

Rectifier Indoor system

Scalable system 18-54 kVA with optional A & B, AC input

The scalable Rectifier indoor system provides AC backup power for 400 V_{AC} 3-phase or 230 V_{AC} 1-phase loads, and 220 V_{DC} power for battery charging and optional DC loads. The flexible DC output can be set to recharge large battery backup with protection time up to 10 hours.

In combination with the optional B-input (dual AC input) eliminates the need for a traditional ATS (Automatic Transfer Switch). Where the switch from A to B input, is a seamless operation with no interruption on the AC load.

When configured with dual AC input for use as an AC UPS, it classifies as - VFI SS 111 according to EN 62040-3



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Doc CTEJ3643.220.DS3 – rev1

MODULAR ARCHITECTURE

RECTIFIER MODULE

The 3 port converter simultaneously provides power for AC and DC loads. During mains outage the Rectifier 220/1200 HE feeds AC loads using energy stored in the battery.

The modular architecture, industry-leading efficiency, compact size, innovative design and comprehensive monitoring and control features provide significant benefits over the current industry standard.



Rectifier Module

APPLICATIONS

TELECOM-MOBILE/WIRELESS

- LTE/4G/WiMAX
- Distributed antenna system
- Broadband
- Radio base stations/cell sites
-

RAILWAY & METRO INFRASTRUCTURE

- Control & protection
- Signaling
- GSM-R
- Safety Systems
-

POWER UTILITIES

- Control & protection
- SCADA system

KEY FEATURES

- 400 V_{AC} 3 PHASE (Y) INPUT
- 400 V_{AC} 3 PHASE (Y) OUTPUT
- 220 V_{DC} INPUT/OUTPUT
- MAX 54 KVA / 43,2 KW AC OUTPUT
- MAX 43,2 KW DC OUTPUT
- PROTECTED BULK AC OUTPUT
- A+B OPTION (DUAL AC INPUT)
- MANUAL BYPASS OPTION
- UP TO 2 BATTERY STRINGS
- BUILT IN TRANSFER TECHNOLOGY
- 150% OVERLOAD CAPABILITY, 15S
- 600% QUICK TRIP CURRENT, 20MS
- HOT PLUGGABLE
- SMARTPACK 2 CONTROLLER
- OPERATES IN PARALLEL WITH FLATPACK2 RECTIFIERS
- GLOBAL COMPLIANCE
- PATENTED HE TECHNOLOGY

Scalable System 18-54 kVA, A+B input ELTEK

A Delta Group Company

Doc CTEJ3643.220.DS3 – rev1

| | |
|---------------------------------|--------------------|
| MODEL | 72 kW |
| Part number | CIEJ3643.xxxx |
| INPUT DATA | |
| Voltage range AC (3 phase Y) | 320-475 V |
| Voltage range DC | 180-290 V |
| Maximum current AC (per phase) | 92-138 A |
| Frequency | 50 Hz / 60 Hz |
| Power factor | > 0.99 |
| OUTPUT DATA | |
| Adjustable range AC (3 phase Y) | 346-415 V |
| Adjustable range DC | 194-290 V |
| Max output power AC | 54,0 kVA / 43,2 kW |
| Max output power DC | 43,2 kW |
| Admissible load power factor | 0 Ind. to 0 Cap. |
| Frequency | 50 Hz / 60 Hz |
| Battery breaker (2-pole) | 2*630 A |
| OPTIONS | |
| B-Input (dual AC input) | 48 kW |
| Manual Bypass Switch | Internal |

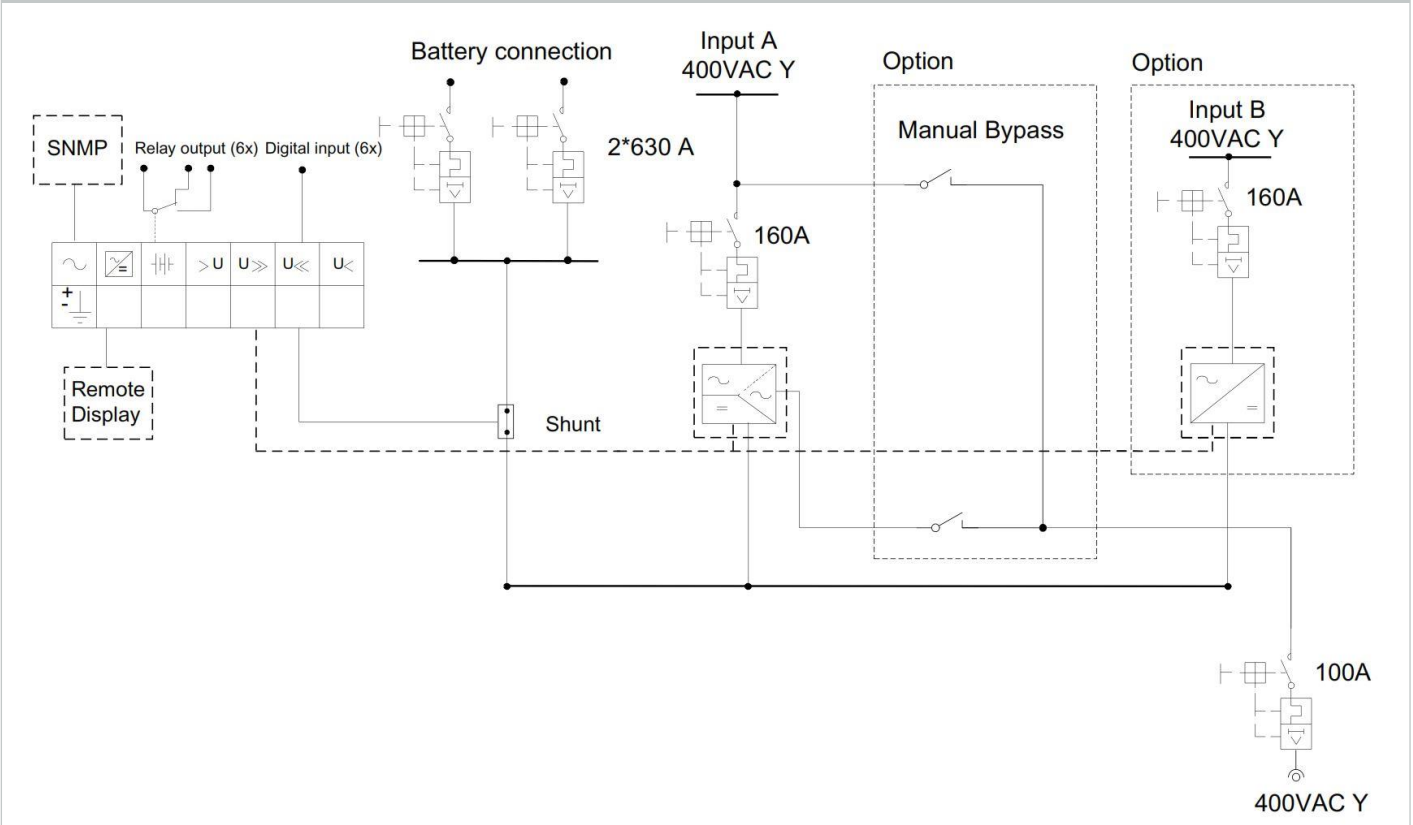
Specifications are subject to change without notice

FRONT VIEW 54 KVA + 48 KW B-INPUT



Rectifier 54 kVA + 48 kW B-input (without front covers)

SINGLE LINE DIAGRAM 54 KVA+48 KW B-INPUT



Scalable System 18-54 kVA, A+B input ELTEK

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| Max output power DC | 43,2 kW |
| Admissible load power factor | 0 Ind. to 0 Cap. |
| Frequency | 50 Hz / 60 Hz |
| Battery breaker (2-pole) | 1*630 A |
| Load Breaker (2 pole) | 1*630 A |
| OTHER SPECIFICATIONS | |
| B-Input (dual AC input) | 48 kW |
| Manual Bypass Switch | Internal |

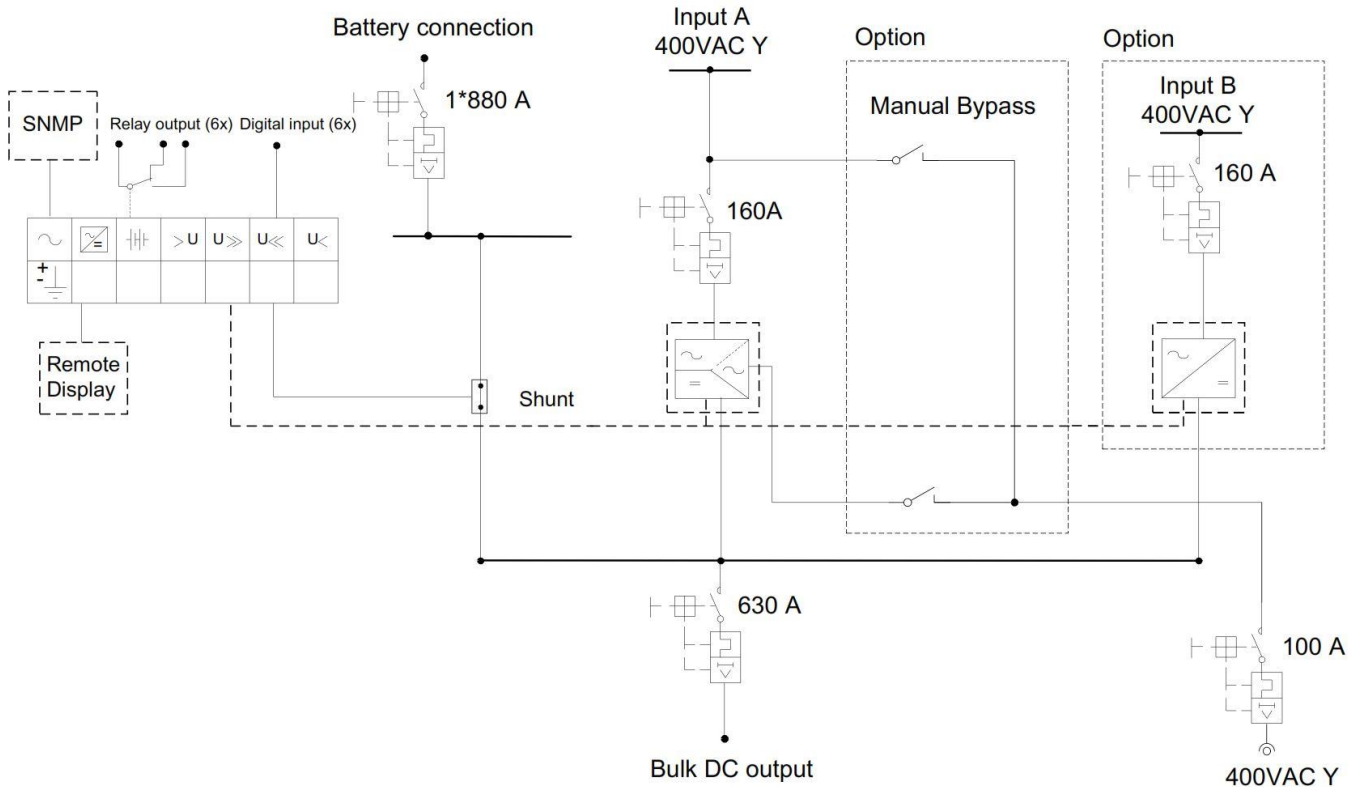
FRONT VIEW 54 KVA + 48 KW B-INPUT



Rectiverter 54 kVA + 48 kW B-input (without front covers)

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SINGLE LINE DIAGRAM 54 KVA + 48 KW B-INPUT



Scalable System 18-54 kVA, A+B input

Doc CTEJ3643.220.DS3 – rev1

| Models / ordering information | 54 kVA + 48 kW B-Input | 54 kVA + 48 kW B-Input |
|---|---|------------------------|
| Product family | CIEJ3643.4xxx | CIEJ3643.4 xxx |
| AC OUTPUT DATA | | |
| Voltage (default) / (adjustable range) ¹⁾ | 400 V _{AC} 3 phase (Y) / 346-415 V _{AC} | |
| Frequency (default inverter mode) | 50 Hz (adaptive) | |
| Frequency (set-able inverter mode) | 50Hz, 60Hz or last synced 50/60Hz (adaptive) | |
| Power maximum (continuous / overload (<15s)) | 43,2 kW (54 kVA) / 72 kVA | |
| Current maximum/phase (continuous / overload (<15s)) | 78A _{RMS} / 104,4A _{RMS} | |
| Current (maximum) Quick trip/phase (20ms) | 380A (6 x nominal) | |
| Hold up (Voltage dips) (before switching to battery) | > 5 ms @ 43,2 kW load | |
| THD | < 1.5 % at resistive load | |
| Output features | Module: Fuse in L and N , Hot pluggable 100 A MCCB, AC output individual screw terminals 70 mm2 for L1-L3, N & PE | |
| DC OUTPUT DATA | | |
| Voltage (default) / (adjustable range) | 245 V _{DC} / 194 - 290 V _{DC} | |
| Power (maximum @nominal input) | 43,2 kW ²⁾ | |
| Current (maximum @V _{OUT} ≤ 216 V _{DC}) | 200 A ²⁾ | |
| Hold up time, maximum output power | >10ms; V _{OUT} > 194 V _{DC} | |
| Output features | Short circuit proof, Over voltage Shutdown Battery input /output connection to M10 bolt | |
| INPUT DATA | | |
| AC Mains Input Voltage(3 phase Y) | 320-475 V _{AC} , | |
| AC Current/phase(at nominal output voltage) (depending on module type) | 92-138 A _{RMS} ⁴⁾ | |
| Frequency (default: sync range) | 47-53 & 57-63 Hz | |
| Frequency (set-able: sync range) | 47-53 Hz, 57-63 Hz or both (adaptive) | |
| Power Factor / THD | > 0.99 at 50% load or more / < 3.5% | |
| DC Voltage nominal / extended range (no overload) ³⁾ | 204 - 290 V _{DC} / 180 - 204 V _{DC} | |
| DC Current (maximum) | 240 A / 324 A during overload (15s) | |
| Input features | Module : Fuse in L and N, Hot pluggable, Varistor, Hot pluggable 160 A MCCB, AC input individual screw terminals 70 mm2 for L1-L3, N & PE | |
| BATTERY & LOAD BREAKER | | |
| 2-pole battery breaker | 2*MCCB 630 A | 1*MCCB 630 A |
| 2-pole load breaker | - | 1*MCCB 630 A |
| OPTIONS | | |
| B-input maximum power (with FP2 HE, 2 kW rectifiers) | 48 kW | |
| Manual Bypass switch | 2*160 A | |
| OTHER SPECIFICATION | | |
| Efficiency | >96% (mains mode (AC/AC and AC/DC)), >94% (inverter mode (DC/AC)) | |
| Protection Class | IP 20 | |
| Operating temperature | -40 to +55°C (-40 to +131°F), humidity 5 - 95% RH non-condensing | |
| Storage temperature | -40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing | |
| Dimensions[WxDxH] / Weight | 600 x 600x 2000mm (23,7 x 23,7 x 78,8") / 300 kg (1100 lbs) | |
| DESIGN STANDARDS | | |
| Electrical safety | EN 60950-1, EN 62040-1 UPS safety | |
| EMC | ETSI EN 300 386 V.1.6.1, FCC CFR 47 Part 15 EN 61000-6-1 /-2/-4/-5 | |
| Environment | ETSI EN 300 019: 2-1 (Class 1.2) & 2-2 (Class 2.3) Normal operating conditions as per IEC/EN 62040-3:2011 clause 4.2. Other operating conditions as per IEC 62040-3:2011 clause 4.3, must be advised 2011/65/EU (RoHS) & 2012/19/EU (WEEE) | |
| <p>1) Output voltage ranges configured in factory and have individual keying in top chassis</p> <p>2) AC load has priority. Maximum available DC output power and current is dependent on instant AC load and AC input voltage; i.e maximum 28,8kW/130 A at full AC power and nominal input for 230V_{AC}.</p> <p>3) 180 - 204 V_{DC}: reduced performance - no power boost and increased voltage THD on AC output.</p> <p>4) If DC voltage is pulled below 194 V the input current may increase above this level</p> | | |

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