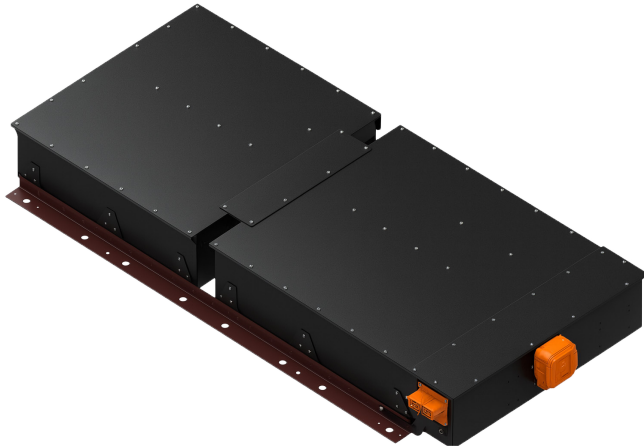


SMART RELAY 500

SR-500 HV



PRECISION BUILT WITH PURPOSE

At XAP Technology, we do not chase innovation — we build it, layer by layer, through precision, discipline, and intent. Energy is our language: one that demands silence, control, and respect for every detail.

Our engineers, from electronics to software and mechanics, work as a single team with a single aim — to design systems that not only perform, but protect, anticipate, and endure.

The SR-500 stands as the proof of this philosophy : a power relay transformed into a complete safety module, capable of switching, measuring, and securing high-voltage architectures with clarity and certainty.

Every aspect — from the busbars to the firmware — is developed and tested in house by the same multidisciplinary team.

This unity of design and execution gives our products their integrity, their precision, and their lasting value.

XAP TECHNOLOGY — CRAFTED INTELLIGENCE FOR HIGH-VOLTAGE SYSTEMS.

MASTERING ENERGY FLOW WITH PRECISION, SAFETY, ENDURANCE

INTELLIGENCE AT THE CORE:

A single module that switches, measures, protects, and records with complete autonomy.

DUAL ISOLATED VOLTAGE INSIGHT:

Continuous supervision of both sides of the circuit, ensuring safe, transparent power control.

SELF-DIAGNOSING SAFETY:

Built-in logic detects contact sticking and prevents uncontrolled current flow before it can occur.

CONTROLLED PRECHARGE MASTERY:

Internal precharge contactor to reach HV voltage progressively

INERTIAL AWARENESS:

Withstands and detects high G-forces to shutdown HV in case of abnormal inclinaison, impact or rollover

HV BATTERY PROTECTION:

Embbded algorithms to prevent over-voltage, under voltage, over-current and polarity inversion

REAL TIME HV POWER SUPPLY MONITORING:

Real-time current and voltage measurement

CONTROL AND COMMUNICATION:

FD-CAN communication with in-built diagnostic frames and control frames



► RELAYS & SENSORS: RELAY SR-500

ELECTRICAL SPECIFICATIONS

Voltage supply	7V to 75 V DC
Current consumption	2,5 A at 12V (maximum)
USB	USB 2.0 for configuration
CAN	FD-CAN 1 Mbits/s max, selectable bitrate IDs and thresholds tunable
Data logging	Internal data logging

MECHANICS

Dimensions	150 x 120 x 60 mm
Temperature	-40 °C to +85 °C
Humidity	5% to 85%
Protection	IP67
Weight	TBD

POWER SPECIFICATIONS

Voltage	Up to 1000V DC
Continuous current	500 A
Peak current	600 A (1 minute maximum)
Voltage sensing	0 to 1200V DC at 1 kHz
Current sensing	± 600 A at 1 kHz
Precharge	Relay 1000V DC ; 1 A max
Precharge	Resistor 500 Ω ; 500 W default Tunable to specific needs PTC resistor compatible
HV power	Plus side contactor Minus side contactor

SAFETY

Protections	ESD protection Reverse polarity ASIL B/C compliant UNECE R10 compliant Insulation detection Stuck or welded relay detection
Shutdown	6 axis inertial sensor for safety shutdown (acceleration and tilt thresholds tunable to need)

REFERENCE

PF0960	RELAY SR-500 HV
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