



STATIC BYPASS SWITCH

In: 2 x 230VAC
Out: 230VAC (7.0kVA)

KEY FEATURES

- 1/4 x 19", 2U
- "Hot plug-in" design with backplane connection
 - Optimized synchronization speed with digital PLL
- CAN-Bus interface
- Display for all main operating parameters, settings and measuring values
- Front-to-rear airflow with temperature-controlled fan cooling
- SNMP interface and monitoring by WEB-Browser included

PRODUCT DESCRIPTION

The new static switch of the series is a compact electronic switch. The digital PLL guarantees minimized synchronization time of inverter and mains frequency. Due to the high synchronization speed the unit can also be used together with diesel gensets as bypass mains supply. The transfer time between the two inputs is less than 4ms. Therefore the use within an IT environment is possible.

The static bypass switch monitors both incoming sources according to the voltage level, frequency and their synchronization. In combination with the inverter series the unit can operate in offline or online mode. This function is programmable at site. All main functional parameters and measuring values are displayed on the front side LCD panel. For highest reliability the internal circuits are supplied in redundancy by the bypass mains as well as the battery circuit of the AC system.

For the communication between static bypass switch and inverter a CAN-Bus communication is used. The unit has an Ethernet interface for remote connection via SNMP protocol or WEB-Browser.

APPLICATIONS

Static bypass switch for AC power supplies in all areas of industry, telecommunication, power generation and power distribution.

TECHNICAL DATA

Nominal input voltage-Source 1	230VAC \pm 20%
Nominal input voltage-Source 2	230VAC \pm 20%
Redundant circuitry supply	91.8- 275VDC (HV-version)
Input frequency range	50/60Hz
Synchronization range	\pm 2Hz
Efficiency	\geq 99%
Mains input fuse	63A semiconductor protection
External mains fuse	Recommended; 32A gL or MCB characteristic B
Nominal output voltage	230VAC; voltage range acc. to input values; switch over threshold \pm 5 to \pm 20% programmable
Nominal output current	30.4AAC
Nominal switching capacity	7.0kVA
Overload capability	1000% for 10ms (fuse tripping of 32 A gL is guaranteed)
Output frequency	acc. to the input frequency
Transfer time	\leq 4ms
LED signalling	Operation (green), Inverter OK (green), Mains OK (green), Load on Inverter (green), Load on Mains (green), Synchronization (green), Alarm (red)
Main processor	16Bit Fujitsu
Monitoring functions	Voltage/frequency of sources 1 and 2; synchronization mains-inverter; over temperature; CAN communication lost; synchronization bus interrupted
Configuration	Via front side operating buttons UP/DOWN/ENTER/ESC and LCD (4x16 characters); via SNMP and HTTP
Fault signalization	Text message on LCD; alarm relay output
Communications interface	CAN-Bus, proprietary protocol; redundant synchronization bus; Ethernet 10Base-T
Ambient temperature	Operation: -20°C to +55°C; storage: -40°C to +85°C
Cooling	Fan cooling (temperature-regulated; monitored)
Climate conditions	according to IEC 721-3-3 class 3K3/3Z1/3B1/3C2/3S2/3M2
Max. installation altitude	\leq 1500m
Audible noise	<45dBA
Type of construction	1/4 x 19", 2U
Dimensions (W/H/D)	106.4/88.4/335mm
Weight	approx. 2.2kg
Type of enclosure / Protection class	IP20 (front panel) / 1
Colour (front panel)	RAL 7035, black imprint
CE conformity	yes
Compliance to safety standards	EN60950-1; VDE0100 T410; VDE0110; EN50178; EN60146
Compliance to EMC standards	EN55011/22 class "B"; EN61000-4 T2-5
Connections	Rear: AC inputs/output, DC input and signalization (DIN41612-M-connector); Front: Ethernet (RJ45), CAN (RJ11)



STATIC BYPASS SWITCH

In: 2 x 230VAC

Out: 230VAC (12,5kVA)

Product Description

The range of static bypass switches features the latest micro controller technology for monitoring, synchronization and communication combined with a flexible 19"-compatible rack mounting.

Parallel connection up to 12,5kVA is possible to increase the output power or system reliability by (n+1)-redundancy.

The micro processor-controlled synchronization unit guarantees mains synchronicity of single or paralleled inverters. The availability of all inverters in the system is continuously checked and monitored.

All monitoring functions and system parameters are indicated and can be adjusted by an alphanumeric display and control keys on the front panel.

Key Features

- 19", 3U
- „Hot plug-in” design
- Wide synchronization range
- Optimized mains synchronization
- Alphanumeric LCD display for measurement values and system parameters
- Complete system monitoring via CAN-Bus
- Temperature-controlled fan cooling

Technical Data

Type Range

Nominal input voltage - Source 1 + 2	220/230/240VAC, programmable
Input voltage tolerance	± 20%
Input frequency range	47-53 resp. 57-63Hz, programmable
Overall efficiency	≥99%
Nominal battery voltage	216VDC
Redundant circuitry supply-fusing (external)	1A gL
Nominal output voltage	220/230/240VAC, programmable
Switching thresholds	± 5% ... ± 20%, programmable
Nominal switching capacity	12,5kVA
Overload capability	1000% for 10 ms
Output frequency	acc. to the input frequency
Transfer time	≤4 ms
Input fusing	External with 80A, character gL
LED indications	Operation (green), Source 1 OK (green), Source 2 OK (green), Load on Mains (green), Load on Inverter (green), Synchronization (green), Alarm (red)
Monitoring functions	Source 1 and source 2 with load transfer, synchronization, over temperature, fan failure
Alphanumeric display	LCD (4x16 characters), background lighted
Signal contacts	Relay “common alarm”

Microprocessor control	Programmable monitoring functions for all system parameters; adjustment via control keys and LCD display at the front
Communication	CAN-Bus interface for communication with inverters
Ambient temperature	Operation: -20°C to +55°C, storage: -40°C to +85°C
Climatic conditions	according to IEC 721-3-3 class 3K3/3Z1/3B1/3C2/3S2/3M2
Dust	< 1mg/m ³
Max. installation altitude	≤1500m
Audible noise	< 45dB (A) at 1m distance
Type of construction	19", 3U
Dimensions (W/H/D)	483/133/360mm
Weight	approx. 12.6kg
Cooling	Temperature-controlled fan cooling (front to rear) with fan monitoring
Type of enclosure / Protection class	IP20 (front panel) / 1 acc. to EN 60950 (electr.)
Surface	Front panel: powder coating RAL 7035, black imprint; constructive parts: anodized
Connections	Rear side: AC inputs/output, DC input and signalization; Front side: 2 x CAN bus (RJ11); 1 x Sub-Min-D (not used)
CE conformity	yes...
Compliance to safety standards	EN 60950-1; VDE 0100 part 410; VDE 0110; EN 50178; EN 60146
Compliance to EMC standards	EN 55011/EN 55022 class "B"; EN 61000-4 part 2-5