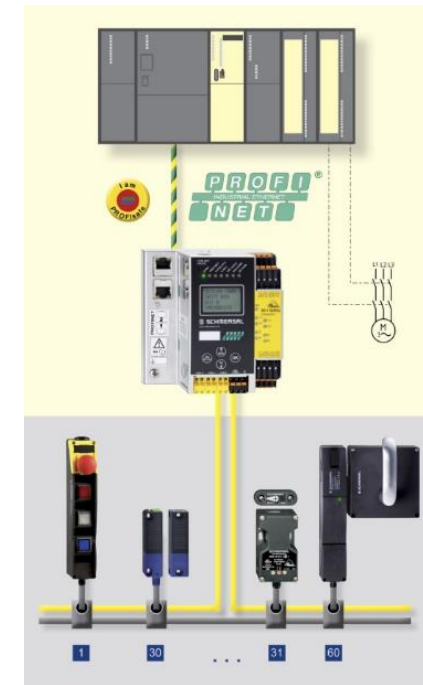
LED signal columns
CleanSIGN

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Safety systems AS-Interface Safety at Work



Master-monitor combinations
("Safety separated")



Safety gateways
("Safety integrated")

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Safety products ATEX Switchgear



Ex guard locking devices



Ex switchgear



Ex position switches



Ex safety sensors



Ex pull-wire emergency stop switches



Ex command and signalling devices



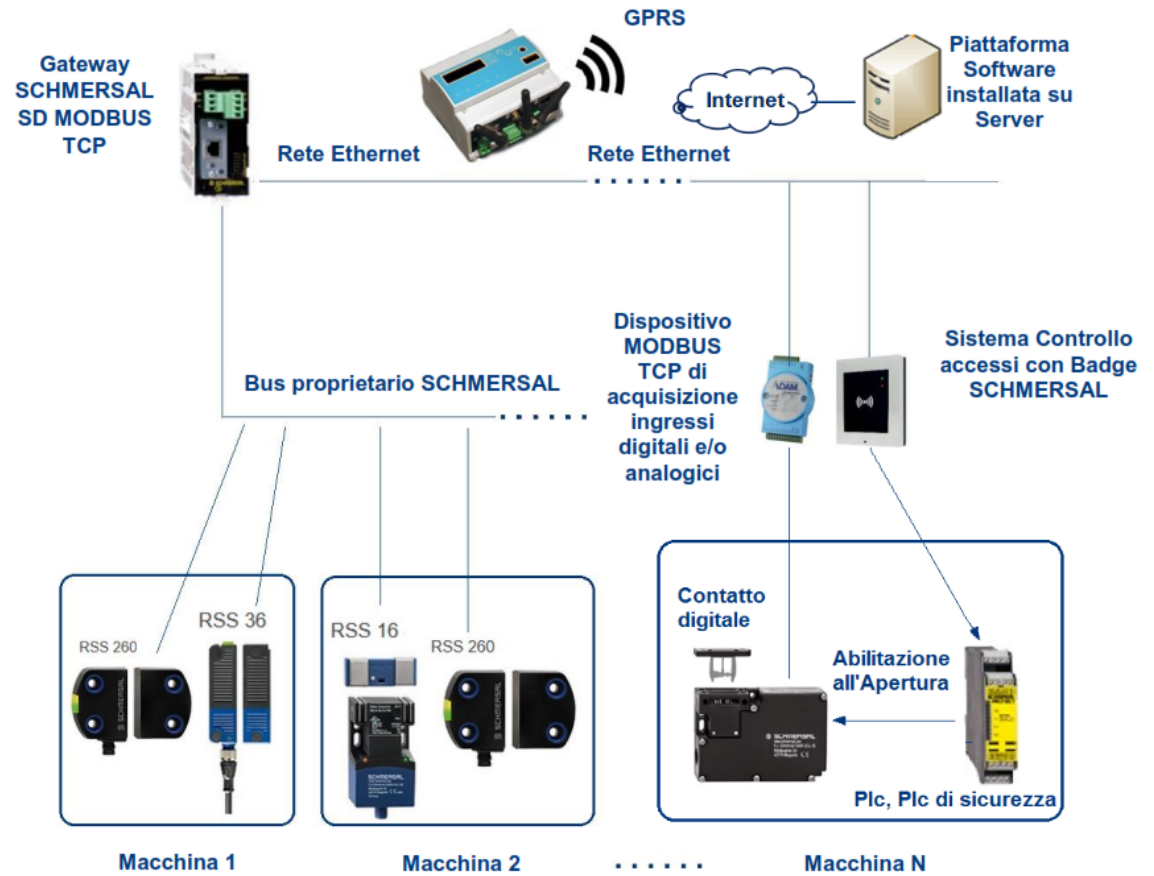
Ex safety-monitoring module



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R&D

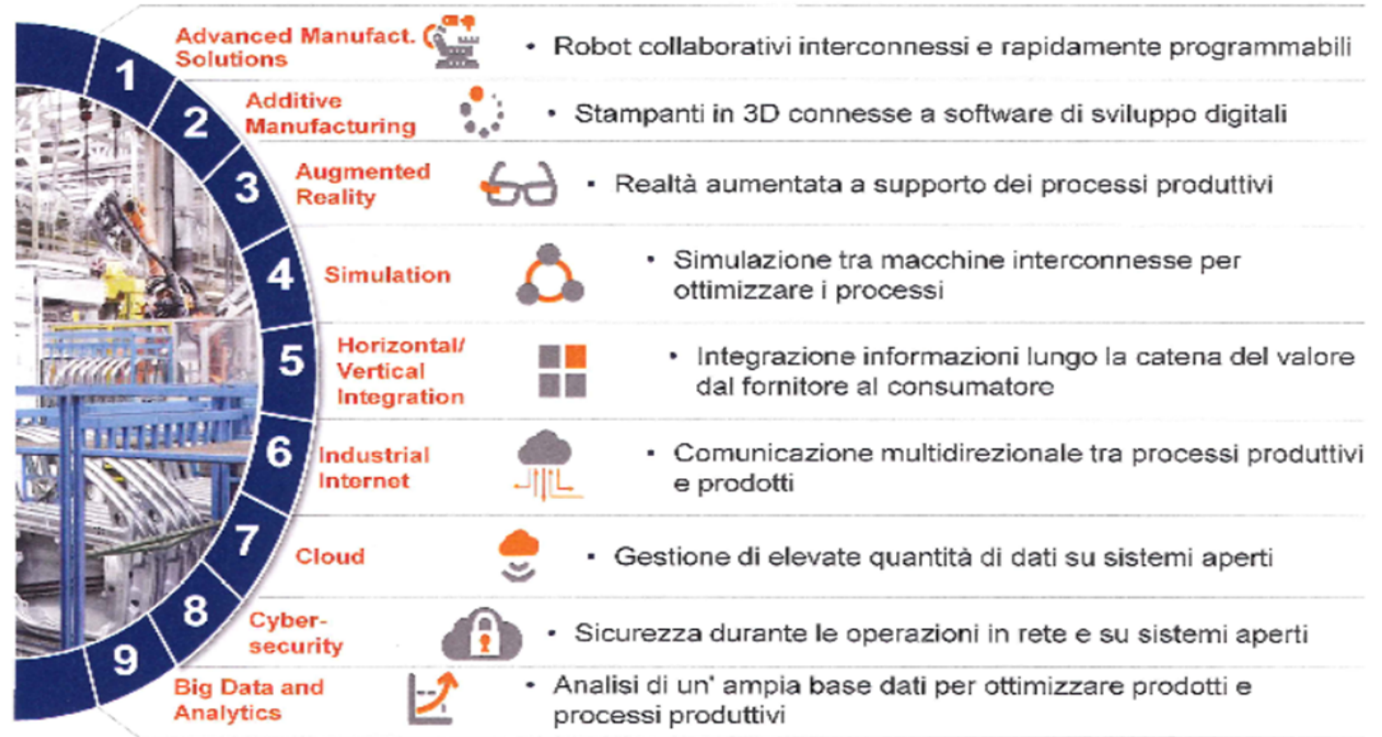
Industry focus
4.0:





Industria 4.0: Le tecnologie abilitanti

Industry focus 4.0:



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Industry focus LIFT/automation:



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What's in it for you ?

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We master the best and most
widespread communication interface

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We «do» useful things

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<p>academy </p> <ul style="list-style-type: none">▪ Corsi di formazione e seminari▪ Formazione in-house▪ Workshop personalizzati▪ Conferenze ed eventi▪ Simposi	<p>consulting </p> <ul style="list-style-type: none">▪ Analisi della sicurezza di macchine e linee di produzione▪ Valutazione della conformità e attestazioni▪ Valutazione dei rischi▪ Valutazione dei pericoli▪ Documentazione tecnica
<p>engineering </p> <ul style="list-style-type: none">▪ Progettazione tecnica▪ Validazione di funzioni di sicurezza▪ Misurazioni e verifiche▪ Adeguamento di macchine e impianti▪ Programmazione di controllori di sicurezza	<p>integration </p> <ul style="list-style-type: none">▪ Adeguamento / retrofitting▪ Installazione di<ul style="list-style-type: none">- ripari- recinzioni perimetrali▪ Integrazione di funzioni di sicurezza▪ Manutenzione e assistenza

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R&D: Safety relevant norms



IEC International Electrotechnical Commission
International Standards and Conformity Assessment electrical, electronic and related technologies

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Standards development > How we work > Technical Committees & Subcommittees > **TC 44 Dashboard**

TC 44 Safety of machinery - Electrotechnical aspects

Scope | Structure | Projects / Publications | Documents | Votes | Meetings | Collaboration Tools

Project files > **Project IEC 62745:2017 ED1**

Mr Andrea Grassi (it-ar-gr) Log out

Detail					
Committee	Working Groups	Project Leader	Current Status	Frcst Pub Date	Stability Date
TC 44	WG 13	[REDACTED]	PPUB	2017-03	2020

Project

IEC 62745:2017 ED1
Safety of machinery - Requirements for cableless control systems of machinery

The safety challenge

Hand trapped in between to the rolling machine
during shell plate pre-bending

- both victim's hands holding and push the small piece of plate support while adjusting/realignment the shell plate for pre-bending



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We «do» those things all over the world

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SITES



- 7 production sites
- 20 subsidiaries
- 50+ sales reps

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We «do» those things our own way

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Schmersal
 agorni.a@schm
 sensore + logica (psc) possibile raggiungere il PL e (fino a PL e), dipende dal numero di operazioni, verificare la compatibilità elettrica (tensione e corrente) tra sensore e psc (e necessario controllare che soddisfatti i requisiti della IEC 60947-5-3). Non ci sono problemi per quanto riguarda i guasti meccanici, mentre i guasti elettrici sono diagnosticati dal psc se compatibile e configurato correttamente. Se si utilizza NO+NC e meglio, altrimenti è possibile 2 NC, se si usa il modello 12 deve essere usato NO e NC per il circuito di sicurezza ridondante (psc), mentre l'altro NC solo per segnalazione. Sensore codificato livello di codifica basso. Se vuole con



Excel spreadsheet showing safety data for a karting track.

Particella N°	TITOLO DEL PERICOLO	Utile, taglio e trascinamento dovuto a elementi zona di lavorazione	Data
13	13 - elementi in movimento	Localizzazione: Zona di lavorazione	12/02/13
VALUTAZIONE DEL RISCHIO PRIMA DELLA MISURA DI CONTROLLO			
Probabilità di accadimento	PE	Gravità di conseguenza	FC
0	5,0	Minimo	1,0
1	2,0	Medio	2,0
2	1,0	Alto	4,0
Coveramento			
Misure di controllo raccomandate			

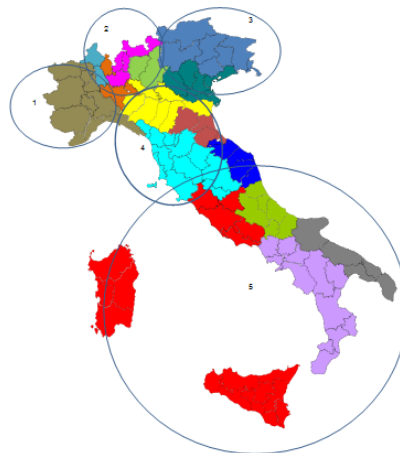


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Having said that...

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We adapt organization to people !



Traditional office buildings

Brescia

Como

Modena

+ Home offices !

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Constantly Open positions in German Headquarter

@ <http://www.schmersal.com/karriere>

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Thank you
for your attention!

Giovanni B. Lucido
General Manager Schmersal Italia and Schmersal Schweiz

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