



## ABB Msmart MV Addendum with MVC4-TCB Instructions

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**ABB Msmart MV Addendum with MVC4-TCB**



### General

Msmart consists of an active touch screen/information display. Msmart supports multiple languages and dedicated information and graphs for each product. Msmart also has a built-in an auto-sleep function with wake-up on motion.

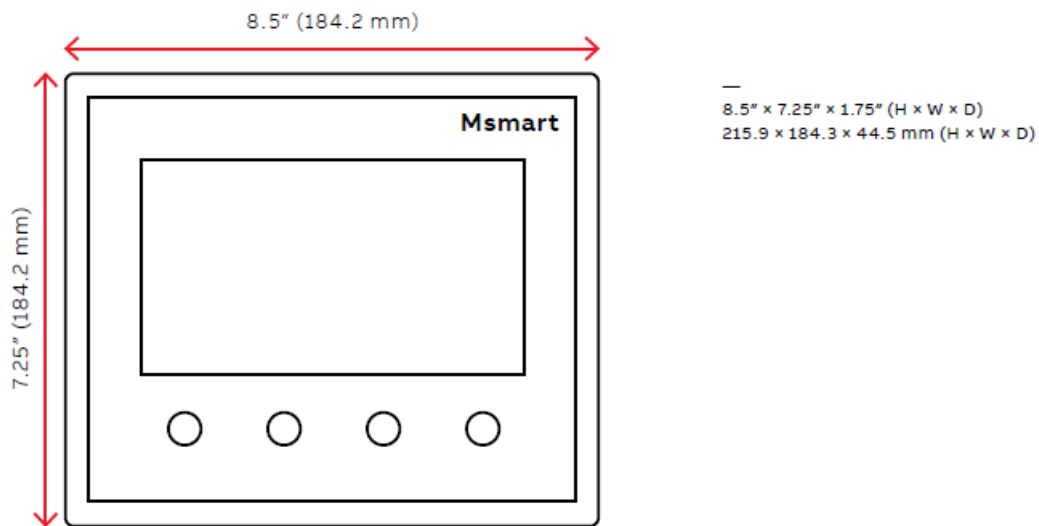
### Features

- Color touch panel
- Hardware pushbuttons for harsh environments
- Auto-sleep function with motion sensing
- Support for six (6) languages
- Virtual MVC4 keypad

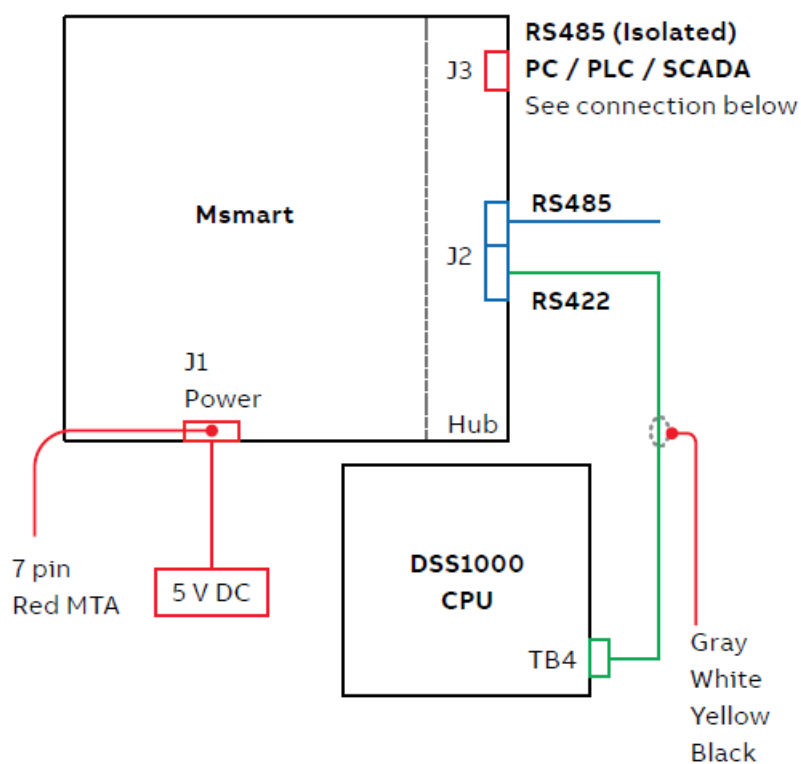
### Available information graphs

- Operation status
- Starting current graph
- Bar graph for RTD temperatures
- Three-phase voltage/current information
- Relay status

## Dimensions



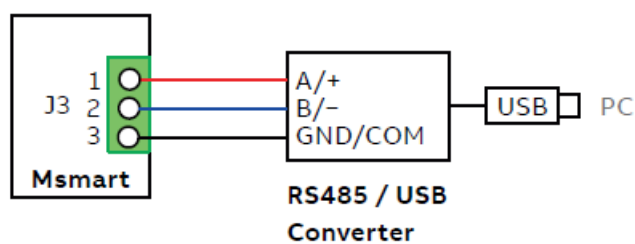
## Msmart configuration



Msmart connection diagram to MVC4 medium voltage soft starter.

### MVC4 MLink connection

Connect the RS485 converter to J3 of the Msmart touchscreen. Plug USB port into PC with MVC4 MLink software.



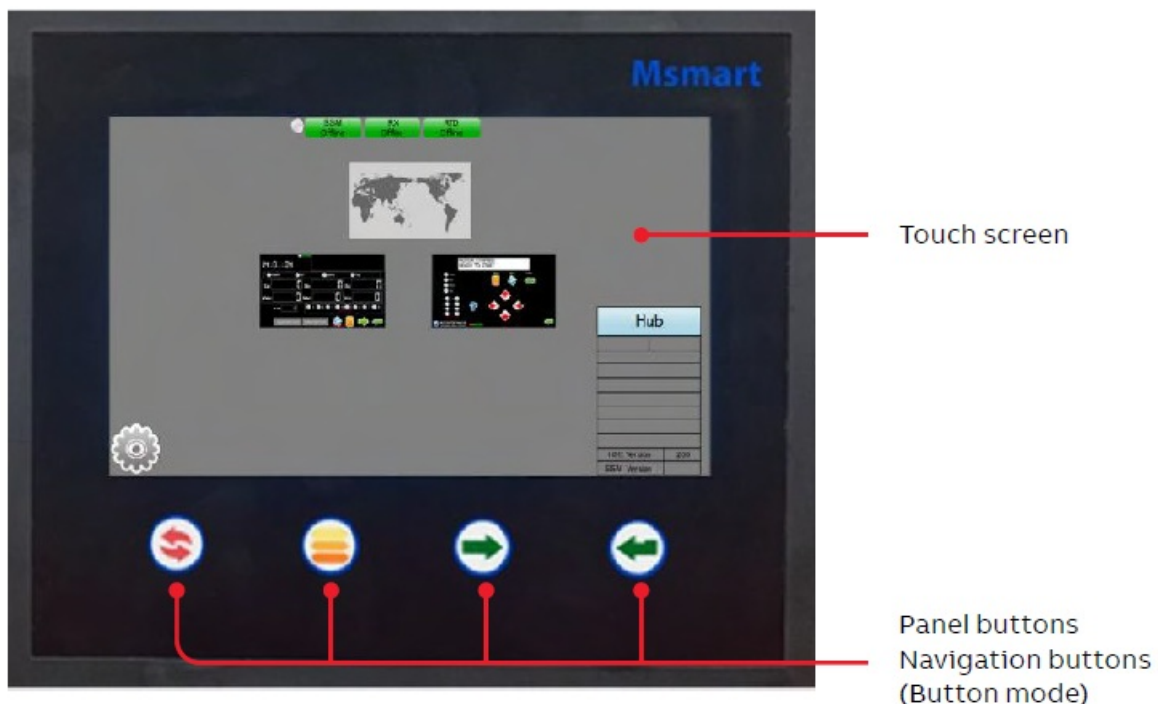
## Msmart touch screen

## Startup

After connecting the Msmart touch screen to the TCB, the system can be powered up. Upon power-up, the Msmart will show a splash startup screen with a status bar indicating the Msmart startup status. Next the Msmart touch screen will attempt to communicate with the MVC4 and additional devices. The online status is shown on the top of the screen. Green indicates device is communicating properly and red indicates communication cannot be established with the device.



Msmart consists of a touchscreen and four membrane buttons for navigation that can be used when the system is installed in a harsh environment.



- Resets the device on the screen only. Also resets the Msmart display by holding button for 6–10 sec.
- Switch between touchscreen and panel buttons (button mode). Menu icon will flash when panel buttons are active.
- Button used to move between selectable items on the touchscreen (forward Tab). The item will flash when selected.
- Select flashing item.

## Navigation and settings

### Main menu

After powerup, Msmart will display the main menu navigation screen. The main menu allows the users to monitor and program all devices connected to the Msmart system.

### Communication status

The communication status indicators at the top of the screen indicate if the Msmart is communicating successfully with the connected devices. Green means communication is ok, red indicates communication has been lost.

### Communication information

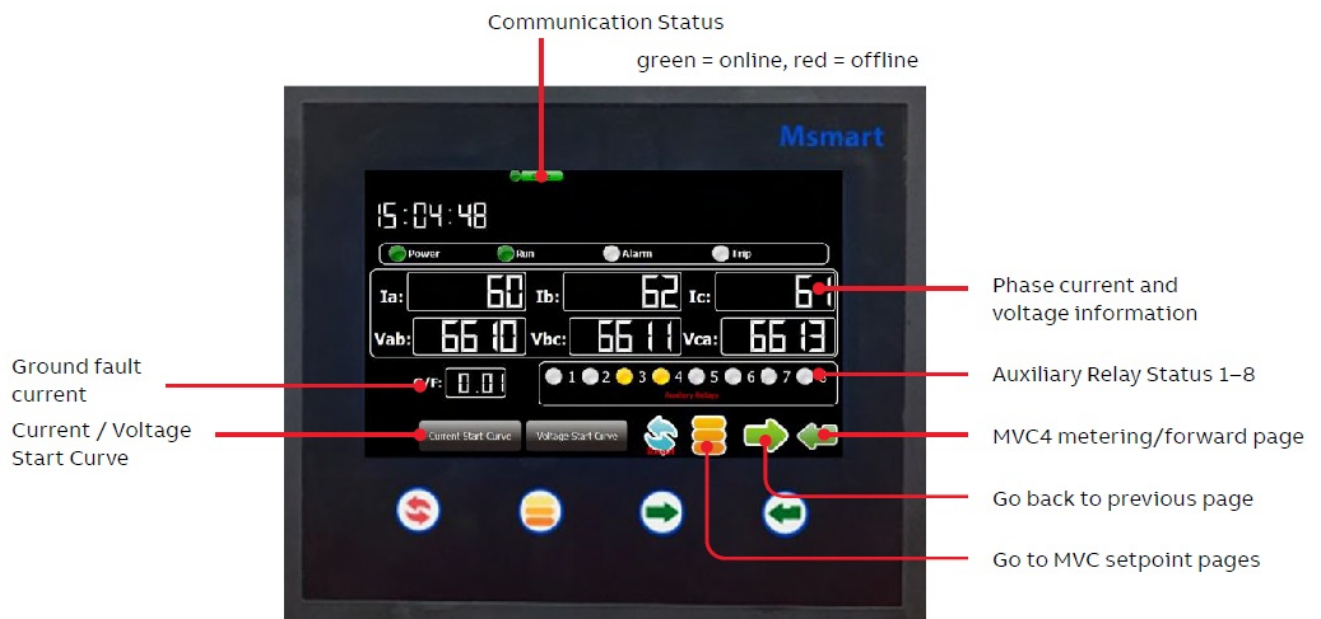
Click to display specific information about

- TCB communication connection
- RS232/RS422/RS485 communication

### Main MVC4 status/Setup screen

The status screen shows current operation status and includes:

- Alarm and trip status
- Phase current and voltages
- Auxiliary relay status
- Starting curve for voltage and current
- MVC4 setpoint and metering page success



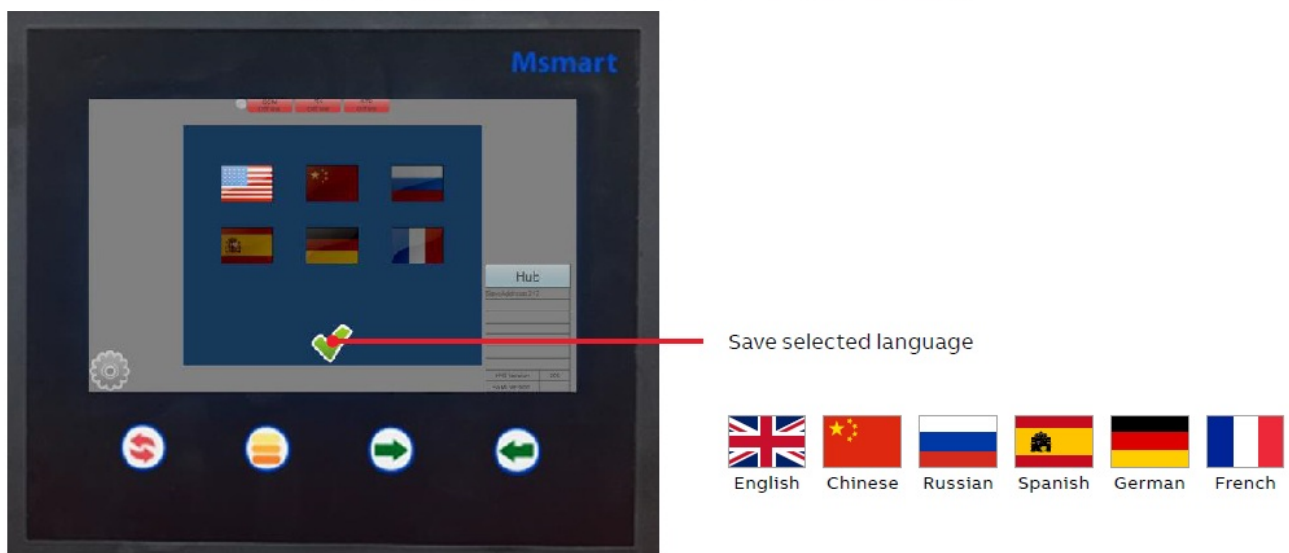
The MVC4 setpoint pages can be accessed by pressing the button. See chapter <MVNAME> programming for more information. The MVC4 metering pages can be accessed by pressing the button. See chapter <MVNAME> metering for more information.

### Msmart settings

Click on the gear tooth icon to view/change the Msmart touch screen settings.

The following settings can be adjusted:

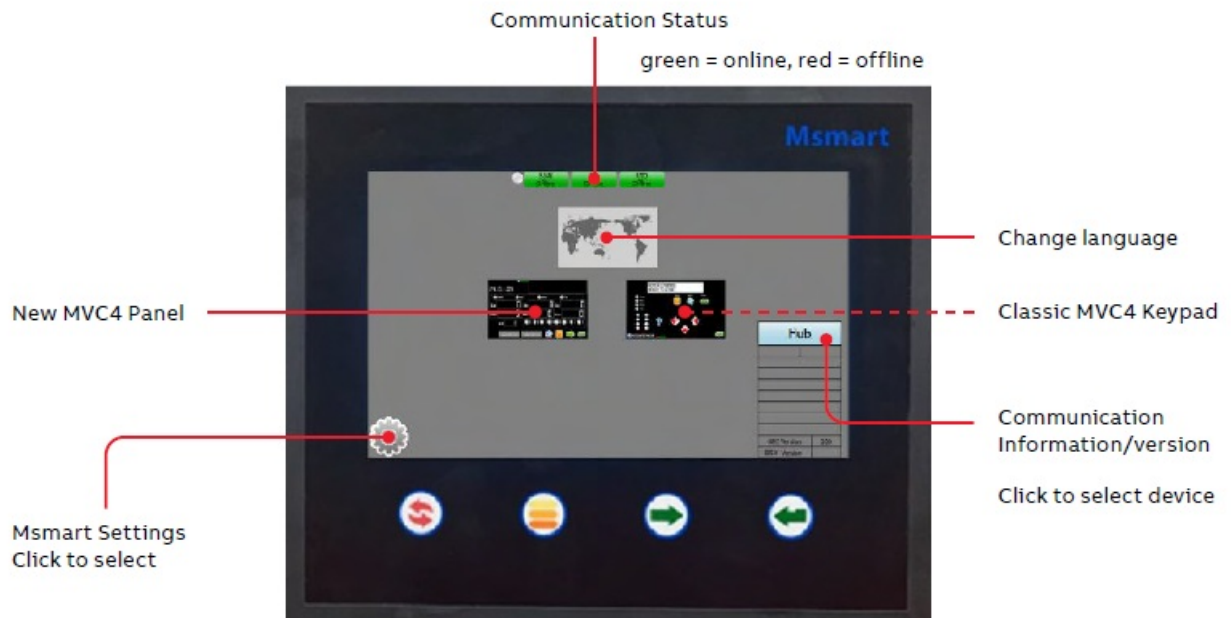
- Main page background color
- Backlight brightness
- Beep sound
- Save delay time
- Return delay to main menu



## Device selection and programming

### Device selection

Depending on the Msmart system configuration, all available devices will be displayed on the main menu page.



### **MVC4 programming**

The Msmart touch panel offers the user two ways to program the MVC4 soft starter:

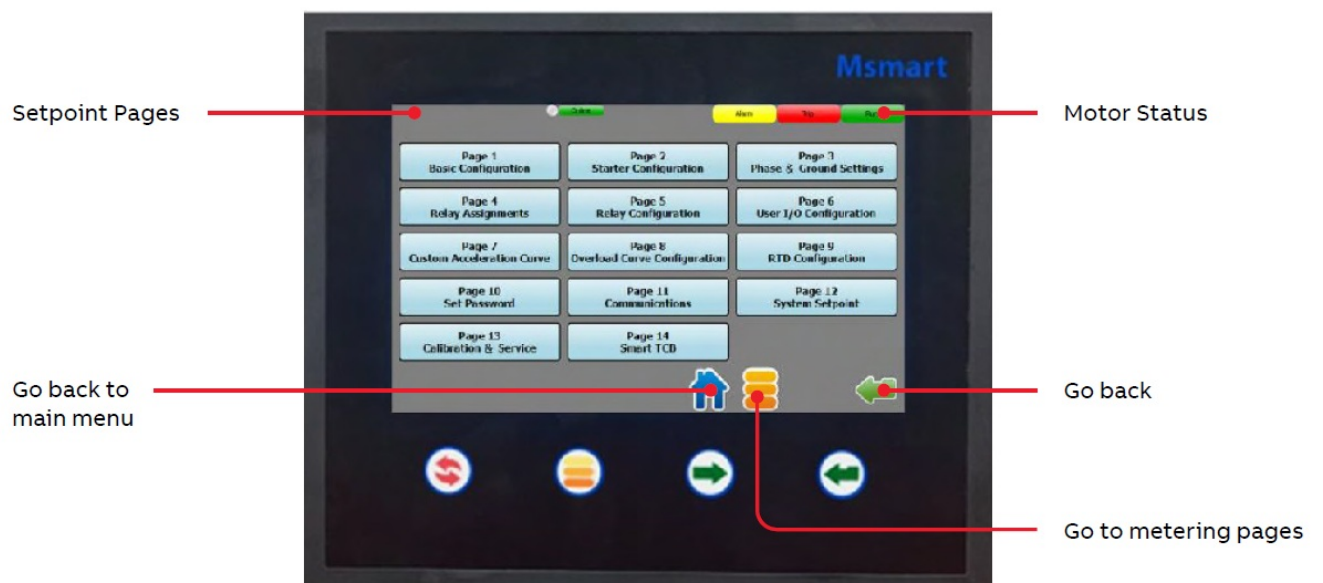
1. Direct setpoint pages
2. Virtual MVC4 keypad

#1: Access MVC4 setpoint pages direct





MVC4 setpoint pages direct



Setpoint Pages

Motor Status

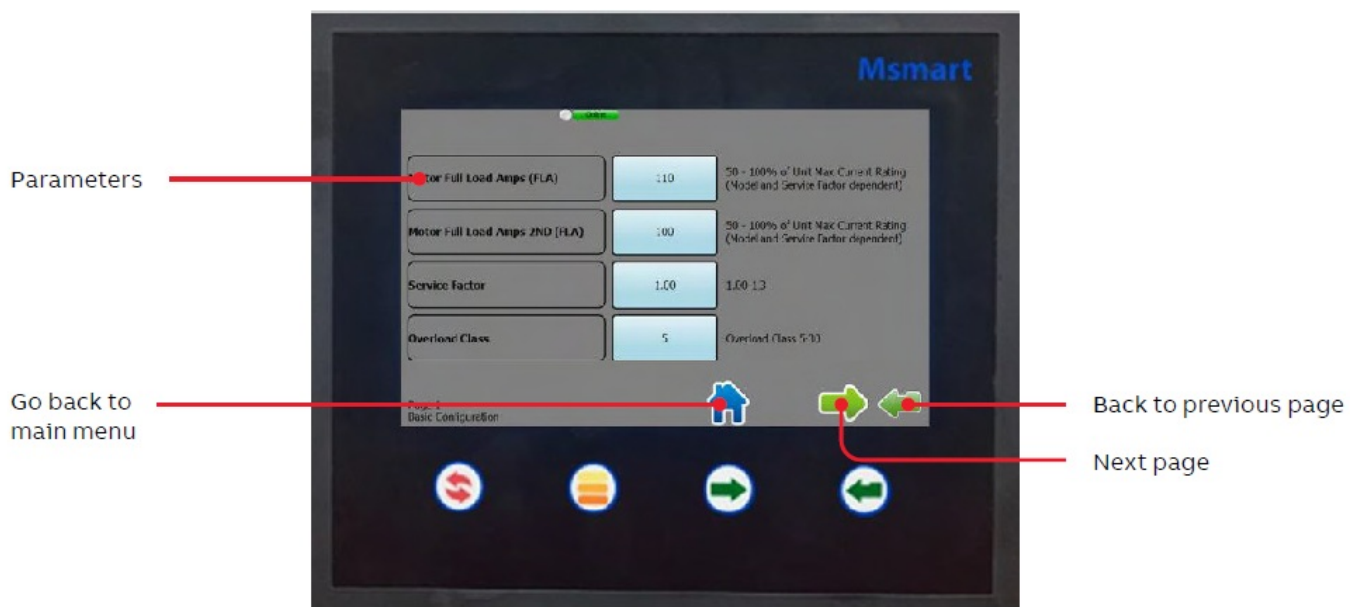
Go back to main menu

Go back

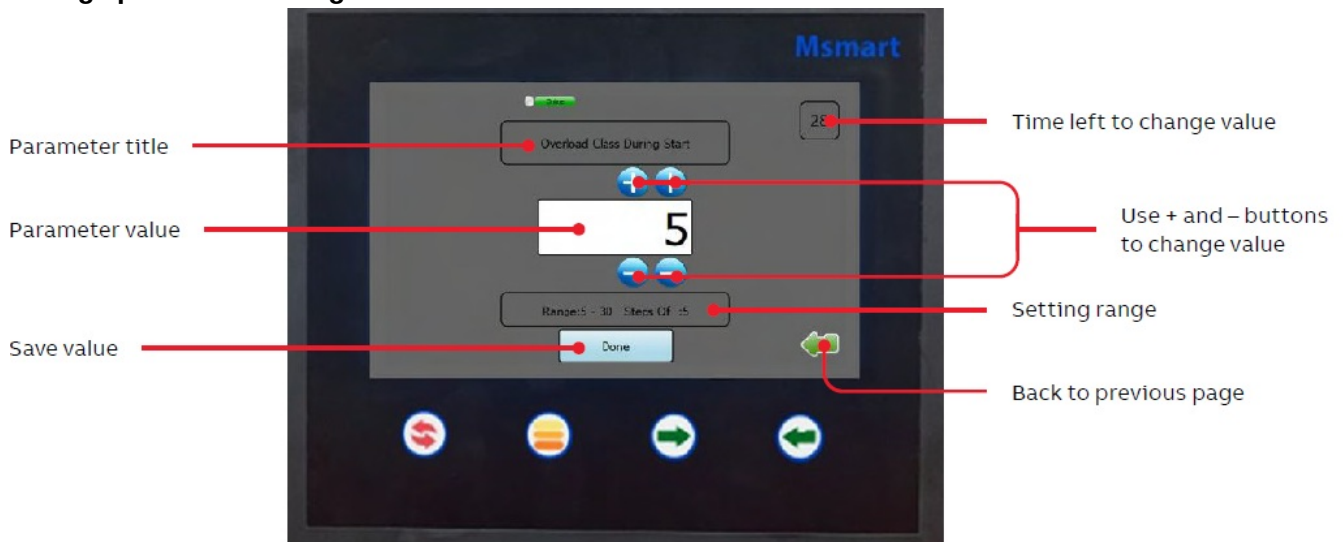
Go to metering pages

#1 Select setpoint page to view parameters direct





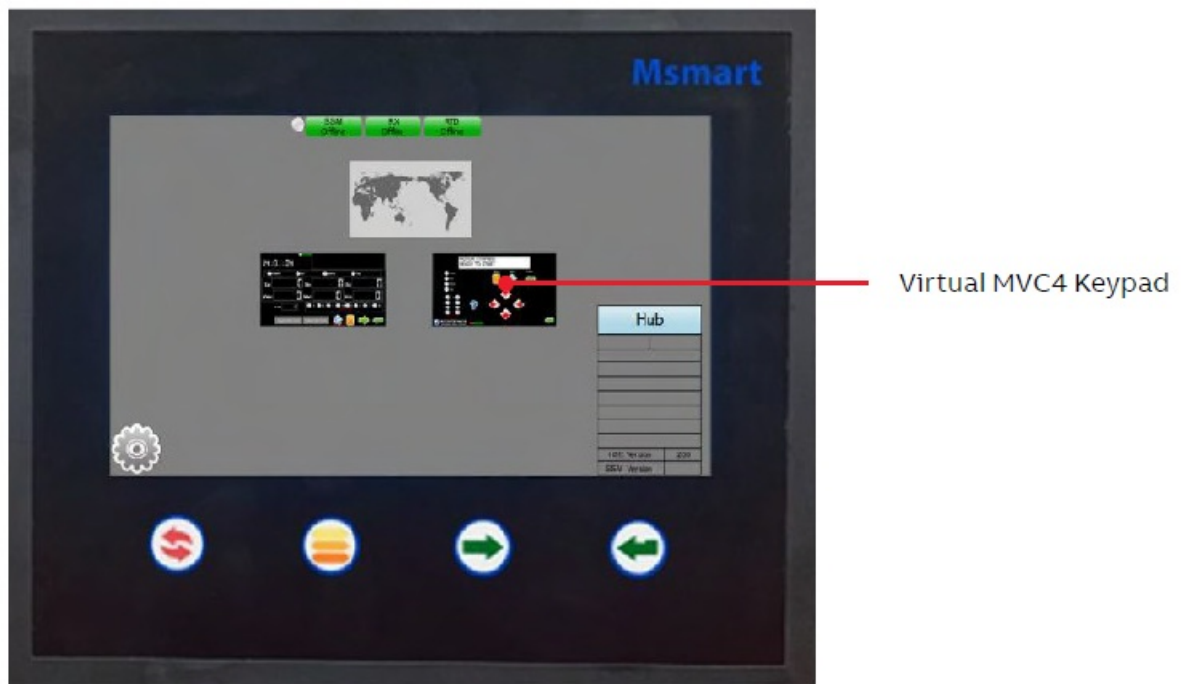
### Change parameter settings



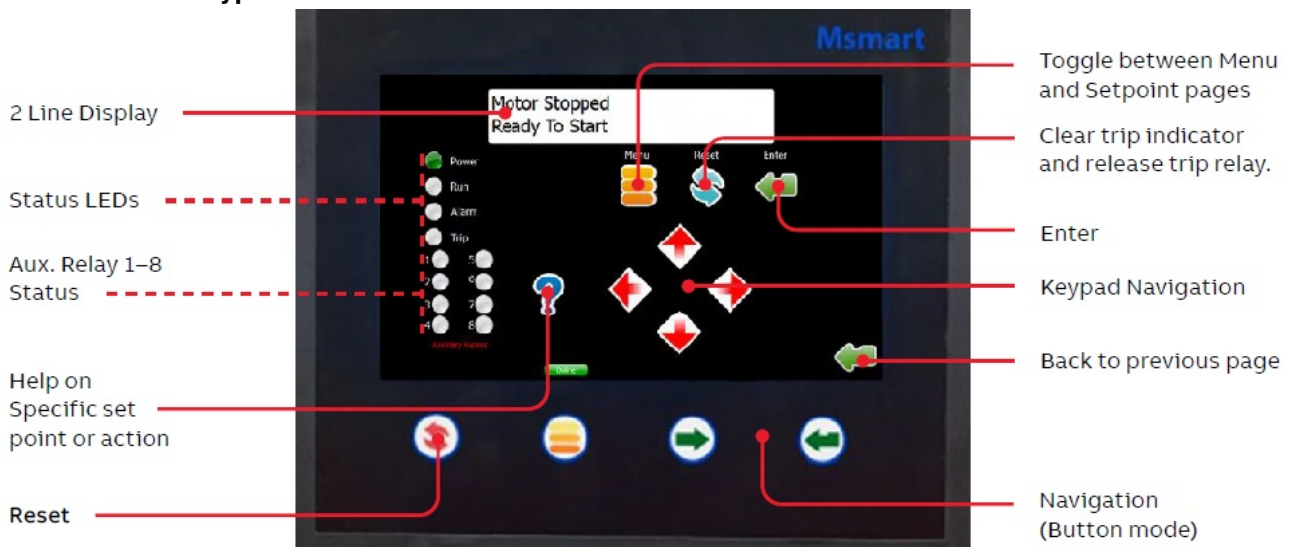
Click "done" button to save value.

### #2: Using the MVC4 virtual keypad

Click on the Classic MVC4 keypad in the Msmart main menu.



## #2 Virtual MVC4 keypad



## #2 Virtual keypad/Operator interface

The virtual keypad/operator interface consists of:

- 2 rows of 20 characters
- 12 indicator LEDs
- 8 buttons



**NOTE:** THE SOSOFT STARTER IS MENU DRIVEN AND THERE ARE THREE LEVELS OF PROGRAMMING. THE programming TWO OF THESE LEVELS IS PASSWORD PROTECTED. LEVEL TWO REQUIRES A THREE-DIGIT PASSWORD AND LEVEL THREE REQUIRES A FOUR-DIGIT password.

Item	Designation	Description
	MENU	Toggle between the menu selection for metering and set point pages.
	RESET	Will clear the trip indicator and release the trip relay.
	ENTER	Pressing the ENTER button once enters the EDIT mode where set point values can be changed. An "Asterisk" will appear on the display to indicate it is in the edit mode . After a set point value is changed, pressing the ENTER button again will save the revised value to memory and the asterisk will go off indicating the change has been saved. When not in the edit mode, the ENTER pushbutton will toggle through the event indicator list (such as alarms or trips).
	HELP	Provides general help information about a specific set point or action.

Key	UP ARROW	Will scroll up through the set point and metering menu page. It will scroll to the top of the set point page or a section. In edit mode it will increase a set point in an incremental step or toggle through the available options in the set point.
	RIGHT ARROW	In the main menu the RIGHT ARROW button provides access to the set point page. For set point pages with multiple columns, the RIGHT ARROW will scroll the set point page to the right. When in edit mode it will shift one character to the right.
	DOWN ARROW	Will scroll down through the set point pages and down through the set points. In edit mode, it will decrement through values and toggle available options in the set point.
	LEFT ARROW	Will move to the left through set point pages with multiple columns. When in edit mode it will become the backspace key and will shift one character to the left.
Led	POWER	Indicates control power is present.
	RUN	Indicates unit/motor is running.
	ALARM	Lights in conjunction with Relay AUX 2 to indicate an Alarm event or warn of possible critical condition.
	TRIP	Lights in conjunction with Relay AUX 1 to indicate a Trip condition has occurred.
	AUX 1–8	Auxiliary relays (Note: Relays 5–8 are available for customer use).

## Technical specifications

Screen Type:	Resistive touch screen
Keypad:	4 membrane keys
Input Voltage:	5 VDC
Average Power Consumption:	3 W
Real-time Clock:	Standard
Operating Design Temperature:	32°F to 122°F / 0°C to 50°C
Storage Temperature:	–4°F to 176°F / –20°C to 80°C
Ambient Conditions:	5% to 95% relative humidity 0 to 3.300 ft (1.000 m) elevation
Approval:	UR (Recognized component)

### California Proposition 65 warning

#### California customers:

California Proposition 65 Warning

WARNING: this product and associated accessories may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

For more information visit: <https://p65warnings.ca.gov>


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[abb.com/mediumvoltage](http://abb.com/mediumvoltage)

### Documents / Resources

	<p><a href="#">ABB Msmart MV Addendum with MVC4-TCB</a> [pdf] Instructions</p> <p>Msmart MV Addendum with MVC4-TCB</p>
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