



The **BU150U** is a microprocessor controlled buffer unit rated 20A usable in 12V, 24V, 48V and 72V systems. The **BU150U** monitors the voltage coming from a DC power supply and in case of failure a capacitor bank is used to keep the output regulated for at least 300ms at full load.

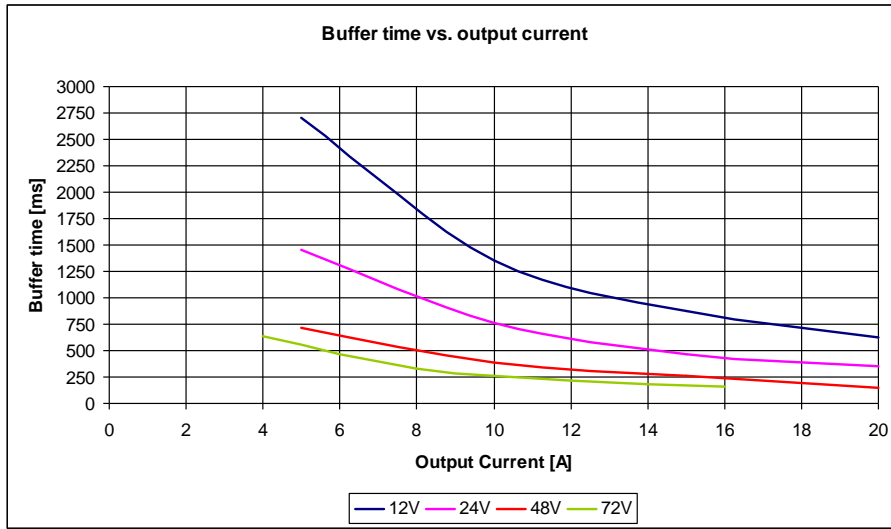
■ Main Features

-] High efficiency and extremely compact size
-] Wide voltage range: 12...85Vdc
-] Self tracking DC BUS voltage
-] > 150 Joules energy storage
-] Compact size
-] Reliable topology, based on standard electrolytic capacitors
-] Dry contacts for status signalling and opto-isolated input for INHIBIT
-] Digital Power regulation
-] Multiple protections, integrated safety circuit that disconnects the capacitor bank in case of internal failure
-] Can boost the peak power of the DC supply
-] Parallelable for power and backup time increase

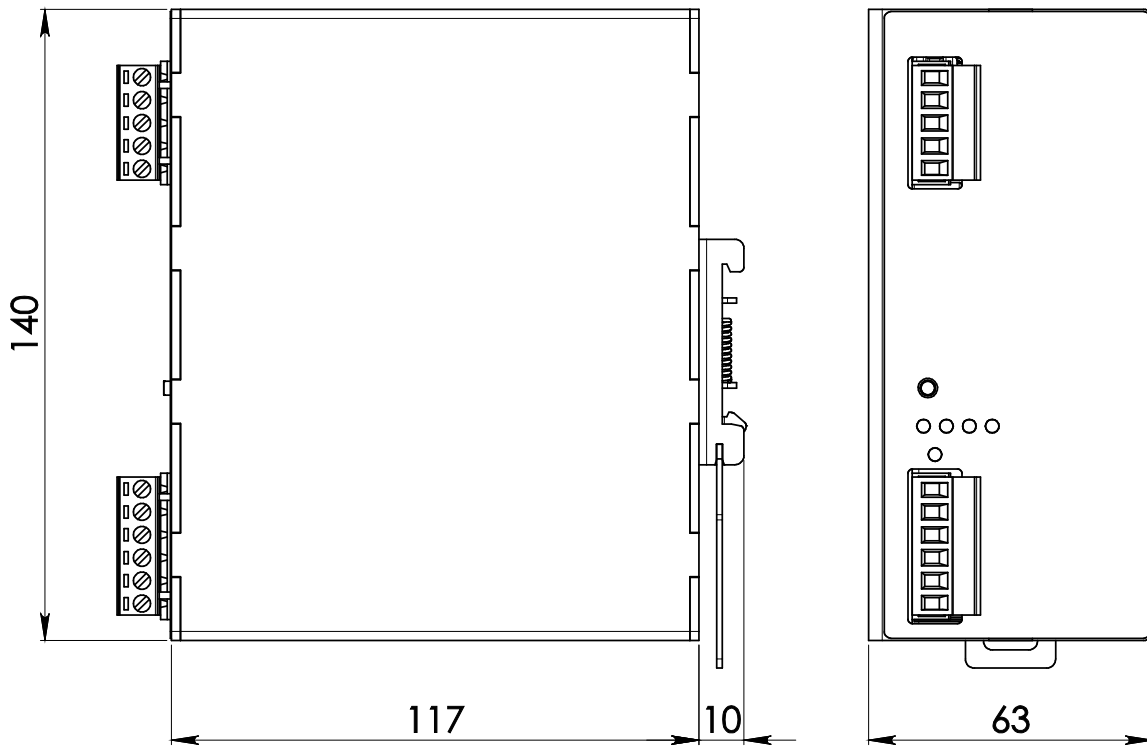
TECHNICAL DATA

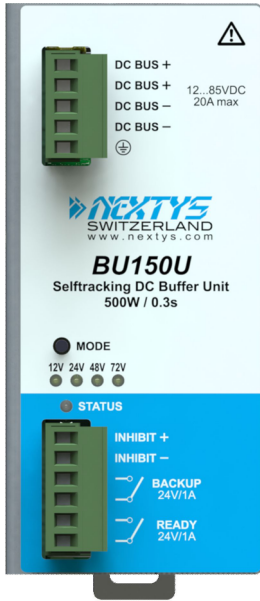
| Model type | BU150U | |
|--|--|--|
| OUTPUT DATA | | |
| Unom Voltage | Vin - 1V (12/24/48/72Vdc - 1V) | |
| Continuous current | 20A @ ≤ 48V 16A @ > 48V | |
| Backup duration | 600ms / 12V @ 20A 300ms / 24V @ 20A 130ms / 48V @ 20A 140ms / 72V @ 16A | |
| Ripple & Noise ¹ | ≤ 250mVpp | |
| Protections | <ul style="list-style-type: none"> ▪ Overload - active ▪ Short circuit - one shot ▪ Overvoltage - active | |
| Status Signals | <ul style="list-style-type: none"> ▪ Voltage level by amber LEDs ▪ STATUS - CHARGING / READY by Bi-color LED ▪ BACKUP - dry contact (NO, 24Vdc / 1A) ▪ READY - dry contact (NO, 24Vdc / 1A) ▪ INHIBIT - remote ON/OFF input | |
| INPUT DATA | | |
| Input DC rated voltage | Nominal: 12/24/48/72Vdc (UL certified) Range: Auto detection (12...85Vdc) | |
| Input DC rated current | 20A max. @ ≤ 48V 16A max. @ > 48V | |
| Charging time | < 40s voltage dependent (see chart on Fig.1) | |
| GENERAL DATA | | |
| Operating modes | <ul style="list-style-type: none"> ▪ AUTO: senses the input voltage and supplies the load when the voltage drops ▪ MANUAL: fixed output voltage (12/24/48/72Vdc) user settable by front key | |
| Control | Digital by CPU | |
| Operating temperature ² | - 40°C...+ 70°C (UL certified up to 70°C) | |
| Storage temperature | - 40°C...+ 80°C | |
| Humidity | 5...95% r.H. non condensing | |
| Life time expectation | 191'963h (21.9 years) at 25°C ambient full load | |
| Cooling | Natural convection | |
| Protection Class | <ul style="list-style-type: none"> ▪ Class I | |
| DC BUS / ground isolation | 0.75kVdc | |
| Safety Standards | <ul style="list-style-type: none"> ▪ UL508 (certified E356563) ▪ EN60950 (reference) | |
| EMC Emission | <ul style="list-style-type: none"> ▪ EN55011 (CISPR11) Class A ▪ EN55022 (CISPR22) Class A | |
| EMC Immunity | <ul style="list-style-type: none"> ▪ EN61000-4-2 Level 3 ▪ EN61000-4-3 Level 3 ▪ EN61000-4-4 Level 2 ▪ EN61000-4-5 Level 1 | |
| Protection degree | <ul style="list-style-type: none"> ▪ EN60529 IP20 | |
| Vibration sinusoidal | <ul style="list-style-type: none"> ▪ IEC 60068-2-6 (5-17.8Hz: ±1.6mm; 17.8-500Hz: 2g 2hours / axis (X,Y,Z) | |
| Shock | <ul style="list-style-type: none"> ▪ IEC 60068-2-27 (30g 6ms, 20g 11ms; 3 bumps / direction, 18 bumps total) | |
| Connection terminals | 2.5mm ² , screw type pluggable (24...12AWG) | |
| Case material | Aluminum | |
| Weight | 0.90kg | |
| Size (W x H x D) | 63.0 x 140.0 x 117.0mm | |
| <p>1) Ripple and Noise are measured with 20MHz bandwidth, probe terminated with a 0.1µF MKP parallel capacitor. 2) Start-up type tested: - 40°C, possible at nominal voltage with load deration.</p> <p>Notes: - Technical parameters are typical, measured in laboratory environment at 25°C and 24Vdc at nominal values, after minimum 5 minutes of operation. - Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details. - Data may change without prior notice in order to improve the product.</p> | | |

Fig.1



DIMENSIONS



CONNECTION

DC BUS Connection:

- DC BUS + = wired in parallel on (+) positive DC BUS
- DC BUS - = wired in parallel on (-) negative DC BUS
- | = Earth ground

Signalling:

- INHIBIT = used to disable the buffering function (+/-)
- BACKUP = dry contact close while BU150U is delivering power COM / NO
- READY = dry contact close when the internal capacitors are charged at least at ½ of their maximal energy and the INHIBIT input is inactive COM / NO