



AC/DC Drop-Out Switch

PFS 3830TDC

- IEC 61000-4-11
- IEC 61000-4-29
- IEC 61000-4-34:3005/
AMD1:2009
- IEC 61000-4-34:2005/
AMD2:2025
- GB/T 17626.11
- GB/T 17626.29
- GB/T 17626.34

Features

- > 5.7-inch color touchscreen for front panel operation
- > Support current measurement and acquisition function
- > Support test sequence function
- > High-power IGBT semiconductor switches, ensuring safe and stable operation
- > Ethernet RJ45 interface for PC remote control and test report printing
- > Support simultaneous three-phase voltage interruption and voltage dip testing

Introduction

The PFS 3830TDC AC/DC Drop-out Switch is designed in accordance with the IEC 61000-4-11, IEC 61000-4-29, and IEC 61000-4-34. It is capable of simulating voltage dips and short interruptions caused by faults in power grids and substation equipment, or sudden large changes in load status.

The PFS 3830TDC is equipped with controllable semiconductor switches that can withstand instantaneous inrush currents and provide electronic short-circuit protection. It is designed to verify whether electrical and electronic equipment can avoid unsafe operating conditions when subjected to such disturbances.

Application Areas



Technical Parameters

EUT Current Measurement	LCD display
Max. Continuous EUT Current	32 A
Max. Input EUT Voltage	AC: 380 V $\pm$ 10%, 50/60 Hz $\pm$ 5% DC: 400 V
Inrush Current Withstand Capability	1,000 A
Protection	Built-in overcurrent, short-circuit, overvoltage, overtemperature, surge, EFT/burst and ESD protection. Optional external protection accessories for Line in/Line out ports
Interruption Level	0%
Voltage Interruption Mode	Selectable one/two/three-phase voltage interruption
Voltage Dip Mode	Phase-to-neutral voltage dip Phase-to-phase voltage dip IEC 61000-4-11/34 Figure 3a, 3c Note: The voltage dip level and phase angle are determined by the external synchronized power supply.
Voltage Dip and Interruption Duration	0.3 ~ 9,999 cycles or 1 ms ~ 99,999 ms
Voltage Dip and Interruption Interval	50 ms ~ 50,000 ms
Voltage Dip and Interruption Counter	1 ~ 9,999
Voltage Dip and Interruption Rise/Fall Time	AC: For generators with a rated current of ≤ 75 A: 1 μ s ~ 5 μ s (Resistor verification as specified in the standard) For generators with a rated current > 75 A: 1 μ s ~ 50 μ s (Resistor verification as specified in the standard) DC: For generators with a load impedance of 100 Ω : 1 μ s ~ 50 μ s
Synchronization	0° ~ 360°, 1° step setting or random mode
Trigger Mode	Manual, automatic, external trigger input
Input and Output Port	Coaxial terminal, three-phase four-wire (L1, L2, L3, N)

General Parameters

Display Screen	5.7-inch TFT touchscreen
Working Power	AC 220 V $\pm$ 10%, 50/60 Hz
Fuse	6 A
Max. Power Consumption	300 W
Storage Space	Infinite (PC)
Communication Mode	Ethernet LAN, RJ45
Auxiliary Interface	COMM serial port
External Trigger Input	BNC, 5 V TTL
CRO Trigger Input	BNC, 5 V TTL
Operation Trigger Input	BNC, 5 V TTL
External Synchronization Input	45 Hz ~ 65 Hz 20 ~ 500 V between the same-polarity and opposite-polarity terminals 0 ~ 500 V between the terminals and chassis

General Parameters

Safety Circuit	Stop work when safety circuit is open
Failure Detection	LCD display in front panel and stop work when failure occurs
Working Status Indication	LED indication and LCD display on the front panel
Grounding Method	Flat grounding wire
EUT Supply Voltage Injection	External power supply is required for both PF1 and PF2
Detection Output Method	Standard 1 m coaxial cable
Dimension	6 U rack, 450 (L) * 280 (W) * 620 (H) mm
Weight	Approx. 21 kg
Ambient Temperature	15°C ~ 35°C
Relative Humidity	45% ~ 75%
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

Power Cord, Test Cable, Fuse, Coaxial Cable, Flat Grounding Wire, User Manual

Optional Accessories

1	Immunity Test Software	Model: CoreLab > Support Windows 7/8/10 /11 > Supports Ethernet and serial communication modes > Supports parameter sequence, test sequences, easy for operation > Supports customer information configuration and automatic test report printing.	
2	Calibration Impedance Box	Model: R100Ω/1134 Impedance: 100 Ω Accuracy: ± 10% Power: 2,000 W Generator rated current: ≤50 A Model: R50Ω/1134 Impedance: 50 Ω Accuracy: ± 10% Power: 3,000 W Generator rated current: 50 A<I≤100 A Model: R25Ω/1134 Impedance: 25 Ω Accuracy: ± 10% Power: 6,000 W Generator rated current: >100 A	

**Optional
Accessories**

3	Calibration Device of Peak Impulse Current	Model: PIC 1134 Capacitance: 1,700 μ F Discharge resistor: 4,700 Ω Max. rated voltage: AC 230 V, DC 350 V Drive capacity of peak impulse current: Max 500 A (for power supply : 220 V - 240 V) Max 250 A (for power supply: 100 V - 120 V)	
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