



日揚科技有限公司
JD Auspice Co., Ltd

Application Brochure



Your Complete Solar Solution
誠 信 品 質



VIM M master unit
RS 485資料傳輸單元

RS485資料傳輸單元: 可接15個介面，二個數位輸入，二個溫測輸入Pt 100 or 1000, -50~+200°C, 3wire, 01°C/0.1°F, ±0.5%RDG, 6位數顯示個別單串之電流、電壓、功率，加總由RS485輸出，Rs485 multi-drop 雙向，2 wire 1000M, 247位址選擇，自動位址、截取 VIM-S, VIM-P, VIM-O 訊息如: 防盜、保險絲熔斷、PV接線問題，PV逆向電壓暨極性、電流、電壓、功率、日照、風速、開關或避雷狀態、自動清洗或遙控。

IP40 DIN rail mount.



VIM S string unit 1000Vdc
串列量測單元

串列即時量測單元: KWH, V, A, W保險絲熔斷、PV接線問題，PV逆向電壓暨極性，電壓等級DC1000V、直測DC直流16A或30A，Continuous overload 1100 Vdc, for 500ms 1600Vdc, to earth 800Vdc, 內置10.3*38mm fuse座，IEC269-2-1，不含fuse。IP40 DIN rail mount.



VIM P measuring unit
溫度、日照、風速量測單元

溫度、日照、風速量測單元: 溫度one module Temp. input, one air Temp. input, Pt 100 or 1000, -50~+200°C, 3wire, 01°C/0.1°F, ±0.5%RDG, 日照一個輸入，解析1W/M², 0-120mvVDC ±0.2%, 風速一個輸入，誤差±0.02%，0-1000HZ.

IP40 DIN rail mount.



VIM O input / output unit
輸出入單元

輸出入單元: 由VIM-M主控二個relay輸出警報，光伏模板效率改變時內建時鐘定時或遙控驅動清洗模板，二個數位輸入，偵測開關開路、閉路、避雷保護狀態經RS485傳送



stringMoni® sever
stringMoni® 網路伺服器

四個RS485資料傳輸埠，三個 USB2.0埠，一個乙太網路埠，電源100~240VAC，壁掛式、DIN導軌安裝，電廠信息，電廠圖示故障位址，網路攝影管理，即時顯示警告指示，圖形分析收益趨勢圖、警報和事件記錄。



PSU18W
電源供應卡

PSU24181, input AC 90~265Vac DC 120~370Vdc, output 24VDC 18W Din-rail power supply.



Pyranometer 日照計

全天空輻射計：ISO 9060 等級II，量測範圍0-2000W/M²，輸出4-20mA，
操作溫度-40~+60°C，反應<30秒。



solmoTemp Solar module surface temperature sensor 薄片型溫度感測器

厚度3mm*長50mm*寬50mm，線長1.5~3米(長度另可客製)，
量測範圍-20~+150°C，輸入型式3 wre Pt100。



Fuse holder 1000VDC / 600VDC 直流熔絲座

直流熔絲座：1000Vdc 32A，操作溫度-20~+70°C

適用直流保險絲：900Vdc: 4, 6, 8, 10, 12, 16, 20A, 10*38 ϕ mm.

1000Vdc: 4, 6, 8, 10, 12, 16, 20, 25A, 10*38 ϕ mm.

EN 60715(EN50022), 2002/95/EC RoHS, IEC60947-1,

IEC60947-3 UL94 V0, IEC60695 960°C



PV fuse link 直流保險絲

直流保險絲：900Vdc: 4, 6, 8, 10, 12, 16, 20A, 10*38 ϕ mm.

1000Vdc: 1, 2, 4, 6, 8, 10, 12, 16, 20, 25A, 10*38 ϕ mm.

1000Vdc: 1, 2, 4, 6, 10, 16, 20, 25, 32, 40, 50,

22*127 ϕ mm, 50KA

IEC60269-6



DC HRC fuse link with base 直流保險絲(NH) 1100VDC

直流保險絲(NH): 700 Vdc: 32, 40, 50, 63, 80, 100, 125A

1000Vdc: 32, 40, 50, 63, 80, 100, 125, 160A*

1100Vdc: 63, 80, 100, 125, 160, 200, 250, 315A.

*900Vdc

STD. IEC/EN 60269-2, IEC/EN 60269-4, VDE0636, DIN43620,

DIN43623

Insulation C-VDE0110



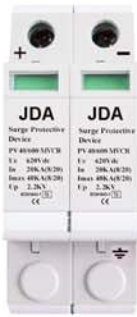
DC Switch disconnect 直流開關

直流開關：600, 750, 850, 1000 Vdc

16, 25, 40, 63, 100, 200, 300, 500, 800, 1000A

極數：2, 4, 6, 8, 12 poles

IEC60974-1/3, DC21, UL508, IEC60364-7-712



DC Surge protection device
直流突波吸收器 600VDC

PV 40/600 直流突波吸收器：600Vdc, In 10-70KA, I_{max} 25-150KA
IEC61643-1:2005, UL1449 ed.3



DC Surge protection device
直流突波吸收器 1000VDC

PV 40/1000 直流突波吸收器：1000Vdc, In 20-40KA, I_{max} 40-80KA
IEC61643-1:2005, UL1449 ed.3



DC Surge protective devices
直流突波吸收器 1000VDC

PV 100/1000 直流突波吸收器：1000Vdc, In 50KA, I_{max} 100KA
IEC61643-1:2005, UL1449 ed.3, 10/350µs 12.5KA, 8/20µs 100KA,
Class I+II/B+C, VPR<3.2KV



DC/AC Surge protective devices
直流交流突波吸收器 D1-100/***-2MVGT-R

直流交流雙相突波保護器：最大連續使用電壓420~560Vdc，最大放電電流
100KA，突波保護等級1.6KV，無洩漏及無續流電流，DIN導軌安裝模組化
設計，模塊插拔更換，熱保護脫扣設計，內建滅弧裝置，紅色落牌故障警
示，常開長閉故障信控輔助接點。



DC/AC Surge protective devices
直流交流突波吸收器 D1-40/***-2MV-R

直流交流單相突波保護器：最大連續使用電壓75~800Vdc，最大放電電流
40KA，突波保護等級0.3~2.0KV，無洩漏電流，DIN導軌安裝模組化設計，
模塊插拔更換，熱保護脫扣設計，內建滅弧裝置，紅色落牌故障警示，常
開長閉故障信控輔助接點。



DC/AC Surge protective devices

直流交流突波吸收器 D1-100/***-2VG-R

直流交流單相突波保護器：複合型變阻與氣體放電管技術，最大連續使用電壓MCOV150~800Vac/dc，高放電能量class I /12.5KA class II /50KA，適合戶外一級雷及戶內二級雷應用，突波保護等級0.5~1.6KV/3KA，無洩漏電流，DIN導軌安裝模組化設計，模塊插拔更換，熱保護脫扣設計，內建滅弧裝置，紅色落牌故障警示，常開長閉故障信控輔助接點。

DC/AC Surge protective devices

直流交流突波吸收器 D3-40/***-4MV-R



直流交流三相突波保護器：最大連續使用電壓75~800Vdc，最大放電電流40KA，突波保護等級0.3~2.0KV，無洩漏電流，DIN導軌安裝模組化設計，模塊插拔更換，熱保護脫扣設計，內建滅弧裝置，紅色落牌故障警示，常開長閉故障信控輔助接點。

DC/AC Surge protective devices

直流交流突波吸收器 D3-100/***-4MVG-T-R



直流交流三相突波保護器，最大連續使用電壓150~800Vdc，最大放電電流100KA，突波保護等級0.6~1.6KV，高放電能量Class I+II/B+C，無洩漏電流，DIN導軌安裝模組化設計，三模塊插洞設計，熱保護脫扣設計，內建滅弧裝置，紅色落牌故障警示，常開長閉故障信控輔助接點。10/350 limp 12.5KA, 8/20 μ s I_{max} 100KA, Class I+II/B+C

TVSS

突波保護器箱型



突波保護器箱型：低壓供電系統突波保護器，適用I級&II級保護，符合IEC61643-1:2005，MOV與GDT高釋放能量，低電壓保護水平，內建過電流斷路器，老化故障指示及電擊計數器。

I_{max} 60~480KA，金屬外殼、非金屬外殼可客製，溫域-40°C~+70°C。

surgeCon SEC

雷擊計數器



SurgeCon SEC主動式雷擊計數，計數電流>0.5KA，爬升時間 \geq 8 μ s，無需外加電源，脈衝感應，6位數機械計數顯示，操作溫域-20~+60°C，保護等級IP67，接地線貫穿本體免接線介面，適用任何雷擊保護設備。



PV array combiner box pvBos®
直流開關箱

直流開關箱：IP65/67, 500, 800, 1000Vdc, 1, 2, 3, 4, 6, 8, 12, 16, 24串列組合。選配：直流熔絲座、直流開關、阻絕二極體、直流突波吸收器 VDE 0100 and IEC 60364-7-712, EN60529, DIN VDE 0470-1, IK08, UL1747, IEC62109-4



AC Box
AC交流開關箱

交流開關箱：多數歐盟國家規定必須裝置交流斷路器、漏電斷路器、突波(過壓)保護器，箱體配置歐式端子並予結線，現場安裝節省成本與時間，除了歐規還有美規以及接受客製。



PV array combiner box stringMoni®
直流匯流箱

直流匯流箱：IP65/67, 500, 800, 1000Vdc, 1, 2, 3, 4, 6, 8, 12, 16, 24串列組合。VDE 0100 and IEC 60364-7-712



anti-island meter
孤島電驛 多功能電錶 MPC72

孤島保護電驛，三相，符合VDE 0126-1-1，多功能電表，另應用於分散式可再生能源發電，當負載需求降低，而這些分散式發電裝置又持續的發電、供電時，電網的電壓與頻率就會持續上升之保護電驛。



energy meter
單相互時表

單相互時表，DIN導軌安裝，IP40保護，免電源，32A，5位數LCD，一個脈衝輸出。

太陽能直流組件系列



直 流 開 關

- 直 流 900/1000Vdc, 16~2000V
- 通 過 UL, IEC, KEMA, CE, BC, CSA, CCC 認證
- 雙軸非同步儲能驅動·雙刀圓盤接點橋·無伸張電弧·可安全的直接電壓下使用
- 自我清潔接點·高速氣流冷卻技術
- 符合國際環保規定·不含鉛鎘
- 體積小·多種安裝選擇



直流保險絲 / 保險絲座

- 軌道式安裝·體積小
- 通過 CE 認證·IEC 60947-1,3 ; EN 60947-1,3 標準
- 熔 絲 : 1 ~ 50A, 900/1000V



突 波 保 護 吸 收 器

- 具備指示·接地視窗
- 符合國際 IEC 規範及 CE 宣告
- 滑軌式安裝·抽出式設計突波保護單元。
- 直 流 600/1000V · 40~100KA ; 交 流 120/240/385/440Vdc · 20~600KA
- CE/UL/CSA



直流匯流箱 pVBoS®

- 可客製化設計製作。
- 符合太陽能發電系統設備需求。
- 1 ~ 15 strings 1~3MPPT plus

環境監測系列



日 照 計



溫 度 貼 片



風 速 計



戶 外 型 溫 溼 度 信 號 傳 送 器

直流斷路器 / 開關



DC MCCB, 500~1000Vdc 16~2000A, TUV.
DC Switch, 500~1000Vdc 16~2000A, TUV.

IP67/ IK08 防水箱系列

材質：ABS, PC 抗 UV



雙 門 型
All-in-one Dual door



戶 外 型 抗 紫 外 線
H Series

(* 更多相關產品及規格請來電洽詢)

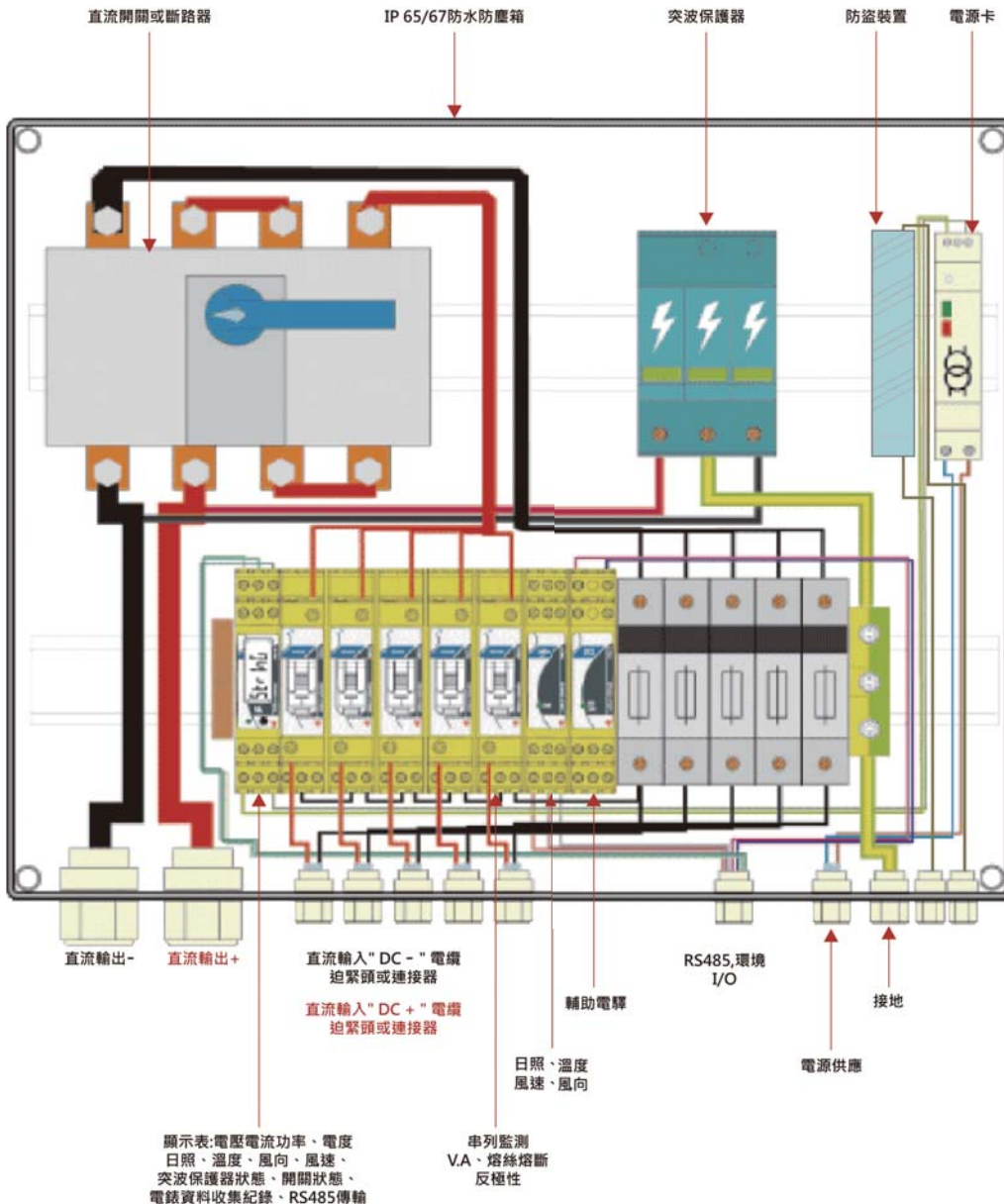
您還在量測 Inverter 的發電量而已?!

徹底解決 **糞怒鳥** 的困擾!



串列監測匯流箱配置

節省成本
提高投資報酬
太陽能發電系統
業者的最佳選擇



TCP / IP



產品優勢

- 易安裝：VIM-S 直接取代直流匯流箱正極保險絲，兼具保護及監測功能，不需更改原有箱體。
- 模組化：透過連接埠擴充模組，不需增加配線。
- 萬筆記錄：可透過 RS485 資料收集，及位址化。
- 量測每一串太陽能發電量，即時發現問題。
- 長期可節省成本、提早回收投資報酬率。



※ 電腦監控畫面，即時掌握發電狀況 ※



(* 更多相關產品及規格請來電洽詢)

串列監測模組功能及特色

| No. | Function and Features | 功能及特色 | stringMoni® |
|------|-----------------------------------------------------------------------------|-----------------------------------|-------------|
| 1 | Modular concept | 模組化概念 | v |
| 2 | VIM-M Units Manager | VIM-M資料收集管理單元 | |
| 2-1 | 12 to 28VDC power supply | 電源12至28VDC | v |
| 2-2 | RS485 communication port (max. 115.2 kbit/s) | RS485通訊端(最大值 115.2 kbit/s) | v |
| 2-3 | Programming of communication speed and address | 編製程序的通信速度和地址 | v |
| 2-4 | Local display with programming pushbutton | 現場顯示編製程序按鈕 | v |
| 2-5 | Measurement of single current from VIM-S only | 僅測量VIM-S的單向電流 | v |
| 2-6 | Alarm management on measured variables | 測量變量的報警管理 | v |
| 2-7 | Local bus-configuration errors control | 本地總線配置控制機制 | v |
| 2-8 | Current string monitoring | 電流串列監測 | v |
| 2-9 | Power string monitoring | 功率串列監測 | v |
| 2-10 | string efficiency | 串列效能 | v |
| 2-11 | Event-logger: variables, functions and system alarms | 事件記錄：變量，函數和系統報警 | v |
| 2-12 | Data-logger: V, A, W, Wh, PV cell temperature, air temperature, irradiation | 資料記錄器：V, A, W, Wh, 光伏電池溫度，大氣溫度，日照 | |
| | 2-12-1 string level | 2-12-1 串列電壓 | v |
| | 2-12-2 DC combiner level | 2-12-2 串列電壓 | v |
| 2-13 | First digital input (energy counting) | 第一個數位輸入（能量計算） | v |
| 2-14 | First temperature input or temperature input: Pt100/Pt1000 (2 or 3 wire) | 第一個溫度輸入：Pt100/Pt1000（2或3線） | v |
| 2-15 | Second digital input or temperature input: Pt100/Pt1000 (2 or 3 wire) | 第二個數位輸入或溫度輸入：Pt100/Pt1000（2或3線） | v |
| 2-16 | Clock | 時鐘 | v |
| 3 | VIM-S String Control Unit | VIM-S串列控制單元 | |
| 3-1 | Local status monitoring by means of LED | 現場LED狀態監測 | v |
| 3-2 | 6-DGT data format for energy | 能源數據格式6位數 | v |
| 3-3 | 4-DGT data format for instantaneous variables | 瞬時變能數據格式4位數 | v |
| 3-4 | Integrated fuse holder (not available for 30A string input) | 整合保險絲座（30A外接式） | v |
| 3-5 | String voltage measurement up to 1000VDC (+/-) (0.5%RDG) | 串列電壓測量達1000VDC (+/-) (0.5%讀取值) | v |

串列監測模組功能及特色

| No. | Function and Features | 功能及特色 | stringMoni [®] |
|------|------------------------------------------------------------------------------|-------------------------------|-------------------------|
| | VIM-S String Control Unit | VIM-S串列控制單元 | |
| 3-6 | String current measurement up to 16ADC(0.5%RDG) | 串列電流測量達16ADC (0.5%讀取值) | v |
| 3-7 | String power measurement (1.0%RDG) | 串列功率測量 (1.0%讀取值) | v |
| 3-8 | String energy measurement (class1) | 串列能量測量 (精確等級class1) | v |
| 3-9 | Fuse blow alarm | 保險絲熔斷警報 | v |
| 3-10 | Fuse temperature alarm | 保險絲溫度警報 | v |
| 3-11 | Wrong connection (reverse current or Voltage) | 錯誤連接 (反向電流或電壓) | v |
| 4 | VIM-1 | VIM-1隔離-增強單元 | |
| 4-1 | Isolation-enhancement unit which increases the string input to earth voltage | 隔離-增強單元/增加串列輸入接地電壓 | v |
| 5 | VIM-P Environment Measuring unit | | |
| 5-1 | from 800VDC to 1000VDC | 達800VDC~1000VDC | v |
| 5-2 | Irradiation sensor input: 120mV or max. 20mA DC | 日射輸入：120mV或最大 20mA DC | v |
| 5-3 | First temperature probe input: Pt100/Pt1000(2 or 3-Wire) | 溫度探測輸入：Pt100/Pt1000 (2或3線) | v |
| 5-4 | Short/open circuit on probe inputs | 短路/開路探測輸入 | v |
| 5-5 | Second temperature probe input: Pt100/Pt1000(2 or 3-wire) | 第二個溫度探測輸入：Pt100/Pt1000 (2或3線) | v |
| 5-6 | Wind Speed sensor measuring input | 風速測量輸入 | v |
| 6 | VIM-O Input / Output unit | VIM-O數位輸出入單元 | |
| 6-1 | First relay output activated by local alarm | 第一個現場警告輸出接點 | v |
| 6-2 | First relay output managed as remote command | 第一個現場警告輸出遙控命令 | v |
| 6-3 | Second relay output activated by local alarm | 第二個現場警告輸出接點 | v |
| 6-4 | Second relay output managed as remote command | 第二個現場警告輸出遙控命令 | v |
| 6-5 | First digital input | 第一個數位輸入 | v |
| 6-6 | Second digital input | 第二個數位輸入 | v |
| 7 | VIM-ANTI Antitheft control | VIM-ANTI 光纖防盜控制單元 | |
| 7-1 | Antitheft control based on fibre optic | 光纖防盜 | v |
| 7-2 | Up to 3 fibre optic sensors (200m each loop) | 可擴充3個光纖感應模組(每個可拉200米) | v |
| 7-3 | VIM-O-ANTI I/O unit (3 digital inputs/one relay output) for VIM-ANTI sensor | 光纖模塊接點3組輸入、輸出 | v |

我們的生命財產安全，不容許任何一次的意外發生
您需要**更安全**的太陽能發電系統

✓ 消防安全開關內置電弧偵測，即早預防火災發生。 ✓ 符合 NEC 690.11, 690.5

直流消防安全開關
The Emergency Switch
Motor driven / DC disconnect switch



FFS Safety Switch
屋頂型應用示意圖

原設置之直流開關箱加配電動驅動、電弧偵測及緊急按鈕。

火災緊急按鈕
Fire alarm button



手機連線
Mobile Phone



直流絕緣接地故障監測
Earth Fault



NEW

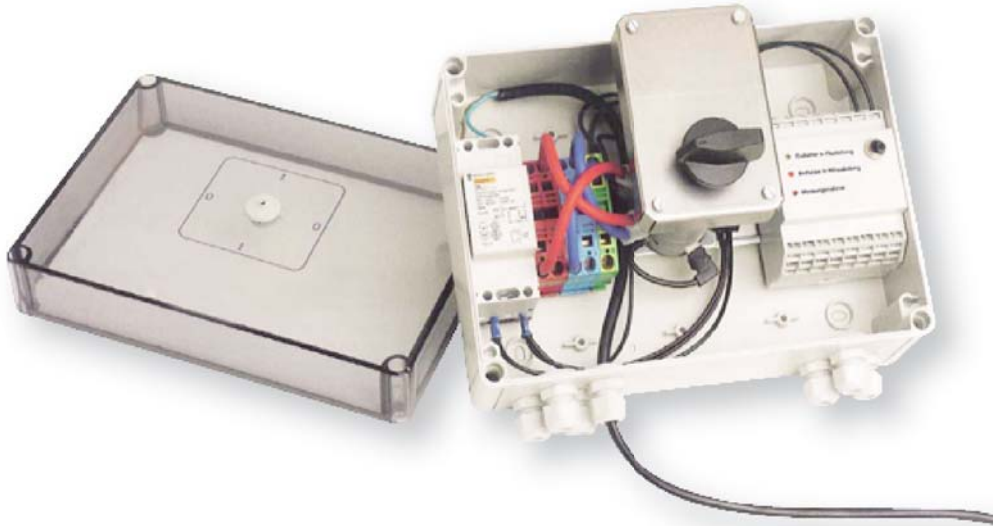
直流電弧偵測
Arc fault detection

緊急按鈕
Emergency stop push-button
Operation panel with switch position indication



(* 更多相關產品及規格請來電洽詢)

DC isolation box with electronic earth fault measurement and motor drive



- Separate earth fault measurement in positive and negative wires with LED display Measurement-taking with LED display
- Motor drive with possible activation from a distance
- Manually operated



Motor drive 24V



Electronic earth fault measurement

直流絕緣監測器



Current Leakage Detection unit for DC power systems - type: PDU4865

General description:

The CL Detection unit is a completely isolated current measuring system using a flux-gate principle. By measuring the difference between the in- and out-going current of a power supply, a leakage current can be detected. Therefore the power cords must be lead through the input gate of the unit. A leakage current is guarded by an amplifier/tripper that triggers a relay and a red LED indicates the alarm status. A green LED indicates that the power is on.

An alarming value is set with a potentiometer within a range from 10 ...100 %.

In case of an alarm or power fail, the relay is deactivated.

The relays can only be energized when the power is on and/or a reset is made. A reset can be made with the reset button on the unit, but there is also an external connection.

Specifications

| | |
|--------------------------------|---------------------------------|
| Power consumption | I (nom) = 65 mA |
| Power input voltage | U(nom) = 25Vdc (±10%) |
| Reset input | Momentarely to the 0 volt power |
| Tamb | -10 + 70 °C |
| Monitored current range I(mn) | Depends on the transducer type |
| Type range A | 0...100mA |
| Type range B | 0...200mA |
| Type range C | 0...400mA |
| Setpoint alarm range (tripper) | 10...100% |
| Alarm Relais | Normaly Energized |
| Contacts | Changeover (protected) |
| Max. Ratings | 30Vdc / 4A |
| Alarm action | Relay de-energizes |
| Reaction time | ± 200msec. |
| Indications | |
| Power on | Green LED |
| Overrange (alarm) | Red LED |
| Housing | DIN-rail enclosure |
| Dimensions (mm.) | 53.0x50.3x86.7 (WxHxD) |
| Material | Polycarbonate (UL94-V0) |

直流絕緣監測器

Isolation characteristics

| | | | |
|----|-----------------------------------------------------|--------------------------------------|-------|
| Vb | Nominal Voltage | 150 V(rms) with IEC 61010-1 standard | + (1) |
| Vb | Nominal Voltage | 250V (rms) with EN 50178 standard | + (2) |
| Vd | Rms Voltage for AC isolation test, 50/60 Hz, 1mn | 2.5 kV | |
| Ve | Rms Voltage for partial discharge extinction @ 10pC | >1.2 kV | |
| Vw | Impulse withstand voltage 1.2/50µs | 6 kV | |

If insulation cable is used for the primary circuit, the voltage category could be improved with the following table:

| Cable insulation (primary) | Category |
|----------------------------|--------------|
| HAR 03 | 300V CAT III |
| HAR 05 | 400V CAT III |
| HAR 07 | 500V CAT III |

1) Conditions

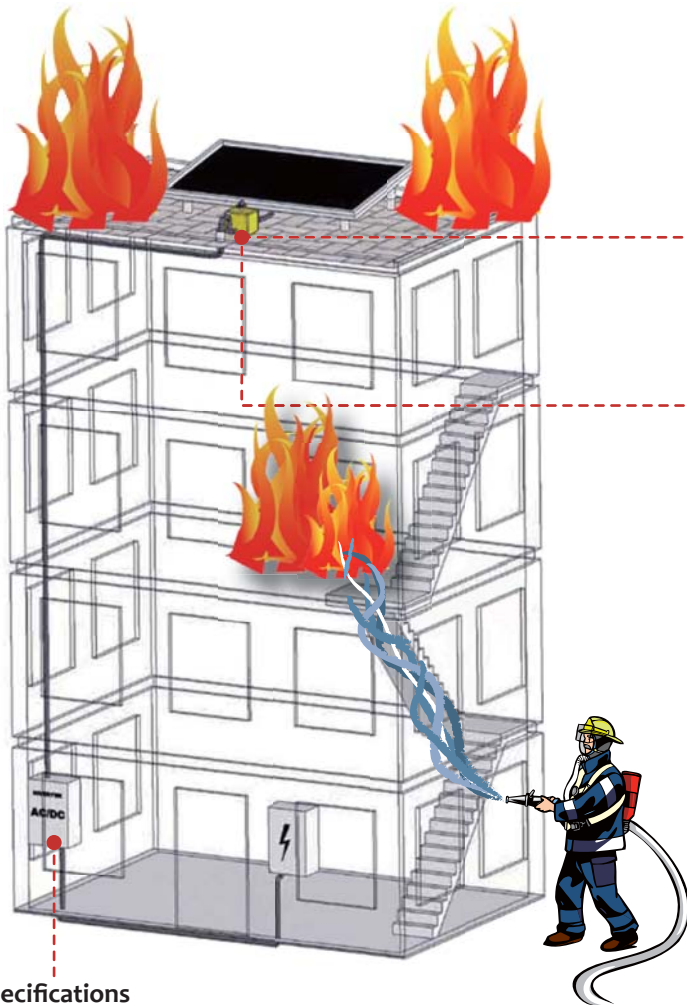
- ▶ Single insulation
- ▶ Over voltage category III
- ▶ Pollution degree 2
- ▶ Heterogeneous field

2) Conditions

- ▶ Reinforced insulation
- ▶ Over voltage category III
- ▶ Pollution degree 2
- ▶ Heterogeneous field

NEW! Emergency SWITCH FIREFIGHTER SAFETY WITH PHOTOVOLTAIC INSTALLATIONS

Quickly shuts down photovoltaic installations giving firefighters maximum security and insight in fire situations



The Emergency Switch



Motor driven DC disconnect switch



Fire alarm button

Fire alarm button (digital signal, pulse, NO or NC)



Mobile Phone

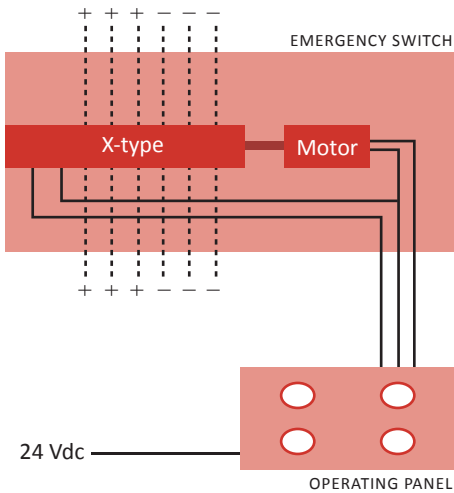


Operating panel with switch position indication

Emergency stop push-button (digital signal, pulse, NO or NC)

Specifications

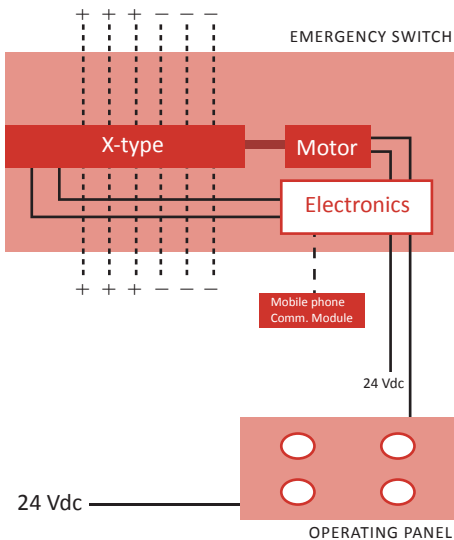
| Solution number | 1 | 2 | 3 | 4 |
|----------------------------------------|-----|--------|--------|--------|
| SWITCHGEAR SPECIFICATIONS | | | | |
| Motor driven | ✓ | ✓ | ✓ | ✓ |
| Conventional cabling | ✓ | ✓ | — | — |
| Bus cabling | — | — | ✓ | ✓ |
| MANUAL SWITCH OPERATIONS | | | | |
| Operating panel (OFF/ON) | ✓/✓ | ✓/✓ | ✓/✓ | ✓/✓ |
| Fire alarm system (OFF) | — | Option | Option | Option |
| Mobile phone (OFF) | — | ✓ | Option | Option |
| AUTOMATIC SWITCH OFF OPERATIONS | | | | |
| Temperature | — | — | — | ✓ |
| Supply power failure | — | ✓ | ✓ | ✓ |
| Communication failure | — | ✓ | ✓ | ✓ |
| Measurement analysis | — | — | ✓ | ✓ |
| Arcing analysis | — | — | — | ✓ |
| INFORMATION | | | | |
| Event logging | — | ✓ | ✓ | ✓ |
| Data logging | — | — | — | ✓ |



SOLUTION 1

Motor driven switch with analog cable connection

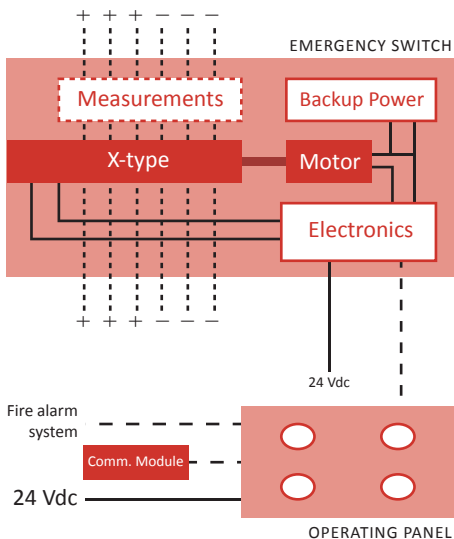
- Switch off when “emergency out” button is pressed
- Can be reset using remote control panel-after periodic function check of emergency system or after (false) alarm.
- Consumes no power when not in operation
- Stays in position when mains power fails
- One core cable provides easy feedback signal for switch position
- Independent disconnection of strings



SOLUTION 2

Motor driven switch with activated by mobile phone signal

- Activate switch-off by mobile phone using mobile phone module for sending feedback information to and from preselected telephone numbers
- Can also be activated by fire department itself
- Can be reset remotely - after periodic function check of emergency system or after (false) alarm
- Consumes no power when not in operation
- Stays in position when mains power fails
- Independent disconnection of strings



SOLUTION 3&4

Motor driven switch with bus connection to operating panel

- As solution 2 with motor-driven switch disconnect
- Independent disconnection of strings
- With bus connection for communication between operating panel and switch box(es)
- Optional mobile phone module for activation and sending feedback information to pre-selected telephone
- Optional PV system fault detection and turning multipole switch to safe mode depending on system fault (e.g. serial & parallel earth faults)

P-type Disconnect

According to the UL508 standard



| 600 VDC disconnect switches | | | | | |
|-----------------------------|-----------|---------|---------|---------|---------|
| Amperes | 1 Poles*1 | 2 Poles | 3 Poles | 4 Poles | 6 Poles |
| 16A | • | • | • | • | • |
| 36A | • | • | • | • | • |
| 63A | • | • | • | • | • |
| 120A | • | • | • | • | • |
| 180A | • | • | • | • | • |
| 200A | • *2 | • | • | • | • |
| 250A | • | • | • | • | • |
| 350A | • | • | • | • | • |
| 500A | • | • | • | | |
| 800A | • | • | | | |

These combinations are UL508 certified

- *1. two poles in series generate a one pole switch for switching off one electrical circuit of the nominal current at 600VDC
- *2. the 200A is only certified with two independent poles for one electrical circuit
- *3. combination switches AC/DC on request
- *4. auxiliary contacts are available

P-type Disconnect

According to the IEC standard

| Switches 1000V DC21 (IEC60947-1/3) | | | | | |
|------------------------------------|-----------|---------|---------|---------|----------|
| Amperes | 2 Poles*1 | 4 Poles | 6 Poles | 8 Poles | 12 Poles |
| 16A | • | • | • | • | • |
| 25A | • | • | • | • | • |
| 40A | • | • | • | • | • |
| 63A | • | • | • | • | • |
| 100A | • | • | • | • | • |
| 200A | • | • | • | • | • |
| 300A | • | • | • | • | |
| 500A | • | • | • | | |
| 800A | • | • | | | |
| 1000A | • | | | | |

| Switches 600V DC21 (IEC60947-1/3) | | | | | |
|-----------------------------------|-----------|---------|---------|---------|----------|
| Amperes | 2 Poles*1 | 4 Poles | 6 Poles | 8 Poles | 12 Poles |
| 16A | • | • | • | • | • |
| 25A | • | • | • | • | • |
| 40A | • | • | • | • | • |
| 63A | • | • | • | • | • |
| 100A | • | • | • | • | • |
| 200A | • | • | • | • | • |
| 300A | • | • | • | • | • |
| 500A | • | • | • | | |
| 800A | • | • | | | |
| 1000A | • | | | | |

- See “Switches Catalogue” for type coding for position selection options
- Together with indication plates and bottom and / or top mounting versions.
- Customized shaft lengths.
- See “Accessories Switches” for all available accessories.



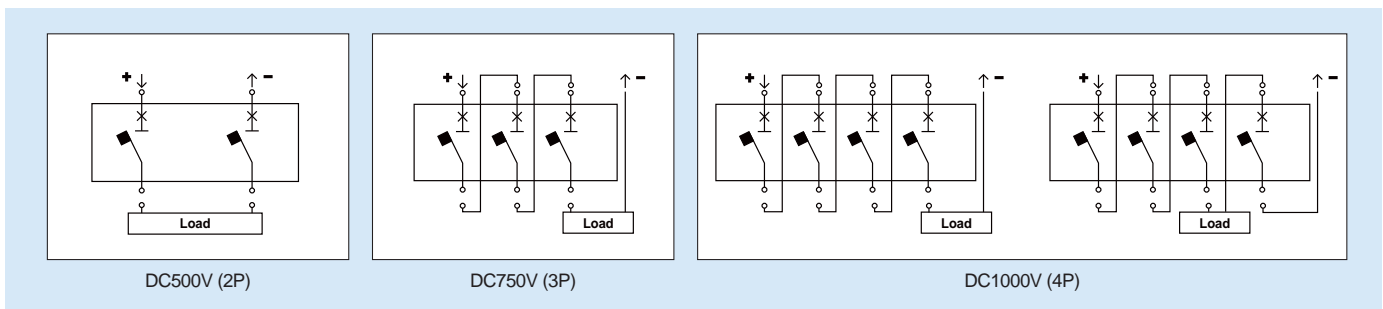
| TS160 | | | TS250 | | | TS400 | | | TS630 | | | TS800 | | |
|---------------|----|-----|--------------------|----|-----|----------|----|-----|----------|----|-----|----------|----|-----|
| 160 | | | 250 | | | 400 | | | 630 | | | 800 | | |
| 100, 125, 160 | | | 125, 160, 200, 250 | | | 300, 400 | | | 500, 630 | | | 700, 800 | | |
| 2, 3, 4 | | | 2, 3, 4 | | | 2, 3, 4 | | | 2, 3, 4 | | | 2, 3, 4 | | |
| 4P | | | 4P | | | 4P | | | 4P | | | 4P | | |
| 3P | | | 3P | | | 3P | | | 3P | | | 3P | | |
| 2P | | | 2P | | | 2P | | | 2P | | | 2P | | |
| N | H | L | N | H | L | N | H | L | N | H | L | N | H | L |
| 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 |
| 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 |
| 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 | 50 | 85 | 100 |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |

- MCCB is suitable for DC application such as Photovoltaic Circuit Breaker, UPS and datacenter
- DC short circuit test tested by VDE
- Higher nominal voltage range up to 1000 VDC
- Rated Current : 16A~800A
- No of Pole : 2/3/4Pole
- Available for AC/DC application

| | |
|-----------------------------|-----------------------------------------------|
| Frame size | (AF) |
| Rated current, In | (A) |
| No. of Poles | (Pole) |
| Rating (DC) | 1000V |
| | 750V |
| | 500V |
| Rated service breaking (DC) | Type |
| | 1000V (4P) |
| | 750V (3P) |
| | 500V (2P) |
| Trip unit | |
| | FTU ((fixed-thermal, fixed-magnetic) |
| | FMU (adjustable-thermal, fixed-magnetic) |
| | ATU (adjustable-thermal, adjustable-magnetic) |

| TD100 | | | TD160 | | | TS100 | | |
|-------------------------------------|----|-----|---------------|----|-----|---------------------|----|-----|
| 100 | | | 160 | | | 100 | | |
| 16, 20, 25, 32, 40, 50, 63, 80, 100 | | | 100, 125, 160 | | | 40, 50, 63, 80, 100 | | |
| 2, 3, 4 | | | 2, 3, 4 | | | 2, 3, 4 | | |
| 4P | | | 4P | | | 4P | | |
| 3P | | | 3P | | | 3P | | |
| 2P | | | 2P | | | 2P | | |
| N | H | L | N | H | L | N | H | L |
| 42 | 65 | 100 | 42 | 65 | 100 | 50 | 85 | 100 |
| 42 | 65 | 100 | 42 | 65 | 100 | 50 | 85 | 100 |
| 42 | 65 | 100 | 42 | 65 | 100 | 50 | 85 | 100 |
| ● | ● | ● | ● | ● | ● | ● | ● | ● |
| ● | ● | ● | ● | ● | ● | ● | ● | ● |
| - | - | - | - | - | - | - | - | - |

Exemplary circuit diagrams



最大功率追蹤器

MppGuard product details

- MPP-Tracking on string level
- high efficiency (> 99 %)
- weatherproof housing, protection class IP 65
- one MPP-Tracking in one housing*
- Connection of strings up to max. 12,5A (Impp)

Technical data MppGuard

| | |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| max. input voltage in idle state: | 780 Voc DC |
| Arbeitsbereich MPP-Spannung: | 250 V – 680 V DC |
| max. input current / string: | 12,5A DC |
| Input power: | 7,5 kWp |
| max. output voltage (Intermediate circuit): | 800 V DC |
| min. output voltage (Intermediate circuit): | 590 V DC (20 V DC over input voltage) |
| junction modules: | (MC4 or comparable) |
| junction DC-output: | (MC4 or comparable) |
| junction communication / monitoring: | RS-485 |
| cooling: | passive (free convection) |
| performance monitoring: | web portal Sinusstrom Control |
| task of the MPP-Tracking: | determination of the optimal operating point of the modules allows a yield optimization of the whole system |
| Dimension: | 240 * 340 * 160 mm |
| Weight: | approx. 7 Kg |



最大功率追蹤器

Datasheet

The intelligent generator junction box for a central inverter

It is an intelligent generator junction box, which connects the solar panels and solar inverters. It combines the advantages of the central inverter concept for large systems with a decentralized MPP tracking. This novel technology allows thus a flexible plant design with optimized efficiency.

Minimized system losses, optimal working range

At large photovoltaic systems of conventional design constant losses are caused by mismatches at the operating point of the system. Mismatching occurs through the production scattering of the modules as well as through the various temperatures and orientations in large systems. Through the completely new concept of the MPP-tracking on string level, the system always operates at the operating point. Mismatching losses are reliably minimized.

Flexible System design

Through the integrated MPP-Tracking it is first time possible, to flexibly design large photovoltaic systems with the central inverter concept.

Your advantages at the design - operating on a Central Inverter:

- ✓ various modules, different types and manufactures
- ✓ various lengths of strings
- ✓ different orientated system parts (inclination angle and southern exposure)

Integrated monitoring

Through the integrated string current monitoring system failures are reliably detected and reported via email. The data is transferred via RS-485 databus and is adapted to the web portal control.

Easy Installation

It is surrounded by a weatherproof housing of the protection class IP 65 and prepared for a wall mounting. The simple installation is ensured by the extensive pre-wiring, so that only the strings of the modules and the data line have to be connected.

Data Sheet

Santon X-Type switch XA100.16P2E-A

Switch disconnecter for solar application according to IEC 60947-3 by KEMA and CCC

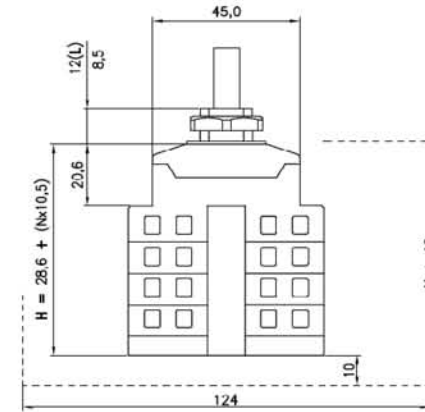
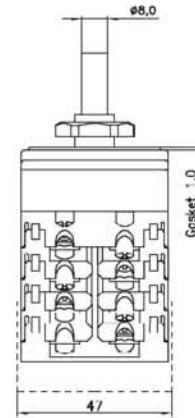
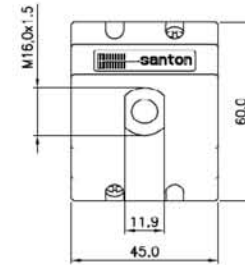


| Terminals Scheme | | | | | | | |
|------------------|------------|-------|--------|-----------|-------|--------------|-------|
| Layer No. | Front Side | | Symbol | Rear Side | | On Positions | |
| | Left | Right | | Left | Right | 1 | 2 3 4 |
| 2 | -1 | | — / — | -1 | | X | |
| 1 | | +1 | — / — | | +1 | X | |

Contacts are made in "X" marked position.
Symbols for interconnection: [

| Technical data | Symbol | Unit | Value | Unit |
|----------------------------------------------------------------------------|-------------------------------|-----------------|---------------|------|
| nominal voltage (DC poles) | Ue | V dc | 1000 | |
| nominal current (DC poles) | Ie | A dc | 16 | |
| nominal voltage (second rating DC poles, if requested) | Ue | V dc | 850 | |
| nominal current (second rating DC poles, if requested) | Ie | A dc | 20 | |
| nominal voltage (third rating DC poles, if requested) | Ue | V dc | 800 | |
| nominal current (third rating DC poles, if requested) | Ie | A dc | 25 | |
| method of mounting | single hole mounting IP65 [P] | | | |
| number of DC poles | | | 2 | |
| utilization category DC | DC-21B | | | |
| actuator | standard black [A], | | | |
| positions | OFF at 12 hr, ON at 3 hr [E] | | | |
| rated impulse withstand voltage | Uimp | kV | 8 | |
| insulation voltage | Ui | V | 1000 | |
| rated thermal current uninterrupted duty | Iu | A | 16 | |
| rated short-time withstand current (1s) | Icw | A | 700 | |
| rated short-circuit making capacity | Icm | kA | 1,4 | |
| rated conditional short-circuit current | | kA | 5 | |
| max power dissipation | | W | 0,7 | |
| method of operation | independent manual operation | | | |
| minimum required dimensions of enclosures L x W x H* | | mm | 124 x 47 x 53 | |
| * see the drawing for the height of the switch. The number of layers N is: | | | 2 | |
| tightening torque terminal screws M4 , min. - max. | | Nm | 1,5 - 1,7 | |
| tightening torque panel mounting nut, min. - max. | | Nm | 2,0 - 2,5 | |
| tightening torque M3 screw in the standard black knob, min. - max. | | Nm | 0,5 - 0,7 | |
| minimum required fine wire cross-section: IEC60947-1, table 9 | | mm ² | 2,5 | |
| ambient temperature allowed between | | °C | - 20 to + 70 | |
| storage temperature allowed between | | °C | - 40 to + 80 | |
| maximum relative humidity, without condensation at 20°C | | % | 90 | |
| pollution degree | | | 2 | |
| IP rating terminals | | | IP20 | |
| IP rating gland of the shaft in case of single hole panel mounting | | | IP65 | |
| nominal voltage (AC poles) | Ue | V ac | | |
| nominal current (AC poles) | Ie | A ac | | |
| number of AC poles | | | | |
| auxiliary contact, nominal current 16A at 250 V, AC15 | No auxiliary contact | | | |
| weight | | g | 157 | |
| accessories: | | | | |

Superior Switch Solutions



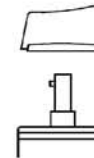
Mounting instructions

In the application all ratings have to be respected. When building the switch in an enclosure, the space envelope must be respected according to the applicable standards. The terminals, without interconnection can take copper wires up to 6 mm². The recommended Spade Tongue Terminals may have a maximum width of 9 mm. For CSA and UL applications, registered Spade Tongue Terminals must be used. The registration numbers are UL: E13288 and CSA: LR7189 (for instance type 165015 from Tyco). After mounting, the wiring must be checked and the switch must operate smoothly.

Maintenance

The X type switches are designed for a very long life but it is advised to do some simple yearly maintenance.
- Check the installation for signs of overload or overheating. The terminals may not exceed the limit of 85°C under full load.
- By operating the switch a few times (5x) the contacts will clean themselves and the switch will have a longer life.

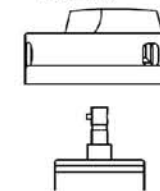
A type knob



D type knob



B type knob



O type knob



Dimensions, specifications and data shown could be subject to change without notice.

Superior Switch Solutions

Your Complete Solar Solution

誠 信 品 質



日煬科技有限公司
JD Auspice Co., Ltd

JD Auspice Co., Ltd
Tel : 02-2595-9780
Mail : service@jdauspice.com

Fax : 02-2595-9412
<http://www.jdauspice.com>