

Pilot devices

Pilot Devices Offering

ABB Pilot Devices offer both modular and compact range of pushbuttons. Both feature the same front-of-panel design and appear consistent when combined.

Modular range, features a wide range of operators that can be combined with high flexibility. The unique snap-on design promotes simple and fast assembly.

Compact range features an all-in-one construction and rugged design for added simplicity and ease of installation.



Modular range

Technical data compact range

Standard and approvals	
IEC / EN 60947-1	Low-voltage switchgear and controlgear - Part 1: General rules
IEC / EN 60947-5-1	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices
IEC / EN 60947-5-5	Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function
IEC / EN 60073	Basic and safety principles for man-machine
IEC / EN 60529	Degrees of protection provided by enclosures (IP Code)
EN 50013	Low-voltage switchgear and controlgear for industrial use - Terminal marking and distinctive number for particular control switches
DIN 40050-9	Road vehicles; degrees of protection (IP-code); protection against foreign objects; water and contact; electrical equipment
UL 508	Industrial control equipment
CSA C22.2 No 14	Industrial control equipment

Environmental data

Degrees of protection

Pilot device:	IEC/EN DIN	UL/CSA
Pushbutton	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Selector switch	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Pilot light	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Emergency stops	IP66, IP67 and IP69K	Type 1, 3R, 4, 4X, 12, 13
Terminals	IP20	

Temperature

Ambient temperature during operation	-25 to +70 °C
Storage temperature	-40 to +85 °C

Technical data

Cable connections

Operator	Cable terminal
Pushbutton	Plus-minus Pozidriv No. 2
Selector switch	Connectable area:
Emergency stop	min. 1 x 0.5 mm ² /1 x AWG22 max. 2 x 1.5 mm ² /2 x AWG14
Tightening torque	
Operators, M22	Min. 2 Nm / Max. 2.3 Nm
Pushbutton and selector switch	Cable terminals M3, 0.8 Nm
Pilot light	Cable terminals M3.5, 0.9 Nm
Emergency stop	Cable terminals M3, 0.8 Nm

Electrical data

Electrical ratings

Contacts

Ratings as per IEC 60947-5-1

Rated insulation voltage, U _i	300 V
Rated thermal current, I _{th}	5 A
Rated operational current, I _e utilization category AC-15	at: 240 V 1 A
Rated operational current, I _e utilization category DC-13,	at: 24 V 0.3 A at: 125 V 0.2 A

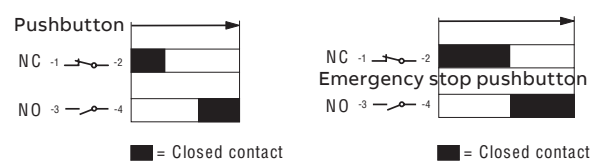
Ratings as per UL, CSA, NEMA

	C300 AC	R300 DC
Rated insulation voltage	250 V	250 V
Rated thermal current	2.5 A	1 A
Rated operational current	at: 120 V 1.5 A at: 125 V 0.75 A at: 240 V 0.22 A at: 250 V 0.11 A	

Short circuit protection

Max. fuse at 1 kA	gG 10A
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Make-and-break contacts



LEDs (for both compact and modular)

Service life for LED's means number of service hours until the brightness has been reduced down 50 %. Service life: 50 000 h

White LEDs	x=0.31 Y=3.2 means the position of color in the ICI Chromaticity Diagram
Over voltage on LEDs	10 % over voltage is acceptable without affecting the service life
Voltage peaks on LEDs	Voltage peaks up to 1000 V Current peaks up to 500 mA during a few msec
Gloaming light	All integrated LEDs have a function built-in to cut leakage currents

Mechanical data

Mechanical life

Pushbuttons, selector switches	500,000 operations
Emergency stop pushbutton	50,000 operations