

Grip Style Safety Enabling Switch: ENS Range



Meets ANSI RIA 15.06 robotics standards

PRODUCT DESCRIPTION:

IDEM's safety enabling switches are three-position devices designed to ensure operator safety by disabling machinery in hazardous situations. These switches function by interrupting the machine's operation when either squeezed or released, thus preventing unintended machine activation. Engineered for use in high-risk environments, these switches play a critical role in mitigating serious accidents and safeguarding operators. Tasks such as visual inspections, minor adjustments, troubleshooting, calibration, tool changes, and lubrication benefit from the integration of these safety enabling switches, enhancing overall safety and operational control.

Three-position spring-return grip button: (OFF-ON-OFF) as required for manual control of a machine.

Ergonomic design: Suitable for both right- and left-handed users.

User-friendly operation: Easily operable even when wearing gloves.

Durable construction: Robust housing with IP67 protection.

Integrated safety features: Optional E-stop, LED's and pushbuttons.

Versatile connectivity: Universal connection via cable or terminals.

OPERATION:

A grip-style enabling pendant is used in industrial and robotic applications to enhance operator safety and control during manual operations. This type of pendant typically requires the user to maintain a firm grip, which acts as a safety mechanism, ensuring that machinery or robotic systems operate only when the operator is fully engaged. If the grip is released or the operator loses control, the system immediately stops or enters a safe state, preventing accidents. Additionally, the ergonomic design of a grip-style pendant reduces hand fatigue, allowing for prolonged use while maintaining precise control over complex tasks.

INDUSTRIES:

Manufacturing: In automotive, electronics, and general manufacturing, enabling pendants are used for tasks like machine setup, maintenance, and troubleshooting, particularly with CNC machines, automated assembly lines, and robotic arms.

Robotics: Robotics industries, including those focused on automation and artificial intelligence, use enabling pendants for programming, testing, and adjusting robotic systems, ensuring that the operator can safely interact with the robot during these processes.

Aerospace: In aerospace manufacturing and testing, enabling pendants are used to safely control and interact with complex machinery and automated systems involved in the production and inspection of aircraft components.

Healthcare and Medical Device Manufacturing: Enabling pendants are utilized in the production and maintenance of medical devices and equipment, where precise and safe control is essential to avoid any errors or accidents.

Packaging: In automated packaging lines, enabling pendants allow operators to safely intervene in the machinery for adjustments or troubleshooting without stopping the entire production line.

Logistics and Material Handling: Warehouses and distribution centers use enabling pendants to safely control automated systems like conveyors, sorting systems, and robotic pickers.

These industries rely on enabling pendants to ensure that human operators can safely interact with automated systems, reducing the risk of accidents and improving overall safety and efficiency.



TECHNICAL SPECIFICATIONS:

Conforming to Standards

IEC60947-5-8, ISO 13849-1

Technical Data

Case Material	Polyester Plastic
Operating Temperature	-10 to +60°C (no freezing)
Rated Output Voltage	24Vdc
Rated Output Current	2A. (max)
Rated Insulation Voltage	250V.
Mechanical Durability	Position 1 → 2 → 1: 100,000 operations minimum
Electrical Durability	100,000 operations minimum
Shock Resistance	11ms - 15g
Vibration Resistance	Operating extremes: 10 to 55 Hz, amplitude 0.5 mm
Actuating Frequency	1200 Cycles per hour (max)
Terminal Style	Spring Terminal
Degree of Protection	IP65

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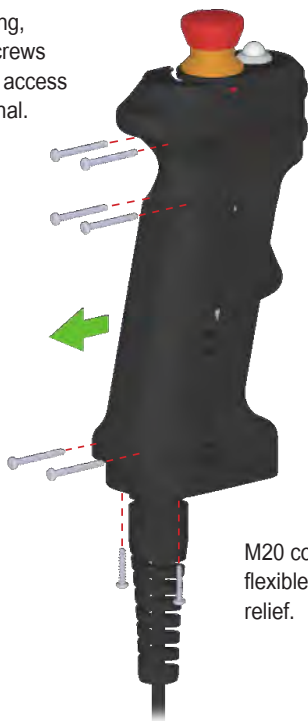
The magnetic holster for IDEM's Enabling Pendant can be easily mounted to any position for undertaking tasks such as visual inspections, minor adjustments, troubleshooting, calibration, tool changes and much more.

The magnetic holster and enabling pendant features 22mm fixing centers for attaching a non-contact safety switch. This is used to detect the position of the enabling pendant (on or off the holster) and can be monitored via a safety circuit.

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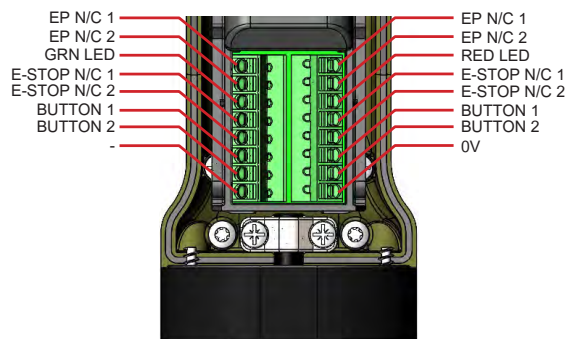
CONNECTIVITY:

For manual wiring, remove the 8 screws shown below to access the wiring terminal.

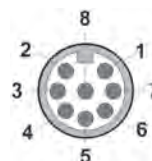


M20 conduit gland with flexible spiral strain relief.

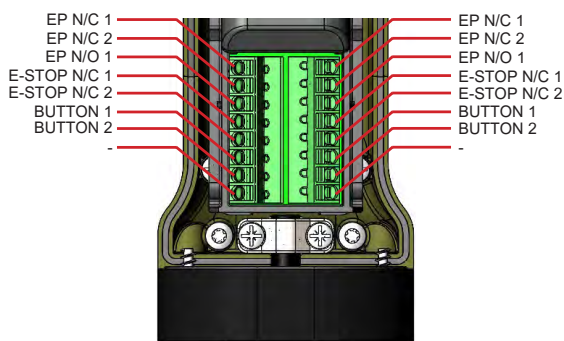
TERMINAL LAYOUT (with LED):



M12 Wiring:



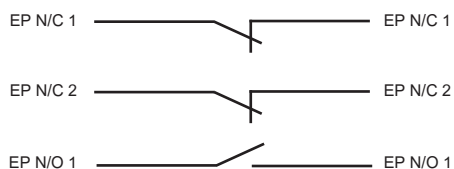
TERMINAL LAYOUT (NO LED):



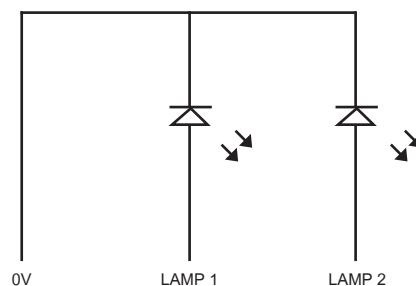
PIN Layout	Flying Lead Colour	EP	EP + ES	EP + BUTTONS	EP + LED
8	Orange	--	ES N/C 2	BUTTON 2	RED LED
5	Brown	EP N/C 2	EP N/C 2	EP N/C 2	EP N/C 2
4	Yellow	EP N/O 1	ES N/C 1	BUTTON 1	--
6	Green	EP N/C 2	EP N/C 2	EP N/C 2	EP N/C 2
7	Black	EP N/C 1	EP N/C 1	EP N/C 1	EP N/C 1
1	White	EP N/C 1	EP N/C 1	EP N/C 1	EP N/C 1
2	Red	--	ES N/C 2	BUTTON 2	GREEN LED
3	Blue	EP N/O 2	ES N/C 1	BUTTON 1	0V

ENABLING SWITCH:

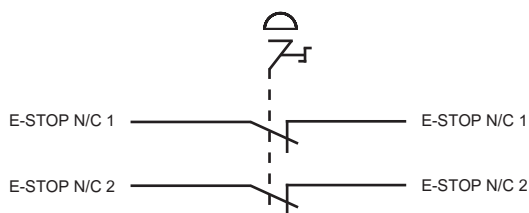
(Shown in position 2 - OFF-**ON**-OFF)



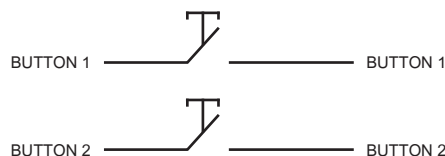
INDICATION:



EMERGENCY STOP:

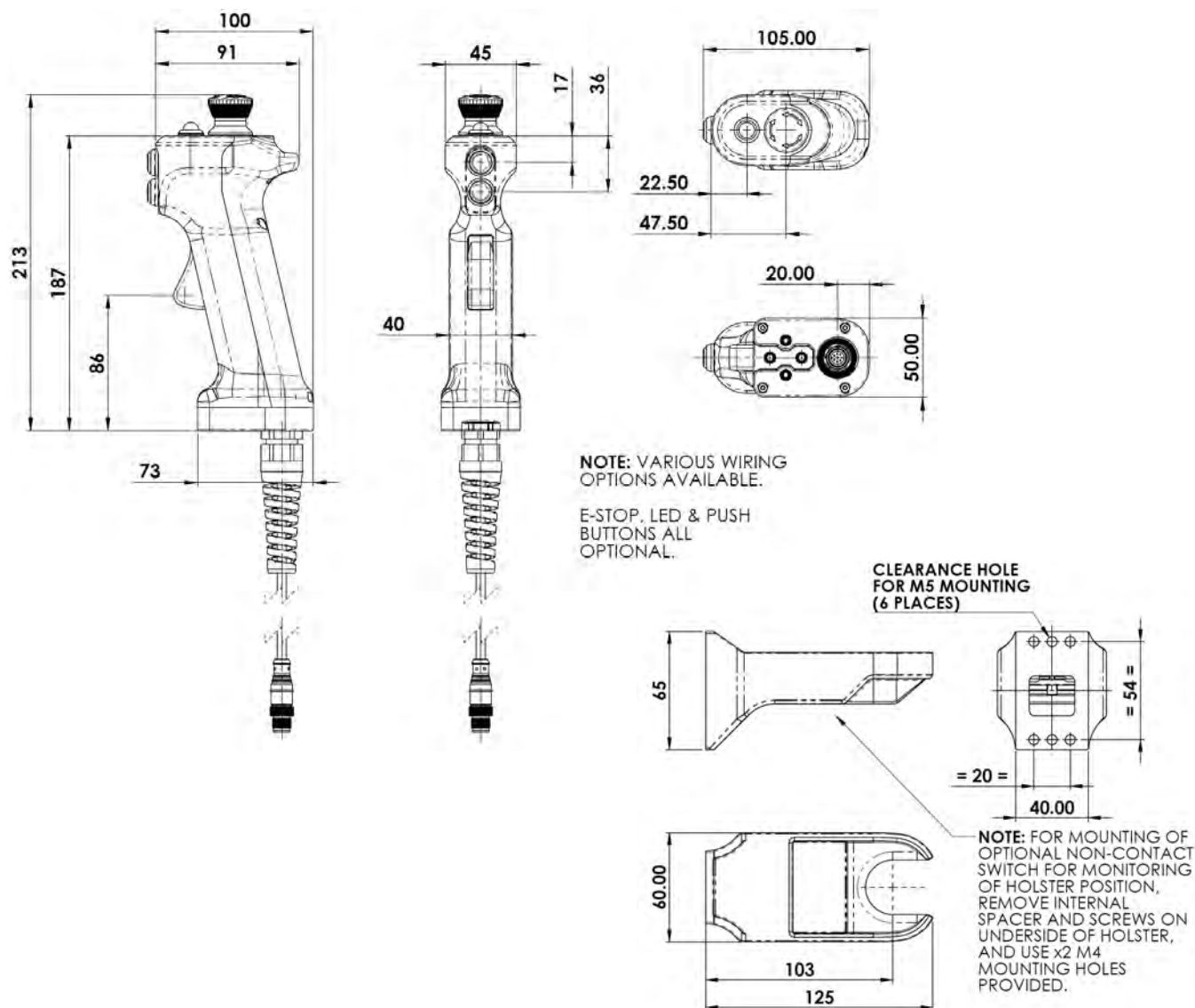


PUSH BUTTONS:



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DIMENSIONS:



ORDERING:

Screw Terminal Versions	Extra Function / Features							
	Basic	1			2			3
Configuration	2NC 1NO	2NC 1NO E-Stop 2NC	2NC 1NO Push Button x 2	2NC LED (2 Colour)	2NC 1NO E-Stop 2NC Push Button x 2	2NC E-Stop 2NC LED (2 Colour)	2NC Push Button x 2 LED (2 Colour)	2NC E-Stop 2NC Push Button x 2 LED (2 Colour)
Part Number	241000	241001	241002	241003	241004	241005	241006	241007

QC Versions M12 Male 8-Way on 250mm Flying Lead	Extra Function / Features				Accessory Part Number	Enabling Pendant Magnetic Holster
	Basic	1				241400
Configuration	2NC 1NO	2NC E-Stop 2NC	2NC Push Button x 2	2NC LED (2 Colour)		
Part Number	241300	241301	241302	241303		

SALES NUMBER	MASTER CODED	CABLE LENGTH
405104	SPF-M-RFID	QC-M12

SPF-M



Magnetic Holster



140101	Female QC Lead	M12 Female 5m. 8 way
140102	Female QC Lead	M12 Female 10m. 8 way