

PRELIMINARY TECHNICAL INFORMATION
HIGHLIGHTS

- Stop/start box up to 12 A_{RMS}.
- Suitable for motors or machine tools up to 1.5 HP.
- 230/400 V_{AC} mains voltage input.
- Single phase and three-phase.
- Prepared to add external emergency contacts.
- Prepared to add external power contactors.
- Very robust, suitable for harsh environments.
- Chromium plated metal push buttons. IP66 enclosure.
- Plug & Play, all included.



non-contractual photo

SC-MP06HE is a ready-to-use Stop/start box with emergency push button which already incorporates all electronics and relays necessary to use it directly interfacing your load or machine tool providing up to 12 A_{RMS} or capable to start/stop motors or machine tools up to 1.5 HP.

The box includes an Stop/start push button and the red emergency stop push button with trigger latching turn release with positive opening according to EN/IEC 60947-5-1 annex K.

All push buttons are made of chromium plated metal giving a high-end and robustness to the whole system providing an IP66 electrical enclosure, a cable-gland to maintain its IP grade is also included.

TECHNICAL SPECIFICATIONS

Description	notes/test conditions	min	typ	max		
Mains input voltage ⁽¹⁾	V _{IN AC}	230V Configuration	213	230	275	V _{AC}
		400V Configuration	340	400	440	V _{AC}
Mains frequency	f _{AC}		50/60		Hz	
Output current	I _{OUT AC1}	AC-1			12	A
		AC-3			3.26	A
Output power	P _{OUT AC1}	AC-1, 3-phase, 230V _{AC}		4000		VA
		AC-1, 3-phase, 400V _{AC}		6950		VA
	P _{OUT AC3}	AC-3, 3-phase, 230V _{AC}		0.85		HP
		AC-3, 3-phase, 400V _{AC}		1.5		HP
Protection degree			IP-66			
Combustibility class			UL94 V-0			
Storing temperature range	T _{stg}	-40		80	°C	
Operating temperature range	T _{op}	-10		35	°C	

Data at T_a = 25 °C and rated values, unless otherwise indicated.

(1) See JUMPER SETUP (230 V_{AC} / 400 V_{AC} OPERATION).

CONFORMALS

Conformal coating

MIL-1-46058, Type UR

Security

EN60950-1, UL60950-1

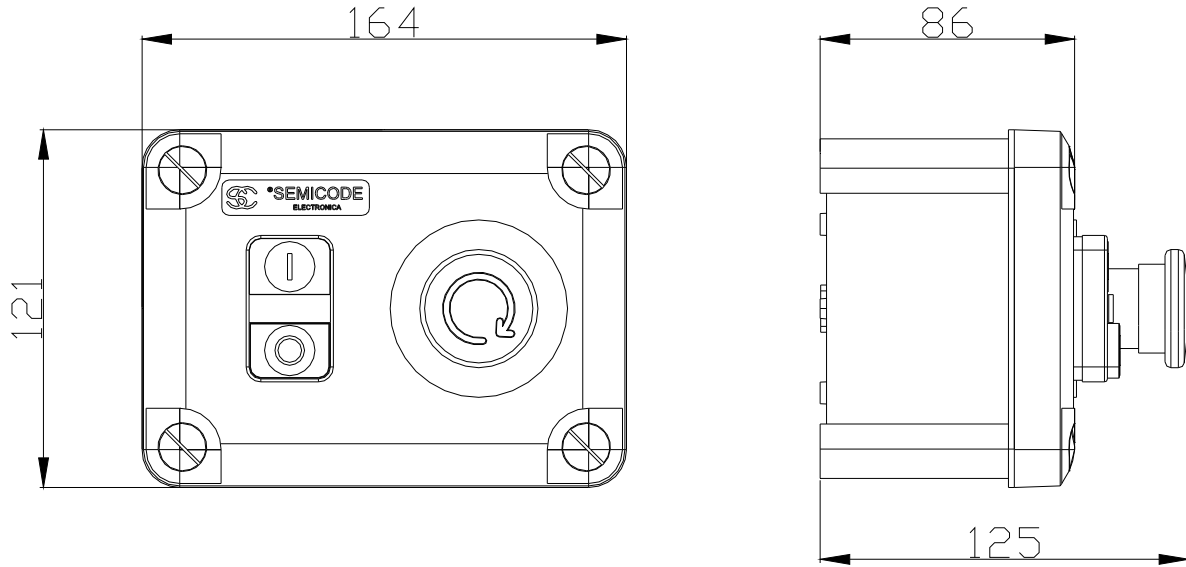
CE Marking



181204 Rev.:3

MECHANICAL DIMENSIONS

<i>Description</i>		
Box dimensions	164 x 12x 125	mm
Weight (aprox.)	680	g



All dimensions in mm.

INTERNAL CONNECTIONS

Description	notes/test conditions	min	typ	max
Device configuration	On-board jumpers (see jumpers set up)			
I/O Power connections	Plug connectors, with screw . Type CIF (Sauro)			
Connectors fixing screw torque			5.0	Nm
Cable section Sauro CIF		30		12 AWG
Maximum current per contact				12 A

ACCESSORIES

The stop-start box is supplied with the following accessories:

- IP 66 Cable gland for input/output wiring.
- All mating pluggable connectors.

TYPICAL APPLICATION, DEFAULT CONNECTION

On figure 1 is depicted the typical connection for a 3-phase use of the Stop/start box. Note that by default, if there is no use of external emergency button, a bridge between poles PE1 and PE2 on J2 is done. Otherwise see “WIRING ADDITIONAL EMERGENCY STOPS”.

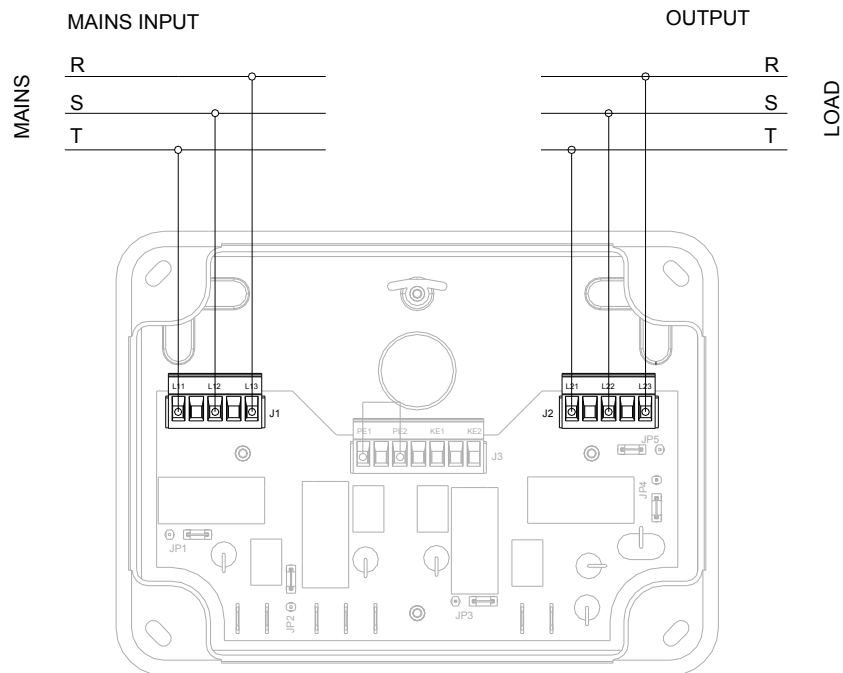


figure 1: 3-phase Typical wiring application. Internal view of stop/start box.

START/STOP BOX CONNECTORS PINOUT

J1 CONNECTOR

#pin	Designator	Function
1	L11	Mains Input AC Line R
2		Not implemented
3	L12	Mains Input AC Line S
4		Not implemented
5	L13	Mains Input AC Line T

J2 CONNECTOR

#pin	Designator	Function
1	L21	Mains Output AC Line R
2		Not implemented
3	L22	Mains Output AC Line S
4		Not implemented
5	L23	Mains Output AC Line T

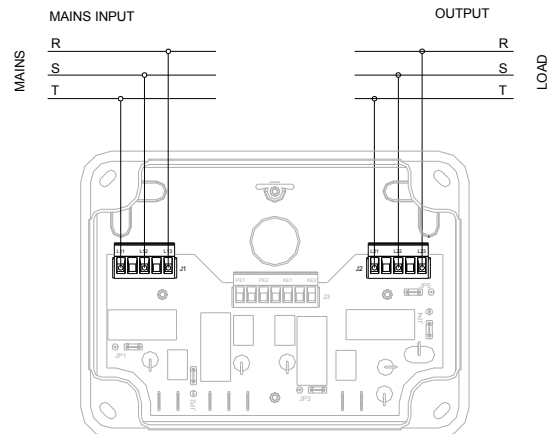


figure 2: Wiring of input and output mains on a three-phase application.

JUMPERS SETUP (230 V_{AC} / 400 V_{AC} OPERATION)

Prior to its connection user must ensure the correct set up of the internal PCB on-board jumper configuration according the input application voltage. Following you will find the two available configurations, 230 V_{AC} configuration and 400 V_{AC} configuration.

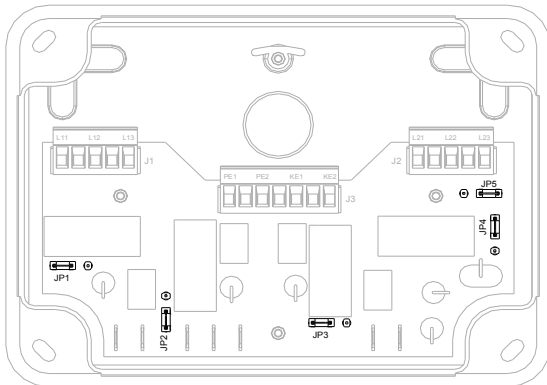


figure 3: Detail of jumpers collocation for 230V_{AC} operation.

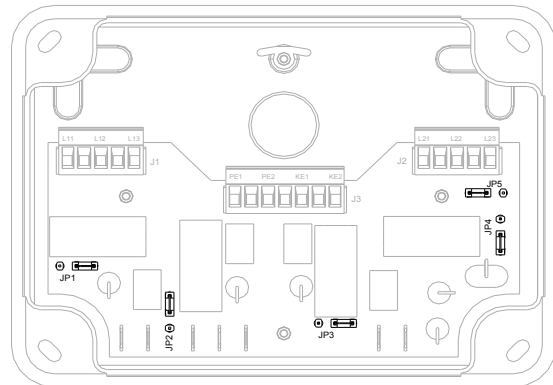


figure 4: Detail of jumpers collocation for 400V_{AC} operation.

230 V_{AC} JUMPERS

#pin	Function
1	LEFT
2	DOWN
3	LEFT
4	UP
5	RIGHT

400 V_{AC} JUMPERS

JUMPER	Position
1	RIGHT
2	UP
3	RIGHT
4	DOWN
5	LEFT



Warning Note:

By default SC-MP06HE is supplied to work on 400 V_{AC} mains power supply. Please check your application needs; **operating at 400 V_{AC} when the board is configured to work as 230 V_{AC} can damage the system.**

WIRING ADDITIONAL EMERGENCY STOPS

SC-MP06HE allows to easily add external Emergency stop buttons that will act as the main emergency button on box. This additional Emergency Button is internally wired in series connection with the main Emergency button on the box lid.

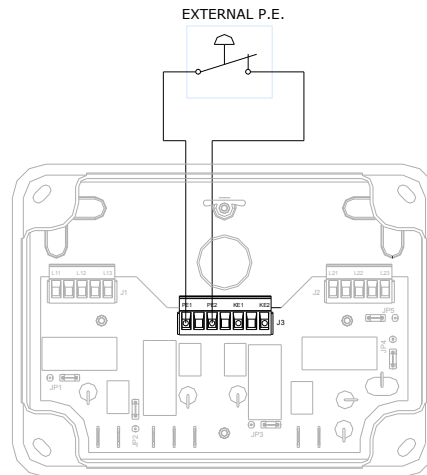


figure 5: Wiring scheme to add additional Emergency stop push buttons.

Please remember that when no additional external emergency stop is used it is necessary to wire a jumper between PE1 and PE2 on J3 connector as is shown in the typical application on figure 5. This jumper is wired by default.

USING AN EXTERNAL POWER CONTACTOR

When driving an external power contactor please consider the maximum current admissible of 3 A_{RMS} (AC-15). The external contactor must be wired as is shown on figure 6. The driving coil voltage on the external power contactor when ON will be the same line mains voltage of the application.

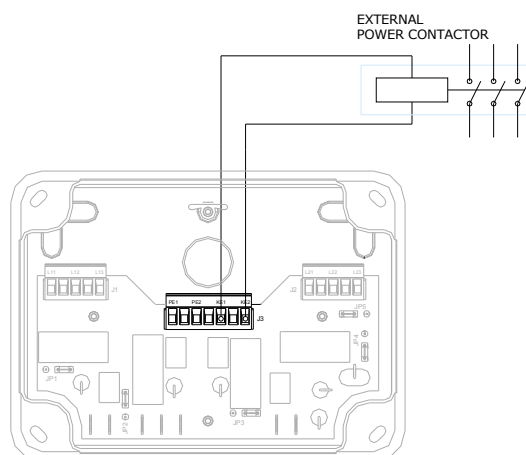


figure 6: Wiring scheme to add an external power contactor.

USING THE START/STOP BOX ON A SINGLE-PHASE MAINS SUPPLY

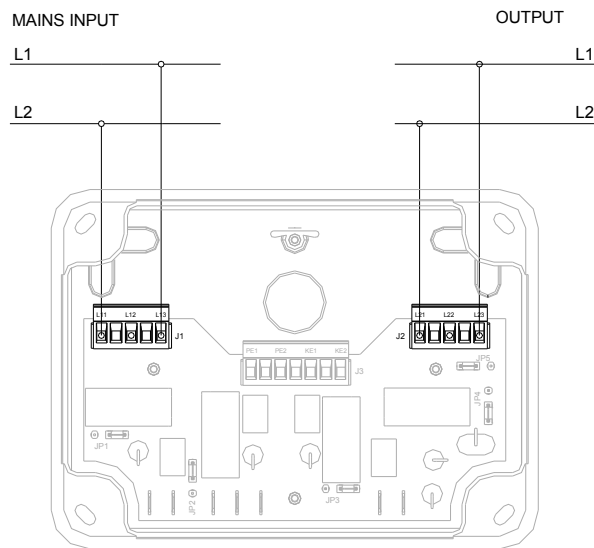


figure 7: Wiring scheme for single phase scheme.

When used on single phase applications the mains and output wiring must be made as is shown on figure 7 leaving the L12 from J1 connector and L22 from J2 connector contacts unconnected.

Cost Effective Products

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