



# Solar container lithium battery BMS operating license

This PDF is generated from: <https://swbsports.co.za/04-10-18-2260.html>

Title: Solar container lithium battery BMS operating license

Generated on: 2026-04-27 17:48:35

Copyright (C) 2026 SWB POWER & SOLAR. All rights reserved.

For the latest updates and more information, visit our website: <https://swbsports.co.za>

What is a battery management system (BMS)?

ications. Battery Management System The BMS protects the battery from harmful operation and maximises its lifespan by constantly monitoring the battery's parameters such as voltage, current, temperature, State-of-Charge 3 ("SOC") and State-of-Health 4 ("SOH"), and ensuring they

What is a BMS in a Li-ion battery?

The BMS is the heart of every Li-ion battery. It is needed to equalize series connected cells and protect the battery from current, voltages and temperatures outside the allowed operating range. Below figure shows a complete battery system with the integrated BMS. Overview of the BMS integrated into a Li-ion battery pack.

What are the classification and shipping requirements for lithium-ion batteries?

The classification and shipping requirements for lithium-ion batteries depend on their size and energy capacity (Watt-hours). For standalone batteries. Strict UN-certified packaging. IUMI strongly supports the SoC limit of 30% for air freight and advocates similar principles for maritime transport.

What is the Libre solar BMS C1?

The Libre Solar BMS C1 is a flexible Open Source Battery Management System (BMS) suitable for various applications. This manual describes the usage and most important functions of the BMS. Please visit [learn.libre.solar](http://learn.libre.solar) for general information about battery management systems, charge controllers and other devices for DC energy systems.

What is energy storage container? SCU uses standard battery modules, PCS modules, BMS, EMS, and other systems to form standard containers to build large-scale grid-side energy storage projects. ...

The BMS is the heart of every Li-ion battery. It is needed to equalize series connected cells and protect the battery from current, voltages and temperatures outside the allowed operating range.

The maritime industry is witnessing a significant shift in cargo composition, with lithium-ion batteries and their applications (EVs, BESS) becoming increasingly prevalent. While these technologies ...

Ultimately, lithium battery BMS shipping regulations represent the "Conversion" of safety theory into global

trade reality. In the worlds of international solar projects, maritime vessel upgrades, and ...

Are lithium-ion batteries safe to operate without BMS protection? A: Operating lithium-ion batteries without proper BMS protection is extremely dangerous and not recommended. While basic protection circuits ...

1 Introduction  
2 Safety Instructions  
3 Features  
4 Installation  
5 Operation

The Libre Solar BMS C1 is a flexible Open Source Battery Management System (BMS) suitable for various applications. This manual describes the usage and most important functions of the BMS. Please visit [learn.libre.solar](http://learn.libre.solar) for general information about battery management systems, charge controllers and other devices for DC energy systems. Read this manual ... See more on [libre.solar#b\\_results](http://libre.solar#b_results) [li.b\\_ans.b\\_mop.b\\_mopb,#b\\_results](http://li.b_ans.b_mop.b_mopb,#b_results) [li.b\\_ans.b\\_nonfirststopb](http://li.b_ans.b_nonfirststopb) {border-radius:6px;box-shadow:0 0 0 1px rgba(0,0,0,.05);margin-top:12px;margin-bottom:10px;padding:15px 19px 10px}#b\_results [li.b\\_ans.b\\_mop.b\\_mopb](http://li.b_ans.b_mop.b_mopb) [.b\\_sideBleed](http://.b_sideBleed) {margin-left:-19px;margin-right:-19px}#b\_results [.b\\_vidAns](http://.b_vidAns) {border-radius:6px;box-shadow:0 0 1px rgba(0,0,0,.05);padding:16px 20px;gap:10px;background:#fff} @charset "UTF-8";#b\_results [.b\\_ans.b\\_vidAns](http://.b_ans.b_vidAns) {box-shadow:none!important;padding:var(--smtc-gap-between-content-medium) 0!important;background:var(--bing-smtc-background-ctrl-fade-on-image-stop-0)}#b\_results [#serpvidans.vsaf](http://#serpvidans.vsaf) [#b\\_results #serpvidans.vsaf](http://.mc_vtvc) [#b\\_results #serpvidans.vsaf](http://.mc_vtvc_th) [#b\\_results #serpvidans.vsaf](http://.cico) [#b\\_results #serpvidans.vsaf](http://.mc_vtvc_htb) [#b\\_results #serpvidans.vsaf](http://.vrhc) [#b\\_results #serpvidans.vsaf](http://.vrhcp) [#b\\_results #serpvidans.vsaf](http://.vrhtc) [.vrhtpc](http://.vrhtpc) {border-radius:var(--mai-smtc-corner-list-card-default)}#b\_results [#serpvidans.vsaf](http://#serpvidans.vsaf) [.mmlist](http://.mmlist) [#b\\_results #serpvidans.vsaf](http://.mc_vtvc) [.mmlist](http://.mmlist) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) {margin:0}#b\_results [#serpvidans.vsaf](http://#serpvidans.vsaf) [.mmlist](http://.mmlist) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [#b\\_results #serpvidans.vsaf](http://.mc_vtvc_meta_channel) [.mmlist](http://.mmlist) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [.mc\\_vtvc\\_meta\\_row\\_channel](http://.mc_vtvc_meta_row_channel) {color:var(--smtc-foreground-content-neutral-primary)}#serpvidans.vsaf,#serpvidans.vsaf [.expctn](http://.expctn) [#serpvidans.vsaf](http://.expbody) [.mmlist](http://.mmlist) {display:flex;flex-direction:column;gap:var(--smtc-gap-between-content-medium)}#serpvidans.vsaf [.cico](http://.cico) {height:auto}#serpvidans.vsaf [.mc\\_vtvc\\_ban\\_lo](http://.mc_vtvc_ban_lo) {top:0;right:auto}#serpvidans.vsaf [.mc\\_cwvc](http://.mc_cwvc) [.mc\\_vtvc](http://.mc_vtvc) [#serpvidans.vsaf](http://.mc_vtvc_meta) [.mmlist](http://.mmlist) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) {height:auto;padding:var(--smtc-gap-between-content-xx-small) 0 var(--smtc-gap-between-content-xx-small) var(--smtc-gap-between-content-medium);display:flex;flex-direction:column;justify-content:space-between}#serpvidans.vsaf [.mc\\_cwvc](http://.mc_cwvc) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [#serpvidans.vsaf](http://.mc_vtvc_title) [.mmlist](http://.mmlist) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [.mc\\_vtvc\\_title](http://.mc_vtvc_title) {color:var(--smtc-ctrl-link-foreground-brand-rest);font:var(--bing-smtc-text-global-body2);height:auto;display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}#serpvidans.vsaf [.mc\\_cwvc](http://.mc_cwvc) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [#serpvidans.vsaf](http://.mc_vtvc_meta_block_area) [.mc\\_cwvc](http://.mc_cwvc) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [#serpvidans.vsaf](http://.mc_vtvc_meta_block) [.mmlist](http://.mmlist) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [#serpvidans.vsaf](http://.mc_vtvc_meta_block_area) [.mmlist](http://.mmlist) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [.mc\\_vtvc\\_meta\\_block](http://.mc_vtvc_meta_block) {display:flex;flex-direction:column;gap:var(--smtc-padding-ctrl-text-side)}#serpvidans.vsaf [.mc\\_cwvc](http://.mc_cwvc) [.mc\\_vtvc](http://.mc_vtvc) [.mc\\_vtvc\\_meta](http://.mc_vtvc_meta) [.mc\\_vtvc\\_meta\\_block\\_area](http://.mc_vtvc_meta_block_area) [#serpvidans.vsaf](http://.mc_vtvc_meta_row)

```
.mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row,#serpvidans.vsacf .mmlist
.mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block_area .mc_vtvc_meta_row,#serpvidans.vsacf .mmlist
.mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block
.mc_vtvc_meta_row{color:var(--smtc-foreground-content-neutral-primary);height:var(--mai-smtc-padding-car
d-default);font:var(--bing-smtc-text-global-caption1)}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before,#serpvidans.vsacf
.mc_cwvc .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row
.mc_vtvc_meta_row_channel::before,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before,#serpvidans.vsacf
.mmlist .mc_vtvc .mc_vtvc_meta .mc_vtvc_meta_block .mc_vtvc_meta_row
.mc_vtvc_meta_row_channel::before{content:" . "}#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mc_cwvc .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area .mc_vtvc_meta_pubdate,#serpvidans.vsacf .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block
.mc_vtvc_meta_pubdate{color:var(--bing-smtc-foreground-content-neutral-tertiary);padding-bottom:0}.vsacf
.mc_cwvc .mc_vtvc_con_rc,.vsacf .mmlist .mc_vtvc_con_rc{display:flex}.vsacf .mc_cwvc .mc_vtvc_con_rc
.mc_vtvc_meta_w,.vsacf .mmlist .mc_vtvc_con_rc .mc_vtvc_meta_w{height:auto}.vsacf
.b_title{padding-left:0}.vsacf .b_title
.mmtitle{font:var(--bing-smtc-text-global-subtitle1-strong);margin-bottom:0}.vsacf .b_title .mmtitle
a::after{content:"";margin:5px 5px 0 0;border-top:2px solid
var(--smtc-foreground-content-neutral-primary);border-right:2px solid
var(--smtc-foreground-content-neutral-primary);background-size:7px
7px;width:7px;height:7px;transform:rotate(45deg);display:inline-block;margin-left:4px}#serpvidans.vsacf
.b_title .mmtitle{margin-bottom:0}#serpvidans.vsacf .b_title .mmtitle
a{color:var(--smtc-foreground-content-neutral-primary)}#serpvidans.vsacf .cardless.mmlist
.mc_vtvc_con_rc,#serpvidans.vsacf .cardless.mmlist .mc_vtvc_th{height:auto}#serpvidans.vsacf
.vsb_tr_c.va_tt{margin:0}#serpvidans.vsacf .vtbc .mv_vtvc_play,#serpvidans.vsacf .vtbc
.mv_vtvc_play_ext{position:static}#serpvidans.vsacf .va_tt
.mc_vtvc_ban_lo{display:block}#serpvidans.vsacf
.mc_bc{width:auto;border-radius:var(--smtc-ctrl-badge-sm-corner);padding:var(--smtc-padding-ctrl-text-side)
var(--smtc-gap-between-content-xx-small)}#serpvidans.vsacf .rmts .mc_bc
ems{display:none}#serpvidans.vsacf a.vsb_tr_t{color:var(--smtc-foreground-content-neutral-primary)}.vsacf
.va_tt .vsb_tr_chd .mc_vtvc_th_dock.rmoveoverlay{height:36px}.vsacf .va_tt .vsb_tr_chd
.mc_vtvc_th_dock{height:92px;background:linear-gradient(180deg,var(--bing-smtc-background-ctrl-fade-on-i
mage-stop-0) 0%,var(--mai-smtc-background-ctrl-on-image-rest) 100%)}.vsacf .va_tt a.vsb_tr_t{padding:0
0;font:var(--bing-smtc-text-global-body-2-alt-strong)}.vsacf .va_tt .vsb_tr_chd .mc_vtvc
.mc_vtvc_meta,.vsacf .va_tt .vsb_tr_chd .mc_vtvc
.mc_vtvc_title{color:var(--mai-smtc-foreground-ctrl-on-image-rest)}.vsacf
span.vcmt_ctt{font:var(--bing-smtc-text-global-caption2);margin:var(--smtc-gap-between-content-xx-small) 0
0;height:16px}#serpvidans.vsacf .vsb_tr_chd .mc_vtvc_tot .mc_vtvc_title
```

```
strong{font-size:14px;line-height:20px;display:unset}#serpvidans.vsaf .va_tt .b_sldrp
.slide:not(:first-child){margin-left:var(--smtc-gap-between-content-small)}#serpvidans.vsaf .va_tt
.vsb_tr_chd .mc_vtvc
.mc_vtvc_title{white-space:normal;display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}#se
rpvidans.vsaf .b_module_expansion_control .b_btnContainer
.b_CompactExpansion{background-color:var(--bing-smtc-background-ctrl-neutral-rest);display:flex;justify-co
ntent:center;align-items:center;gap:4px;width:fit-content;height:auto;padding:8px 12px}#serpvidans.vsaf
.b_module_expansion_control .b_btnContainer .b_CompactExpansion
.b_CompactExpansionBtnText{font:var(--bing-smtc-text-global-caption1-strong);color:var(--bing-smtc-foregr
ound-ctrl-neutral-primary-alt-rest)}#serpvidans.vsaf .b_module_expansion_control .b_btnContainer
.b_CompactExpansion .b_arrow{display:flex;margin:0;height:auto}#serpvidans.vsaf
.b_module_expansion_control .b_btnContainer .b_CompactExpansion .b_arrow
path#Shape{fill:var(--bing-smtc-foreground-ctrl-neutral-primary-alt-rest)}#serpvidans.vsaf
.b_module_expansion_control
.b_btnContainer::after{content:"";position:absolute;width:100%;bottom:20px;left:0;height:1px;border-radius:
1px;background:var(--smtc-stroke-ctrl-on-neutral-rest)}#b_results
.b_ans.b_vidAns{box-shadow:none;padding:12px 20px 0}#b_results .b_ans.b_vidAns
.vasac{padding:unset;margin:0}#b_results .b_ans.b_vidAns .vsa .b_attribution{padding-bottom:0}#b_results
.b_ans.b_vidAns .cardless .salink{margin:0}#b_results .b_ans.b_vidAns .mmlist
.mc_vtvc{margin-top:10px}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc
.mc_vtvc_meta{display:flex;flex-direction:column;justify-content:space-between;margin:0 10px 4px
12px}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_channel{color:#111}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_row_channel,#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area{color:#666}#b_results .b_ans.b_vidAns .mmlist .mc_vtvc .mc_vtvc_meta
.mc_vtvc_meta_block_area{bottom:0;height:unset}.b_dark .vsa.cardless
.mc_vtvc{background-color:unset}.mmtitle>a{display:block}.mc_fh{height:100%;border-radius:6px}.mc_tc_
bs{overflow:hidden}.mmlist .mc_vtvc .mc_vtvc_meta { padding: 12px 16px 16px 16px; } .mmlist .mc_vtvc
.mc_vtvc_meta_w { height: 112px; margin-top: -0px; } .mmlist .mc_vtvc .mc_vtvc_title { height: 44px;
line-height: 22px; margin-bottom: 0px; margin-top: 0px; } .mmlist .mc_vtvc .mc_vtvc_meta_block_area {
height: 40px; } .mmlist .mc_vtvc .vtmu, .mmlist .mc_vtvc .vtpl { bottom: 120px; } .mmlist .mc_vtvc_th_dock
{ height: 112px; } .mmlist .mc_vtvc_th .cico { height: 131px; }
.mc_vtvc{background-color:#fff;box-shadow:0 0 0 1px
rgba(0,0,0,.05);line-height:0;margin:0;position:relative;border-radius:6px;overflow:hidden}.mc_vtvc.noshado
w{box-shadow:none}.mc_vtvc_con_rc{border-radius:6px;overflow:hidden;position:relative}.mc_vtvc>a{colo
r:#71777d;display:block;text-decoration:none;width:100%}.mc_vtvc>a:focus::after{outline:2px solid
#00a89d;width:100%;height:100%;content:"";outline-offset:-2px;position:absolute;top:0;left:0}.mc_vtvc_th{ba
ckground-color:#d5d5d5;position:relative}.mc_vtvc_th
.cico{border-radius:0}.mc_vtvc_ban_lo,.mc_vtvc_ban_up{position:absolute;vertical-align:middle}.mc_vtvc_
ban_lo{bottom:0}.mc_vtvc_ban_up{top:0}.mc_vtvc_title{font-weight:normal;margin-bottom:11px;overflow:
hidden;color:#111;height:54px;line-height:18px}.mc_vtvc_title
```



# Solar container lithium battery BMS operating license

```
a{display:inline-block;color:#111}.mc_vtvc_title
a:hover{text-decoration:underline}.mc_vtvc_src_ico{float:left;margin-right:4px}.mc_vtvc_act{height:16px;margin-top:-40px;padding:12px
8px;z-index:1}.mc_vtvc_actc{right:16px;bottom:16px;position:absolute;display:inline-block;z-index:1}.mc_vtvc_act_sep{border-top:1px
solid #d5d5d5;height:40px;margin:0 8px}.mc_vtvc_fh
.mc_vtvc_act_sep,.mc_vtvc_fh
.mc_vtvc_act{visibility:hidden}#serpvidans
.b_topTitle{margin-bottom:8px}.mc_vtvc_htc{width:100%;height:100%;position:absolute;top:0;bottom:0;left:0;right:0}.mc_vtvc_htb{width:100%;height:100%;background:rgba(0,0,0,.7);position:absolute;top:0;bottom:0;left:0;right:0}.mc_vtvc_ht{width:100%;padding:0
16px;line-height:16px;color:#fff;text-decoration:underline;word-break:break-word;box-sizing:border-box;vertical-align:middle;text-align:center}.mc_vtvc_th_live_b{background-color:#c80000;color:#fff;display:inline-block;padding:2px
8px;font:11px/14px
Arial;border-radius:2px;text-transform:uppercase;height:15px;width:26px;position:absolute;left:8px;top:110px}.isvctrl
.isv
.mc_vtvc_ban_up{left:0;right:initial}.mc_vtvc_ban_lo,.mc_vtvc_ban_up{right:0}.vt_text.b_ILRight
.b_ILLeft{margin:0 0 0 1px;height:14px;line-height:14px;padding:2px
8px;background:rgba(0,0,0,.75);border-radius:2px;font-weight:bold}.mc_vthtb{width:100%;height:100%;background:rgba(0,0,0,.7);position:absolute;top:0;bottom:0;left:0;right:0;display:table}.mc_vtht{width:100%;padding:0
16px;line-height:16px;color:#fff;text-decoration:underline;word-break:break-word;box-sizing:border-box;vertical-align:middle;text-align:center;display:table-cell}.vt_text.b_ILRight
.b_ILLeft{margin:0 0 0 1px;height:14px;line-height:14px;padding:2px
8px;background:rgba(0,0,0,.75);border-radius:2px;font-weight:bold}.emptyStyleForDebuggingPurpose{top:0
}.emptyStyleForDebuggingPurpose{top:0}.mc_vtvc_center_play{width:32px;height:32px;background-size:cover;position:absolute;margin:auto;bottom:0;top:0;left:0;right:0;box-shadow:none;border-radius:0}.mc_vtvc_center_play.rmvbg{width:32px;height:32px;background-image:none}.mc_vtvc_htb,.mc_vtvc_ht{display:none}.vt_onhv
.mc_vtvc_htb{display:table}.vt_onhv
.mc_vtvc_ht{display:table-cell}.mc_vtvc_center_play{display:inline-block}.vt_onhv
.mc_vtvc_center_play{display:none}.mc_vtvc
.vtmu,.mc_vtvc
.vtpl{bottom:163px}.vsarf
.mc_vtvc
.vtmu,.vsarf
.mc_vtvc
.vtpl{bottom:122px}.svarh #mmcar
.mc_vtvc
.vtmu,.svarh #mmcar
.mc_vtvc
.vtpl{bottom:137px}.svarht #mmcar
.mc_vtvc
.vtmu,.svarht #mmcar
.mc_vtvc
.vtpl{top:8px;left:8px}.mc_vtvc_center_play{background-image:url(data:image/svg+xml,%3Csvg%20width%3D%2232%22%20height%3D%2232%22%20viewBox%3D%220%200%2032%2032%22%20fill%3D%22none%22%20xmlns%3D%22http%3A%2F%2F%2F2000%2Fsvg%22%3E%0D%0A%20%20%20%20%3Crect%20width%3D%2232%22%20height%3D%2232%22%20rx%3D%2216%22%20fill%3D%22black%22%20fill-opacity%3D%220.6%22%2F%3E%0D%0A%20%20%20%20%3Cpath%20d%3D%22M14.2354%2010.1923C13.2355%209.62986%2012%2010.3524%2012%2011.4997V20.5C12%2021.6472%2013.2355%2022.3698%2014.2354%2021.8073L22.2356%2017.3073C23.2551%2016.7339%2023.2551%2015.2661%2022.2357%2014.6926L14.2354%2010.1923Z%22%20fill%3D%22white%22%20fill-opacity%3D%220.9%22%2F%3E%0D%0A%3C%2Fsvg%3E)}.mmlist
.mc_vtvc{margin:10px 1px 0}.mmlist
.mc_vtvc_con_rc{display:flex}.cardless
.mmlist
.mc_vtvc_con_rc{height:112px}.mmlist
.mc_vtvc
```

```
.mc_vtvc_meta{display:flex;flex-direction:column;justify-content:space-between;margin:0 10px 4px 12px;padding:0}.mmlist
.mc_vtvc_title{font-weight:400;font-size:16px;height:44px;line-height:22px;margin-bottom:0;margin-top:0;color:unset}.mmlist .mc_vtvc_meta_row{font-size:13px}.mmlist .mc_vtvc
.mc_vtvc_meta_block_area{height:unset}.mmlist .mc_vtvc .vtmu,.mmlist .mc_vtvc
.vtpl{bottom:8px}.cardless .mmlist .mc_vtvc{box-shadow:none}.cardless.mmlist
.mc_vtvc_center_play{width:32px;height:32px}.cardless.mmlist
.mc_vtvc_title{font-size:16px;color:unset}.cardless.mmlist
.mc_vtvc_meta_row{line-height:20px}.cardless.mmlist
.mc_vtvc_meta_pubdate{padding-bottom:2px;color:#666}.cardless.mmlist .mc_vtvc_th,.cardless.mmlist
.mc_vtvc_th .cico,.cardless.mmlist .mc_vtvc_th div.rms_img{border-radius:6px}.cardless.mmlist
.mc_vtvc_th{height:111px}.cardless.mmlist
.mc_vtvc_htc{border-radius:6px;overflow:hidden}#serpvidans.vasac.cardless{box-shadow:none}.cardless.mmlist
.mc_bc{padding:2px 8px;line-height:14px;border-radius:2px;font-weight:normal}.mmlist
.mc_vtvc:hover
.mc_vtvc_title{text-decoration:underline}.mc_vtvc_meta{box-sizing:border-box;display:inline-block;line-height:18px;position:relative;width:100%}.mc_vtvc_meta_block{bottom:0;position:absolute;width:100%}.mc_vtvc_meta_row{line-height:16px;font-size:11px;height:17px;overflow:hidden;text-overflow:ellipsis;white-space:nowrap}.mc_vtvc_meta_row a{display:inline-block}.mc_vtvc_meta_row a:hover{text-decoration:underline}.mc_vtvc_meta_block_area{position:relative}.mc_vtvc_meta_block .b_dark a{color:#444}.b_dark
.mc_vtvc_meta_block{color:#edebe9}.mc_vtvc_meta_row>:nth-of-type(n+2)::before{content:">"}.mc_vtvc_meta_row .mc_vtvc_meta_row_channel::before{content:">"}.mc_vtvc_kmt_title{line-height:18px;padding-bottom:4px;font-weight:bold;color:#00809d;text-transform:uppercase;font-size:11px}.mc_vtvc_kmt,.mc_vtvc_con_rc.onhov .wkmt
.mc_vtvc_meta_row,.mc_vtvc_con_rc.onhov .wkmt .tbc_tt{display:none}.mc_vtvc_con_rc.onhov .wkmt
.mc_vtvc_title{max-height:18px;margin-bottom:18px;overflow:hidden}.mc_vtvc_con_rc.onhov.mmsts
.mc_vtvc_title{visibility:hidden}.mc_vtvc_con_rc.onhov
.mc_vtvc_kmt{display:block}.mc_vtvc_kmt_content
.b_factrow{line-height:17px;font-size:11px;max-height:34px;overflow:hidden;text-overflow:ellipsis;padding:0 16px 0 0;color:#444}.mc_vtvc_meta
.mc_vtvc_kmt_title{line-height:18px}.mc_vtvc_title:hover{text-decoration:none}.mc_vtvc_meta_pubdate{color:#444;padding-bottom:3px}.mc_vtvc_meta_channel{color:#444}.mc_vtvc_meta_w,.mc_vplvc_meta_w{position:relative}.mc_vtvc_meta_bg_w,.mc_vplvc_meta_bg_w{height:100%;width:100%;overflow:hidden;position:absolute;top:0}.mc_vtvc_meta_bg_w .cico,.mc_vplvc_meta_bg_w
.cico{border-radius:0;overflow:visible}.dg_u .mm_vidch_th_c{overflow:visible}.dg_u .mm_vidch_th_bg_img{margin-top:-20px}.emptyStyleForDebuggingPurpose{top:0}.mc_vtvc_meta_w
.mc_vtvc_meta{background:rgba(255,255,255,.75)}.mc_vtvc_meta_bg_w img,.mc_vtvc_meta_bg_w
.mc_vtvc_cb_w{filter:blur(25px);transform:scale(1.2)}body{--video-metadata-channel-color:#3c3c3c}body.b_dark{--video-metadata-channel-color:unset}.vsarf .mc_vtvc_meta_pubdate{color:unset}.vsarf
.mc_vtvc_meta_channel{color:var(--video-metadata-channel-color)}.vsarf .mc_vtvc .mc_vtvc_meta_w
```

.mc\_vtvc\_title,.vsarf .mc\_vtvc .mc\_vtvc\_meta\_w .mc\_vtvc\_title strong{font-weight:bold}.vsarf  
.mc\_vtvc\_meta\_w .mc\_vtvc\_meta\_row{font-size:13px}.emptyStyleForDebuggingPurpose{top:0}.vsarf  
.mc\_vtvc\_th  
.cico{height:132px}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.empt  
yStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurp  
ose{top:0}.emptyStyleForDebuggingPurpose{top:0}.emptyStyleForDebuggingPurpose{top:0}.mmsi{height:1  
6px;width:16px;position:relative;top:5px;padding-right:var(--smtc-gap-between-content-xx-small)}.mmsi-mic  
rosoftnews,.mmsi-msn{top:3px}.vrhdata{display:none}.mmgrid>div{width:197px;display:inline-block;margi  
n-right:8px;margin-bottom:8px;box-shadow:0 0 0 1px  
rgba(0,0,0,.05);position:relative;vertical-align:top;overflow:hidden;white-space:normal;border-radius:6px}.vs  
arr .mmgrid>div,.vsarr1stbig .mmgrid>div{margin-right:8px;margin-bottom:8px}#serpvidansrr .mc\_vtvc  
.mc\_vtvc\_meta{height:auto}#serpvidansrr .mc\_vtvc  
.mc\_vtvc\_title{display:-webkit-box;-webkit-line-clamp:2;-webkit-box-orient:vertical}.mmgrid  
.mc\_tc{border:0}.vsa .mmgrid>div:nth-child(3n){margin-right:0}.vsa  
.b\_moreLink{padding-top:4px}#serpvidansrr  
.mc\_vtvc\_meta\_row{line-height:18px;font-size:100%;height:17px}.vsarr  
.mmgrid>div:nth-child(2n){margin-right:0}#serpvidansrr .mc\_vtvc .vtmu,#serpvidansrr .mc\_vtvc  
.vtpl{bottom:128px}.vsarr1stbig .mmgrid>div:nth-child(2){margin-right:0}#serpvidansrr.uipolish  
.mc\_vtvc\_meta\_pubdate,#serpvidansrr.uipolish .mc\_vtvc\_meta\_channel,#serpvidansrr.uipolish #vidans2  
.b\_videocard .video\_metadata .video\_source{color:#767676}#serpvidansrr #vidans2 .b\_videocard  
.video\_metadata\_container,#serpvidansrr #vidans2 .b\_videocard .video\_metadata\_container  
.video\_metadata>h3{width:100%}@media(max-width:1362.9px){#serpvidansrr  
.mmgrid>div{width:168px;height:206px}#serpvidansrr .mmgrid>div .cico,#serpvidansrr .mmgrid>div .cico  
.rms\_img{width:168px;height:100px}#serpvidansrr .mc\_vtvc .mc\_vtvc\_meta{padding:12px}#serpvidansrr  
.mc\_vtvc .mc\_vtvc\_title{height:32px;line-height:16px;margin-bottom:16px}#serpvidansrr .mc\_vtvc  
.mc\_vtvc\_meta\_block\_area{height:34px}#serpvidansrr  
.mc\_vtvc\_meta\_row{line-height:15px;font-size:13px;height:15px}#serpvidansrr  
.mc\_vtvc\_meta\_pubdate{padding-bottom:4px}#serpvidansrr .mc\_vtvc .vtmu,#serpvidansrr .mc\_vtvc  
.vtpl{bottom:114px}#serpvidansrr #vidans2 .b\_videocard .videoPlayer,#serpvidansrr #vidans2 .b\_videocard  
.videoPlayer .cico,#serpvidansrr #vidans2 .b\_videocard .videoPlayer .cico  
.rms\_img{width:343px!important;height:194px!important;margin-right:0}@media(max-width:1274.9px){#s  
erpvidansrr .mmgrid>div{width:124px;height:164px}#serpvidansrr .mmgrid>div .cico,#serpvidansrr  
.mmgrid>div .cico .rms\_img{width:124px;height:76px}#serpvidansrr .mc\_vtvc  
.mc\_vtvc\_meta{padding:8px}#serpvidansrr .mc\_vtvc  
.mc\_vtvc\_title{height:32px;line-height:16px;margin-bottom:12px}#serpvidansrr .mc\_vtvc  
.mc\_vtvc\_meta\_block\_area{height:28px}#serpvidansrr  
.mc\_vtvc\_meta\_row{line-height:13px;font-size:11px;height:13px}#serpvidansrr  
.mc\_vtvc\_meta\_pubdate{padding-bottom:2px}#serpvidansrr .mc\_vtvc .vtmu,#serpvidansrr .mc\_vtvc  
.vtpl{bottom:96px}#serpvidansrr #vidans2 .b\_videocard .videoPlayer,#serpvidansrr #vidans2 .b\_videocard  
.videoPlayer .cico,#serpvidansrr #vidans2 .b\_videocard .videoPlayer .cico  
.rms\_img{width:256px!important;height:144px!important;margin-right:0}#serpvidansrr .maskthumb

```
.mc_bc_w{padding:8px 4px 4px 8px}#serpviansrr.withsplitline
.mmgrid>div:nth-last-child(1),#serpviansrr.withsplitline
.mmgrid>div:nth-last-child(2){margin-bottom:24px}#serpviansrr.withsplitline .mmgrid{border-bottom:1px
solid #ecec; margin-bottom:16px}#serpviansrr #vidans2 .b_videocard
.video_metadata{max-width:auto;padding:12px 16px}#serpviansrr #vidans2
.b_videocard{margin-bottom:12px;box-shadow:0 0 1px rgba(0,0,0,.05),0 2px 3px
rgba(0,0,0,.1);border-radius:6px}#serpviansrr .b_rich{padding-top:0}#serpviansrr #vidans2
.videoPlayer{border-radius:6px 6px 0 0;overflow:hidden}#serpviansrr #vidans2 .b_videocard
.video_metadata>h3{white-space:nowrap;overflow:hidden;text-overflow:ellipsis;-webkit-line-clamp:1;line-he
ight:15px;height:15px;font-size:13px;color:#000;margin-bottom:20px;font-family:Arial,Helvetica,Sans-Serif;f
ont-style:normal;display:block}#serpviansrr.varr1stbig #vidans2 .b_videocard .video_metadata
.actionmenu{display:none}#serpviansrr #vidans2 .b_videocard .video_summary,#serpviansrr #vidans2
.b_videocard .video_source{line-height:15px}#serpviansrr #vidans2 .b_videocard .videoPlayer
.vtbc{right:0}.vrhc line.nhvpv .pffvi,.vrhc line.nhvpv[data-tps="S"] .pffvt,.vrhc line.nhvpv[data-tps="M"]
.pffvt,.vrhc line.nhvpv[data-tps="L"] .pffvt{display:inline-flex}.vrhc line.nhvpv .vrhct.pffv
.vrhc{display:none}.vrhc line.nhvpv .vrhct.pffv
.player_ol{background:var(--mai-smtc-background-ctrl-on-image-hover);transition:background-color
.5s;display:flex;align-items:center;justify-content:center;padding:var(--smtc-gap-between-content-x-small);ga
p:var(--smtc-gap-between-content-x-small);box-sizing:border-box}.mc_vtvc_th img{transition:all .3s
ease-out}.nhvpv+.mc_vtvc_th
img{transform:scale(1.1)}.smtplayerhtml5{height:100%;width:100%;overflow:hidden}.smtplayerhtml5
video{min-height:100%;min-width:100%}.smtplayerhtml5
.videoplaying{background-color:#000}.smtplayerhtml5.hide{display:none}.pffvt{display:none;color:var(--ma
i-smtc-foreground-ctrl-on-image-rest);font:var(--bing-smtc-text-global-subtitle2-strong)}.pffvi{mask:url(/rp/ui
07wU6K7FR_inzG7DRbP1i8fGo.svg) center
no-repeat;mask-size:12px;background:var(--bing-smtc-background-card-on-image-default);width:20px;height
:20px;flex-shrink:0;align-self:flex-start}[data-tps="L"]
.pffvt{font:var(--bing-smtc-text-global-subtitle2-strong)}[data-tps="L"]
.pffvi{width:22px;height:22px;mask-size:16px}[data-tps="S"] .pffvt{font-size:0}[data-tps="S"]
.pffvi{width:24px;height:24px;mask-size:24px;align-self:center}.hvpv.h5s
.pffvt{display:inline-flex}.hvpv.h5s .vrhct.pffv .vrhc{display:none}.hvpv.h5s .vrhct.pffv
.player_ol{background:var(--mai-smtc-background-ctrl-on-image-hover);transition:background-color
.5s;display:flex;align-items:center;justify-content:center;padding:var(--smtc-gap-between-content-x-small);ga
p:var(--smtc-gap-between-content-x-small);box-sizing:border-box}.pffvt{text-decoration:underline}.vrhc
.vrhc{position:absolute;width:100%;height:35px;max-height:35px;bottom:0;left:0;padding:0;background:non
e;display:block;z-index:9}.vrhc .vrhc.hide,.vrhc .vrhc
.hide{display:none}.vrhc{white-space:nowrap;text-overflow:ellipsis;overflow:hidden;display:inline-block;po
sition:absolute;max-width:240px;height:18px;line-height:14px;margin-left:8px;top:10px;left:0;right:0;border-
radius:2px;padding-right:8px}.vrhc div{display:inline-block}.vrhc
nt{color:#fff;font-size:11px;font-weight:bold;background-color:rgba(0,0,0,.75);padding:2px
8px;margin-left:0;top:0;box-sizing:border-box;position:relative}.vrhc
```

```
.ricons{position:absolute;right:8px;top:10px;left:auto;bottom:auto;height:18px;display:inline-block;cursor:poi
nter}.vrhol.icons_1 .vrhot{margin-right:27px}.vrhol.icons_2 .vrhot{margin-right:49px}.vrhol.icons_3
.vrhot{margin-right:79px}.vrhol .vrhot nt,.vsb_tr_chd .vrhol.icons_1
.vrhot{margin-right:0}.vpb{position:absolute;display:block;bottom:0;left:0;height:4px}.vpb
div{position:absolute}.vpb nt{width:0;background:#fff}.vpb
nt.test{display:none}.vpb.back{background-color:#999}.vrhcp
.vrhol.npb{height:36px;max-height:36px}.vrhol
.vadda{width:22px;height:18px;padding:0;margin-right:0;margin-left:2px;bottom:0;position:relative;display:i
nline-block;z-index:1;background:rgba(0,0,0,.75);border-radius:2px;overflow:hidden}.vrhol
.vadda.hide{display:none}.vrhol .vadda .mc_vfaa{margin:3px 5px}.ricons .vol{float:left}.ricons
.adultFlag{float:right}.vol{width:22px;height:18px;bottom:0;margin-left:1px;margin-right:1px;position:relati
ve;display:inline-block}.vol.hide,.vol .hide{display:none}.vol
.bg{background:rgba(0,0,0,.75);border-radius:2px}.vol.bg,.vol nt{position:absolute;bottom:0}.vol
.vol.bg.volnb{border-radius:0 0 2px 2px}.vol .volsliderHandle.bg{border-radius:2px 2px 0 0}.vol nt
.volsliderHandle{height:70px;display:none;width:22px;float:left;bottom:18px;position:absolute;display:block
}.vol nt .volsliderHandle.hide{display:none}.volsliderHandle
.vsb{height:54px;width:4px;background-color:#999;margin:9px auto
8px;position:relative;display:block;border-radius:2px}.volsliderHandle
.vsh{height:6px;width:14px;padding:9px 7px 9px 7px;margin:0
-12px;display:block;position:absolute;top:30px}.volsliderHandle .vsh.hide{display:none}.volsliderHandle
.vshi{height:4px;width:14px;background-color:#fff;border-radius:2px}.volMuteIcon{width:16px;height:14px;
margin:2px
4px;float:left}.volMuteHandle{width:22px;height:18px}.vo{background:url(/rp/ffZxBXEIP9WYOO0jhTaEl
yLhEVU.svg) no-repeat}.vm{background:url(/rp/fsX-ZVd03wB2TL0vmQJxSp4U9vs.svg)
no-repeat}.vl{background:url(/rp/YXYMPC1Rry_XJGc7Yg8lR4B2eEs.svg)
no-repeat}.vf{background:url(/rp/NosrIR4amKTs1zYxWy3laZN3HRk.svg)
no-repeat}@media(forced-colors:active){.vol{forced-color-adjust:none}.vrhc line .vt_vp,.vrhc.popout
.vt_vp,.vrhc.mousefollow
.vt_vp{position:absolute;bottom:0;border:hidden;padding:0;top:0;left:0;z-index:3}.vrhc
.hide{display:none}.vrh_clc .vt_vp,.vrh_clc .vrhc .vrhi,.vrh_clc .player_ol{cursor:pointer}.vrh_clc
.cico{border-radius:0}.vrhc{border:hidden;top:0;left:0;padding:0}.vrhc.mousefollow .vrhc,.vrhc.popout
.vrhc{background-color:#999}.vrhpc.load
.player_ol{background:url(/rp/J_o2maogFDeUOsovPJL-ofEuxJ4.gif) center center no-repeat}.vrhc line .vrhc
.vrhi,.vrhc.popout .vrhc .vrhi,.vrhc.mousefollow .vrhc
.vrhi{position:absolute!important;border:hidden;z-index:2;padding:0;left:0;top:0}.player_ol{position:absolute
;width:100%;height:100%;bottom:0;border:hidden;z-index:7}.vrhc.popout,.vrhc
line,.vrhc.mousefollow{border-radius:6px;overflow:hidden;display:table-row-group;background:none}.vrhc.p
opout,.vrhc.mousefollow{z-index:4;box-shadow:0 4px 4px rgba(0,0,0,.1),0 2px 80px rgba(0,0,0,.2)}.vrhc
line{z-index:1;margin:0}.vrhc.popout,.vrhc line{position:absolute;top:0}.vrhc.popout{border:1px solid
#fff}.vrhc.mousefollow{position:fixed}.vrhcp{position:relative;top:0;left:0;display:table-row}.vrhcp
.vrhc{position:relative;overflow:hidden}.vrhc.hide{display:none}@keyframes
```

vh\_fadein{from{opacity:0}to{opacity:1}}.vrhc:not(.hide){animation:vh\_fadein 250ms}.vrhc line  
img{color:transparent}.vrhc  
line.fullsize{height:100%}.vrhc,.vrhc: hover,.vrhc: link,.vrhc: active,.vrhc: visited{color:#000;text-decoration:none}.vrhc.vrh\_clc{cursor:pointer}a.hover-anchor{display:block;height:100%;width:100%;text-decoration:none}.vrhstat{height:0;overflow:hidden}Videos of Solar Container Lithium Battery BMS Operating LicenseWatch video on made-in-china [Hot Item] 230 Kwh BMS Solar Energy Storage Container with Lithium Battery made-in-china 4 weeks agoWatch video on made-in-china [Hot Item] 1000ah 48V Li-ion LiFePO4 Battery Cabinet System for Solar Energy System with BMS made-in-china 3 weeks agoWatch video on alibaba 120S 384V Lithium Battery for BMS Commercial Container Solar Storage System with Master for BMS and Slaves Ma...alibaba 64 views4 months agoWatch full videobladesport BATTERY MANAGEMENT SYSTEMS BMS IN LITHIUM BATTERIES - BLADE SOLAR CONTAINERThis standard outlines comprehensive technical and performance requirements for lithium-ion battery production equipment, including terminology and definitions, operating conditions, safety ...

This standard outlines comprehensive technical and performance requirements for lithium-ion battery production equipment, including terminology and definitions, operating conditions, safety specifications, equipment ...

Discover the ultimate guide to Battery Management Systems (BMS) in lithium batteries--covering functions, components, architecture, compliance, protocols, and best practices.

Designing a custom BMS for Li-ion batteries requires careful consideration of safety, performance, cost, and regulatory requirements. Success depends on thorough understanding of battery chemistry, robust circuit ...

Fig4. Outside View of 5MWh Battery Container Standard 20 -foot battery container has two stacks,one side O& M, every container has two out for one PCS. Fig5. Comprehensive guide to Battery Management Systems ...

The BMS protects the battery from harmful operation and maximises its lifespan by constantly monitoring the battery"s parameters such as voltage, current, temperature, State-of-Charge 3 ("SOC") and ...

Web: <https://swbsports.co.za>

