

APEM
an IDEC company



ENABLING SWITCH

3-POSITION SAFETY SWITCH TO
PROTECT THE OPERATOR DURING
MACHINE OPERATION

IDEC

IDEC'S ORIGINAL ENABLING SWITCH

Also known as "Operator presence detection" or "3-position safety" switches, the enabling switches allow the operator to work safely on a machine without disabling operation. The use of an enabling switch stops the device in the event of a catastrophic failure or unforeseen problem.

Where is it strongly recommended?

3-position safety switches are used in hazardous environments:

System changeover and maintenance of robots

In teaching pendants for robots and cobots (collaborative robots)

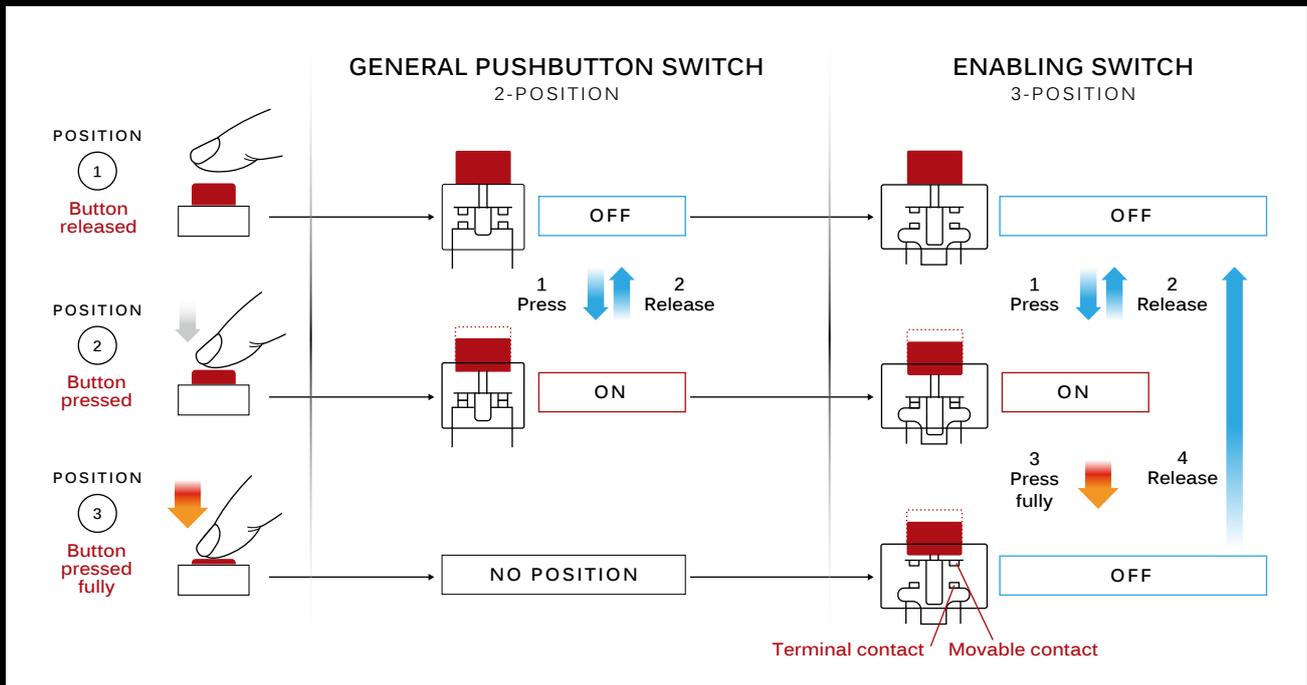
In belly boxes for special vehicles such as construction vehicles, automated guided vehicles or material handling vehicles

In remote control for milling units or bridge crane

And many more applications where the absolute attention of the operator is required for a given task.



How does it work?



The concept is that the operator must keep a light amount of operating force on the switch during the operation of the application.

As soon as the device is released, the machine operation will stop, keeping the operator away from any danger.

The difference between this type of switch and the other safety switches is the third position. When extra operating force is put on

the device by a panicked operator, the switch will also initiate a stop.

Since instinct of danger will affect an operator differently, it is possible that a shock would result in either letting go of the device or causing the body to tense up and clench the device harder. Both will initiate a stop command and could prevent loss of life, injury or machine damage.



THE WORLD'S SAFEST ENABLING SWITCH

Every second counts!

In hazardous situations, every second counts and whichever way the worker reacts, the enabling switch gives the fastest stop signal, compared to the use of a regular Emergency stops.

Operator safety is our priority

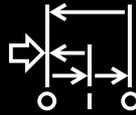
Considering the Enabling switch is needed in all the most critical working modes and situations, all our 3-position switches offer redundancy, meaning that even in the unlikely event of a single switch failure, the second set of contacts safe stopping of the hazard.

This reduces the probability of failure per hour to a very low level ensuring the product meets the highest performances levels: PLe (ISO 13849-1) and SIL3 (EN 62061).



The most demanding standards

EN 60947-5-8 APPROVED



Because the "operator presence detection" function is a matter of life or death, a dedicated standard exists: the ISO 60947-5-8, with its associated logo showing the 3 different positions, ensures the enabling switch meets the international requirements.

DIRECT (OR POSITIVE) OPENING ACTION



The Direct (or positive) opening action contacts indicates that the force delivered by the switch is high enough to open the contact, even if welded, thanks to a direct action on the contact.

STANDARD FOR SAFETY REQUIREMENTS

ISO 13849-1
EN 62061

The Enabling switch are PLe-ready and SIL3-ready to reach the highest possible performance and safety level on a system, helping all machine manufacturers in justifying the CE marking.

Certification

UL
RECOGNIZED



TUV
SUD



CE
MARKING



ENABLING SWITCH

IDEC's Enabling switches come in different shapes and sizes to suit all your applications.

Thanks to a thoughtful ergonomic, the force to reach position 2 (enabling function) or position 3 (off function) is adapted to the interacting method: light force for a finger or a higher force for the palm of the hand.

				
	HE2B	HE3B	HE5B	HE6B
NUMBER OF 3-POSITION CONTACTS	2	2	2	2
EXTRA MONITORING CONTACT	0, 1 or 2	0	0	1 or 2
PANEL CUT-OUT	70 x 12,2 mm + 2 x Ø 3,2 holes	Ø 16,2 mm + 1 x Ø 3,2 holes	Ø 16,2 mm	29,4 x 16,2 mm + 2 x Ø 3,2 holes
IP RATING WITHOUT RUBBER BOOT	IP 40	IP 40	Not applicable	Not applicable
IP RATING WITH RUBBER BOOT	IP 65	IP 65	IP 65	IP 65
ACTUATING FORCE* POSITION 1 ->2	4N	Approx. 4N	3N	4N
ACTUATING FORCE* POSITION 2 -> 3	30N	Approx. 20N	17N	17N
RUBBER BOOT				 Please contact us
CERTIFICATIONS				

* Approximate force, without the rubber boot

GRIP-STYLE ENABLING SWITCH

IDEC also offers exceptional ergonomic grips pre-equipped with Enabling switches.

The grips come in 2 versions: a thumb-grip and a palm grip, which can be customised with indicators, key selectors or pushbuttons.

			
	HE1G-L	HE2G	HE9Z
STYLE	Palm-grip	Palm-grip	Thumb-grip

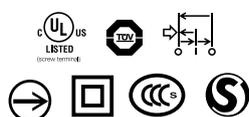
CONTACT

EXTRA MONITORING CONTACT	Optional, 1	1	No
E-STOP	Optional, 2NC	Optional, 2NC	No
ADDITIONAL SWITCH	Optional, 1	Optional, max 2 switches, DPDT	No
ADDITIONAL PILOT LIGHT	No	Optional (green)	No
ADDITIONAL KEY SELECTOR	No	Optional (2 position, DPDT)	No
INTERLOCK SWITCHES	HS5	HS5	No

ACCESSORIES

A CABLE GLAND	Included	Included	Included
HANDSTRAAP	No	Optional, HG9Z-PS1	No
MOUNTING BRACKET	Optional, HE9Z-GH1	No	Optional, HE9Z-GH1

CERTIFICATIONS



ABOUT IDEC

IDEC MAIN PRODUCT FAMILIES

LED MACHINE LIGHTING | AUTOMATION & SENSING | SAFETY | SWITCH & CONTROL

IDEC PRODUCTS ARE ESSENTIAL

Best-in-class products

Field-proven and reliable products

Environment-friendly

Long-lasting and efficient products

Enhanced safety

Original solutions

Standardisation committee



420 M€

TURNOVER



3 900

EMPLOYEES



70

YEARS
OF EXPERIENCE



+ 100 000

REFERENCES

BENELUX B (+32) 27 25 05 00 - sales@apem.be
BENELUX NL (+31) (70) 799 91 51 - sales@apem.be
FRANCE (+33) 5 63 93 14 98 - commercial@apem.fr
GERMANY - MUNICH (+49) 89 45 99 11 0 - info@apem.de
GERMANY - HAMBURG (+49) 40 253054 0 - info@apem.de
ITALY (+39) 0172 74 3170 - apem.italia@apem.it
SWEDEN (+46) 8 626 38 00 - info@apem.se
UNITED KINGDOM (+44) 1 844 202400 - sales@apem.co.uk

www.apem-idec.eu

