Unit 14, The Bridge Business Centre Dunston Road, Chesterfield, S41 9FG

T e I: + 44 (0) 1246 452909 F a x: + 44 (0) 1246 452942 W e b: w w w . e t p s . c o . u k Email: sales@etps.co.u k Sales: 0800 612 95 75

INV-B

Rackmounting Inverter with Bypass

Description

The INV-B is ideal for ensuring loads are continually supplied in the event of mains failure. This series of inverters are built with integrated static bypass switches. Connected systems are protected from downtime caused by power failures and disturbances. Should the usual AC supply fail the INV-B will automatically switch over to the connected DC Source within 10ms. When the bypass is operated the phase angle of the voltage output is synchronised to the previous sinewave to provide a seamless changeover. Where the mains supply is particularly unreliable the INV-B can be set to permanently operate from the DC supply. The inverter can be manually switched to pass through the AC input when the batteries need to be serviced. The inverter produces a true stabilised sinewave output that is controlled by high quality micro-processors. This ensures the INV-B range is ideal for even the most sensitive loads. These robust units are extremely efficient at converting energy meaning longer autonomy times or smaller battery capacity requirements. The wide operating temperature range and choice of inputs help to ensure that the INV-B is the first choice for the majority of locations.



- Robust IGBT end stage
- Low output impedance
- No 50Hz transformer
- Built-in static bypass
- Efficiency over 88%

Selection Table

| Part Number | Maximum Power | Input | Output Voltage | Output Trequency |
|------------------|------------------|----------|-------------------|------------------|
| | | Voltage | | |
| INV-B 500-24 | 500VA | 24VDC | 230VAC | 50Hz |
| INV-B 500-48-60 | 500VA | 48/60VDC | 230VAC | 50Hz |
| INV-B 500-110 | 500VA | 110VDC | 230VAC | 50Hz |
| INV-B 500-220 | 500VA | 220VDC | 230VAC | 50Hz |
| | | | | |
| INV-B 1000-24 | 1000VA | 24VDC | 230VAC | 50Hz |
| INV-B 1000-48-60 | 1000VA | 48/60VDC | 230VAC | 50Hz |
| INV-B 1000-110 | 1000VA | 110VDC | 230VAC | 50Hz |
| INV-B 1000-220 | 1000VA | 220VDC | 230VAC | 50Hz |
| | | | | |
| INV-B 2000-24 | 2000VA | 24VDC | 230VAC | 50Hz |
| INV-B 2000-48-60 | 2000VA | 48/60VDC | 230VAC | 50Hz |
| INV-B 2000-110 | 2000VA | 110VDC | 230VAC | 50Hz |
| INV-B 2000-220 | 2000VA | 220VDC | 230VAC | 50Hz |
| | | | | |
| INV-B 4000-48-60 | 4000VA | 48/60VDC | 230VAC | 50Hz |
| INV-B 4000-110 | 4000VA | 110VDC | 230VAC | 50Hz |
| INV-B 4000-220 | 4000VA | 220VDC | 230VAC | 50Hz |

^{*}Different output voltages and frequencies are possible. Please contact ET to discuss your requirements.





INV-B

Rackmounting Inverter with Bypass

Technical Data

| Output Power 500VA/400W 1.kVA/500W 2.kVA/1600W 4.kVA/3200W Voltage 230VAC, failure tolerance ±CF, 60Hz), sinewave processor controlled Power Factor 0.8 0.100% Load Range 0.100% 0.25 Crestfactor > 2.5 0.25 Harmonic Distortion < 2% 0.25 Input Range 24 (19 - 31,VDC 48,60 (28 - 72,VDC 24VOC 48,60 (28 - 72,VDC 210VDC 48,60 (28 - 72,VDC 220VDC 220 (178 - 264,VDC General Electrical Safety EN 60950, VDE 0805 (overload & short-circuit protected) Efficiency >88% at nominal load Galvanic Isolation 3.75 k/VDC EMC (Emission) EN 60950, VDE 0805 (overload & short-circuit protected) EMC (Emission) EN 60950, VDE 0805 (overload & short-circuit protected) EMC (Immunity) 0 per aligne from perature Over-Temperature Derating -5 to +45° (non-condensing) -5 to +5° (non-condensing) Casing 19° x3 U x 240mm (W x H x D) 19° x3 U x 360mm (W x H x D) Weight Approx. 7kg | Output | INV-B-500 | INV-B-1000 | INV-B-2000 | INV-B-4000 | | |
|---|----------------------------|--|-------------------------------|-------------------------------|---------------------------------------|--|--|
| Frequency | • | 500VA/400W | 1kVA/800W | 2kVA/1600W | 4kVA/3200W | | |
| Power Factor | Voltage | | 230VAC, failure tolerance ±5% | (Option /1 for 115VAC, 60Hz | :) | | |
| Power Factor | Frequency | | | | | | |
| Crestractor | Power Factor | | | | | | |
| Harmonic Distortion | Load Range | | | | | | |
| Approx. 7kg | Crestfactor | | | | | | |
| 24 \ 10 - 31 \ 10 \ 20 \ 20 \ 20 \ 48 \ 60 \ 38 - 72 \ 10 \ 20 \ 20 \ 20 \ 20 \ 20 \ 20 \ 2 | Harmonic Distortion | < 2% | | | | | |
| 24 \ 10 - 31 \ 10 \ 20 \ 20 \ 20 \ 48 \ 60 \ 38 - 72 \ 10 \ 20 \ 20 \ 20 \ 20 \ 20 \ 20 \ 2 | nput Range | | | | | | |
| 110VDC | | 24 (19 - 31)VDC | | | | | |
| 220VDC General Electrical Safety EN 60950, VDE 0805 (overload & short-circuit protected) Efficiency Sa8% at nominal load Galvanic Isolation EMC (Emission) EMC (Emission) EMC (Immunity) Operating Temperature Over-Temperature Derating Casing Casing Casing Casing Casing Casing Approx. 7kg Approx. 7kg Approx. 7kg Approx. 7kg Approx. 1kg | 48/60VDC | | 48/60 (3 | 8 - 72)VDC | | | |
| Electrical Safety EN 60950, VDE 0805 (overload & short-circuit protected) Efficiency >88% at nominal load Galvanic Isolation S.75 kVDC EMC (Emission) EN 50081-1, Curve EN 55022B EMC (Immunity) EN 50082-2 Operating Temperature Over-Temperature Over-Temperature Derating +45 to +70 °C (2%/K derating) +55 to +70 °C (2%/K derating) Casing Size 19" x3U x240mm (Wx H x D) 19" x3U x360mm (Wx H x D) Weight Approx. 7kg Approx. 7.5kg Approx. 11kg Approx. 15kg Classifiaction IP 20 Ventilation Internal fan Electrical Connections Connector Position Front of unit (optionally rear of unit) DC Input (at 24, 48/60VDC) 3 x high current terminal blocks 16mm² AC Output Appliance unlet Schurter Phoenix Power-Combicon AC Output Alarm Phoenix Mini-Combicon Binder round connector Bypass Switch Time Check Connections Connections Appliance inlet Schurter Phoenix Power-Subcon plug Alarm Phoenix Mini-Combicon Binder round connector Position Binder round connector Poptical Signals LCD dot matrix display LEDs for load display, PG/Oh Signal Output Voltage free alarm contact Potential free status/alarmoontac Potential free status/alarmoontac Operation Push-button for setup, DC switch, AC switch | 110VDC | | | | | | |
| Electrical Safety Electrical Safety Efficiency Sa8% at nominal load Galvanic Isolation EMC (Emission) EMC (Emission) EMC (Immunity) Departing Temperature Over-Temperature Derating Properation Over-Temperature Derating Properation Over-Tombicon Over-Temperature Derating Properation Over-Temperature Derating Dever-Subcon plug Over-Temperature Derating Properation Over-Temperature Dever-Temperature Derating Dever-Subcon plug Over-Temperature Derating Properation Over-Temperature Dever-Temperature Derating Dever-Subcon plug Over-Temperature Derating Properation Over-Temperature Dever-Temperature Derating Properation Over-Temperature Derating Pr | 220VDC | | | | | | |
| Electrical Safety Electrical Safety Efficiency Sa8% at nominal load Galvanic Isolation EMC (Emission) EMC (Emission) EMC (Immunity) Departing Temperature Over-Temperature Derating Properation Over-Temperature Derating Properation Over-Tombicon Over-Temperature Derating Properation Over-Temperature Derating Dever-Subcon plug Over-Temperature Derating Properation Over-Temperature Dever-Temperature Derating Dever-Subcon plug Over-Temperature Derating Properation Over-Temperature Dever-Temperature Derating Dever-Subcon plug Over-Temperature Derating Properation Over-Temperature Dever-Temperature Derating Properation Over-Temperature Derating Pr | Conoral | | · | | | | |
| Efficiency \$88% at nominal load 3.75 kVDC EMC (Emission) EN 50081-1, Curve EN 55022B EMC (Immunity) EN 50082-2 Operating Temperature -5 to +45°C (non-condensing) -5 to +55°C (non-condensing) Over-Temperature Derating +45 to +70°C (2%/K derating) +55 to +70°C (2%/K derating) Housing Casing 19" rack with mounting flanges Size 19" x 3U x 240mm (W x H x D) 19" x 3U x 360mm (W x H x D) Weight Approx. 7kg Approx. 7.5kg Approx. 11kg Approx. 15kg Classification IP 20 Ventilation Internal fan Electrical Connections Connector Position Front of unit (optionally rear of unit) DC Input (at 24, 48/60VDC) 3 x high current terminal blocks 16mm² DC Input (at 110, 220VDC) 3 x high current terminal blocks 16mm² Phoenix Power Combicon AC Output Appliance outlet Schurter Phoenix Power-Combicon AC Input (bypass) Appliance inlet Schurter Phoenix Power-Combicon Bypass Switch Time <10ms <5ms Other Optical Signals LCD dot matrix display LEDs for load display, P6/0h Signal Output Push-button for setup, DC switch, AC switch Push-button for setup, DC switch Push-button for setup, | 5.01.01.01. | | EN COOFO VDE OGOE (averal | | | | |
| Galvanic Isolation EMC (Emission) EMC (Immunity) Operating Temperature Over-Temperature Derating Over-Temperature Derating Casing Casin | • | | | | | | |
| EMC (Emission) EMC (Immunity) Operating Temperature Over-Temperature Derating Housing Casing Size 19" x 3U x 240mm (W x H x D) Weight Approx. 7kg Approx. 7kg Approx. 7kg Approx. 7kg Approx. 1kg Approx | • | | | | | | |
| EMC (Immunity) Operating Temperature Over-Temperature Derating Over-Temperature Derating -5 to +45 °C (non-condensing) Over-Temperature Derating -5 to +55 °C (non-condensing) Over-Temperature Derating -5 to +55 °C (non-condensing) -5 to +55 °C (non-condensing -6 to +50 °C (non-condensing | | | | | | | |
| Operating Temperature Over-Temperature Derating Over-Temperature Derating Casing Casing Casing 19" rack with mounting flanges Size 19" x 3U x 240mm (W x H x D) Weight Approx. 7kg Approx. 7kg Approx. 7kg Approx. 11kg Approx. 15kg Classification Ventilation Internal fan Electrical Connections Connector Position DC Input (at 24, 48/60VDC) AC Output AC Output AC Output AC Output AC Output AC Input (bypass) Alarm Bypass Switch Time Optical Signals LCD dot matrix display Description For to yeartich and selections Clons Connector Connector Connections Connector Position Buryan Connector Position AC Output AC Input (at 110, 220VDC) AC Output AC Input (bypass) Alarm Bypass Switch Time Connector Connect | , | | | | | | |
| Over-Temperature Derating +45 to +70 °C (2%/K derating) +55 to +70 °C (2%/K derating) Casing 19" rack with mounting flanges Size 19" x 3U x 240mm (W x H x D) 19" x 3U x 360mm (W x H x D) Weight Approx. 7kg Approx. 7.5kg Approx. 11kg Approx. 15kg Classifiaction IP 20 Ventilation Internal fan Electrical Connections Connector Position Front of unit (optionally rear of unit) DC Input (at 24, 48/60VDC) 3 x high current terminal blocks 16mm² DC Input (at 110, 220VDC) 3 x high current terminal blocks 16mm² AC Output Appliance outlet Schurter Alphanisc outlet Schurter Phoenix Power-Combicon AC Input (bypass) Appliance inlet Schurter Phoenix Power-Subcon plug Alarm Phoenix Mini-Combicon Binder round connector Bypass Switch Time Optical Signals LCD dot matrix display LEDs for load display, PG/0h Signal Output Voltage free alarm contact Potential free status-/alarmcontact Operation Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | ` | | | | | | |
| Casing 19" rack with mounting flanges Size 19" x 3U x 240mm (W x H x D) 19" x 3U x 360mm (W x H x D) Weight Approx. 7kg Approx. 7.5kg Approx. 11kg Approx. 15kg Classifiaction IP 20 Ventilation Internal fan Electrical Connections Connector Position Front of unit (optionally rear of unit) DC Input (at 24, 48/60VDC) 3 x high current terminal blocks 16mm² DC Input (at 110, 220VDC) 3 x high current terminal blocks 16mm² AC Output Appliance outlet Schurter Phoenix Power-Combicon AC Input (bypass) Appliance inlet Schurter Phoenix Power-Subcon plug Alarm Phoenix Mini-Combicon Binder round connector Bypass Switch Time Other Optical Signals LCD dot matrix display LEDs for load display, PG/Oh Signal Output Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | | | , o | | | | |
| Casing 19" rack with mounting flanges Size 19" x 3U x 240mm (W x H x D) 19" x 3U x 360mm (W x H x D) Weight Approx. 7kg Approx. 7.5kg Approx. 11kg Approx. 15kg Classifiaction IP 20 Ventilation Internal fan Electrical Connections Connector Position Front of unit (optionally rear of unit) DC Input (at 24, 48/60VDC) 3 x high current terminal blocks 16mm² DC Input (at 110, 220VDC) 3 x high current terminal blocks 16mm² AC Output Appliance outlet Schurter Phoenix Power Combicon AC Input (bypass) Appliance inlet Schurter Phoenix Power-Subcon plug Alarm Phoenix Mini-Combicon Bypass Switch Time 710ms Smith Phoenix Phoenix Phoenix Power-Subcon plug Signal Output Phoenix Phoen | | +45 to +70 °C (2%/K derating) +55 to +70 °C (2%/K derating | | | | | |
| Size 19" x 3U x 240mm (W x H x D) Approx. 7kg Approx. 11kg Approx. 11kg Approx. 15kg Approx. 1 | | | | | | | |
| Weight Approx. 7kg Approx. 7.5kg Approx. 11kg Approx. 15kg Classifiaction Ventilation Electrical Connections Connector Position DC Input (at 24, 48/60VDC) DC Input (at 110, 220VDC) AC Output AC Output AC Input (bypass) Alarm Bypass Switch Time Optical Signals Signal Output Operation Approx. 7kg Approx. 7.5kg Approx. 11kg Approx. 15kg Approx. 15kg Approx. 15kg Approx. 15kg Approx. 11kg Approx. 11kg Approx. 11kg Approx. 11kg Approx. 12kg Appro | | | | | | | |
| Classifiaction Ventilation Electrical Connections Connector Position DC Input (at 24, 48/60VDC) DC Input (at 110, 220VDC) AC Output AC Output AC Input (bypass) Alarm AC Input (bypass) Alarm Bypass Switch Time Optical Signals Signal Output Operation IP 20 Internal fan Internal fan Front of unit (optionally rear of unit) A philance outlet Schurter Phoenix Power Combicon A phoenix Power Combicon A phoenix Power Combicon A phoenix Power-Combicon Binder round connector A phoenix Mini-Combicon Binder round connector A phoenix Mini-Combic | | | | | , | | |
| Ventilation Electrical Connections Connector Position DC Input (at 24, 48/60VDC) DC Input (at 110, 220VDC) AC Output AC Output AC Input (bypass) Alarm Alar | - | Approx. 7kg | | | Approx. 15kg | | |
| Connector Position Connector Position DC Input (at 24, 48/60VDC) DC Input (at 110, 220VDC) 3 x high current terminal blocks 16mm² Phoenix Power Combicon AC Output Appliance outlet Schurter AC Input (bypass) Alarm Phoenix Power-Subcon plug Alarm Phoenix Mini-Combicon Binder round connector Bypass Switch Time Optical Signals LCD dot matrix display Voltage free alarm contact Push-button for setup, DC switch, AC switch Front of unit (optionally rear of unit) 3 x high current terminal blocks 16mm² 3 x high current terminal blocks 16mm² Phoenix Power Combicon A phoenix Power-Combicon Phoenix Power-Subcon plug Alarm Phoenix Mini-Combicon Binder round connector Syms Cher Optical Signals LCD dot matrix display LEDs for load display, PG/ON Signal Output Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | | - | | | | | |
| Connector Position DC Input (at 24, 48/60VDC) DC Input (at 110, 220VDC) 3 x high current terminal blocks 16mm² Phoenix Power Combicon AC Output AC Input (bypass) Alarm Phoenix Mini-Combicon Bypass Switch Time Optical Signals LCD dot matrix display Voltage free alarm contact Operation Front of unit (optionally rear of unit) 3 x high current terminal blocks 16mm² Phoenix Power Combicon 3 x high current terminal blocks 16mm² Phoenix Power Combicon A ppliance outlet Schurter Phoenix Power-Subcon plug Binder round connector Stms Character Potential free status-/alarmcontact Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | Ventilation | | Interr | ial fan | | | |
| DC Input (at 24, 48/60VDC) DC Input (at 110, 220VDC) 3 x high current terminal blocks 16mm² Phoenix Power Combicon AC Output AC Input (bypass) Alarm | Electrical Connections | | | | | | |
| DC Input (at 110, 220VDC) 3 x high current terminal blocks 16mm² AC Output AC Output AC Input (bypass) Alarm Alarm Bypass Switch Time Optical Signals Coperation AC Disput (bypass) Bypass Switch Coperation AC Input (bypass) Appliance outlet Schurter Appliance outlet Schurter Phoenix Power Combicon Phoenix Power-Combicon Phoenix Power-Subcon plug Binder round connector Soms Coperation Action | Connector Position | Front of unit (optionally rear of unit) | | | | | |
| AC Output Appliance outlet Schurter Phoenix Power-Combicon AC Input (bypass) Appliance inlet Schurter Phoenix Power-Subcon plug Alarm Phoenix Mini-Combicon Binder round connector Bypass Switch Time < 10ms <5ms Other Optical Signals LCD dot matrix display LEDs for load display, PG/ON Signal Output Voltage free alarm contact Potential free status-/alarmcontact Operation Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | DC Input (at 24, 48/60VDC) | 3 x high current terminal blocks 16mm² | | | | | |
| AC Input (bypass) Appliance inlet Schurter Phoenix Power-Subcon plug Alarm Phoenix Mini-Combicon Binder round connector Sypass Switch Time Other Optical Signals LCD dot matrix display Signal Output Voltage free alarm contact Operation Appliance inlet Schurter Phoenix Power-Subcon plug Binder round connector Stand LEDs for load display, PG/ON Signal Output Voltage free alarm contact Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | DC Input (at 110, 220VDC) | 3 x high current terminal blocks 16mm² | | Phoenix Power Combicon | 3 x high current terminal blocks 16mm | | |
| Alarm Phoenix Mini-Combicon Binder round connector Bypass Switch Time Sypass Switch Time Other Optical Signals LCD dot matrix display LEDs for load display, PG/ON Signal Output Voltage free alarm contact Operation Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | AC Output | | Appliance outlet Schurter | | Phoenix Power-Combicon | | |
| Bypass Switch Time <10ms <5ms Other Optical Signals LCD dot matrix display LEDs for load display, PG/ON Signal Output Voltage free alarm contact Potential free status-/alarmcontact Operation Push-button for setup, DC switch, AC switch">Push-button for setup, DC switch Push-button for setup, DC switch | AC Input (bypass) | Appliance inlet Schurter | | | Phoenix Power-Subcon plug | | |
| Optical Signals Signal Output Operation LEDs for load display, PG/ON Voltage free alarm contact Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | Alarm | Phoenix Mini-Combicon | | | Binder round connector | | |
| Optical Signals LCD dot matrix display LEDs for load display, PG/ON Signal Output Voltage free alarm contact Potential free status-/alarmcontact Operation Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | Bypass Switch Time | <10ms | | | <5ms | | |
| Optical Signals LCD dot matrix display LEDs for load display, PG/ON Signal Output Voltage free alarm contact Potential free status-/alarmcontact Operation Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | Other | | | | | | |
| Signal Output Voltage free alarm contact Potential free status-/alarm.contact Operation Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | | | LCD dot matrix display | | | | |
| Operation Push-button for setup, DC switch, AC switch Push-button for setup, DC switch | | | | | | | |
| Warranty 2 Years | Operation | , | | | | | |
| | Warranty | | | | | | |

Options Table

| Code | Description |
|---------|-------------|
| /1 | |
| , /2 | |
| / = | |

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ET must reserve the right to make changes to the published specifications without prior notice. Where certain operating parameters are critical for your application we advise that they be confirmed at the time of order. ET specialises in modifying its proven platforms to suit your needs. Please contact our office if your requirement is non-standard. Please note that your actual unit may differ from those shown.