

ESD3

Safety Mat and Sensing Edge Controller



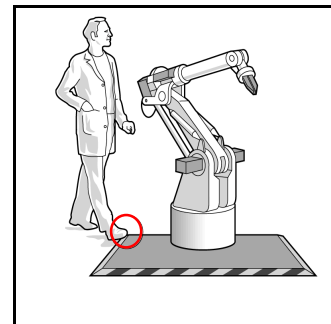
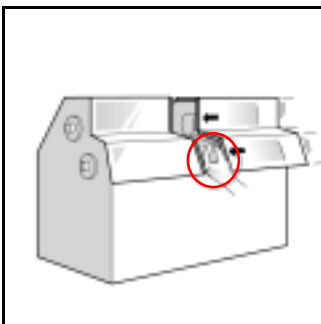
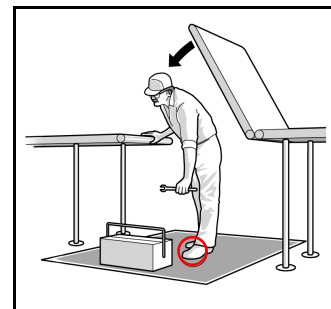
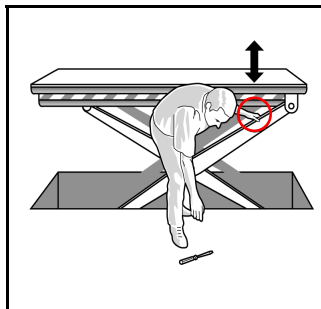
- Meets EN 954 Safety Category 3 requirements, third party certified
- 2 NO safety outputs and 1 NO or NC diagnostic output
- Fail safe wiring with only 2 wires
- DIN rail mount
- Multiple sensor inputs
- Manual, automatic or remote reset options

Controller Function

The Bircher SafeTec® series of ESD controllers monitors for changes in the no-load current determined by an 8.2kOhm resistor built into, or externally connected to the sensor. This way, fail safe wiring is achieved using only 2 wires.

With power to the ESD unit, the output relays are energized and closed.

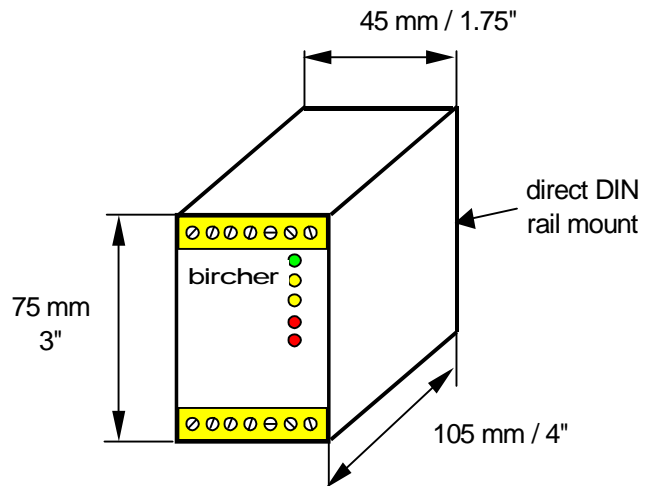
The output relays open with the sensor activated — resulting in a resistance drop towards zero Ohm, or — with a wire failure — resulting in a resistance increase towards indefinite Ohm.



ESD-3 Mat and Edge Controller

Technical Data

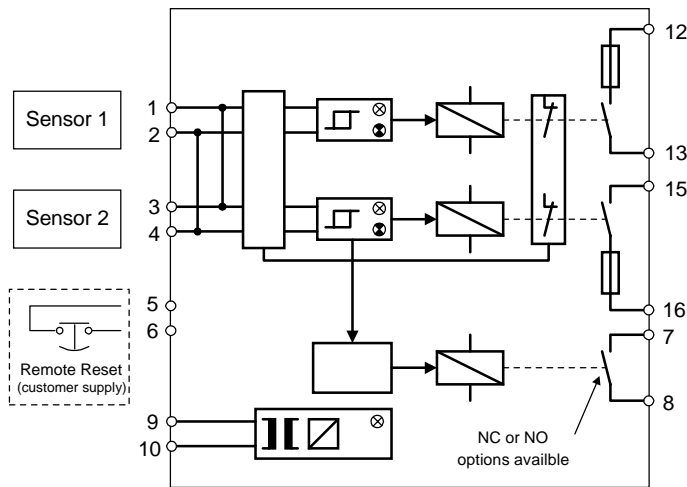
Housing	ABS, direct DIN rail mount
Isolation class	IP 30 (IEC 529)
Protection Class	IP 54 (IEC 529)
Power supply	
- 24 ACDC	(+/- 20%) with isolating transformer
- 115 AC	(+10%/-15%) with isolating transformer
- 230 AC	(+10%/-15%) with isolating transformer
Power consumption	max. 5VA
Sensor input	2 sensor inputs, max. 15VDC / 5mA
Mat area monitored	each sensor input monitors 54 sq.feet or 5 m2 of safety mats
Edge length monitored	each sensor input monitors 164 ft or 50 m of sensing edge
Safety output relay	2 safety outputs
- switching capacity	250 VAC/2A (Ohm load)
- operating life	mechanical 50'000'000 / electrical 80'000 cycles (250AC/2A)
Fuse protection	2A slow, internal
diagnostics relay (not a safety output)	30VAC/1A (Ohm load)
Reaction time	< 50 ms (sensor to output relay operation)
LED indicators (4) for	operation / safety stop / sensor error / system error
Temperature range	
- operation and storage	0 F to + 125 F (- 15C to + 50C)
- humidity	max. 80% relative



ESD3 version	Reset Options			Diagnostic Relay Output			
	manual, on the unit	automatic	remote	no voltage	system operative	sensor actuated	wire failure, system error
01	X			open	closed	closed	open
02	X			open	closed	open	open
03		X		open	closed	closed	open
04		X		open	closed	open	open
05			X	open	closed	closed	open
06			X	open	closed	open	open
07	X			closed	open	closed	closed
08		X		closed	open	closed	closed
09			X	closed	open	closed	closed
01C	X			closed	open	open	closed
03C		X		closed	open	open	closed
05C			X	closed	open	open	closed

	Safety Outputs (2)			
	no voltage	system operative	sensor actuated	wire failure, system error
Safety Output - all ESD3 types	open	closed	open	open

ESD-3 Controller



Order Code

ESD3 - 01 - 24VADC GB

version _____
(see table above)

supply voltage _____
24VADC
115VAC
230VAC

label language _____
D - German
E - Spanish
F - French
GB - English
I - Italian
S - Swedish

Bircher America Inc. 800-252-1272 inforequest@bircheramerica.com
909 E. Oakton Street, Elk Grove Village, IL 60007