XAP TECHNOLOGY
SOLUTIONS FOR YOUR FUTURE

RETROFIT SOLUTIONS :

HVC-200 INVERTER

CONTROLLED POWER, SEAMLESS INTEGRATION

Engineered for demanding programs, the HVC-200 brings high-voltage motor control that combines sustained output, precise response, and fast integration.

In a compact enclosure with liquid cooling, it delivers 200 kW continuous (240 kW peak), holds 500 A continuously.

Native dual-drive logic powers two independent three-phase motors or a single 3/6-phase machine, cutting boxes and harness length while enabling modular architectures.

Control electronics are designed for real programs: independent CAN-FD buses for clean system partitioning, auxiliary I/O that lets the inverter act as an embedded VCL for pumps, valves, and fans, and Logic Power Latched for safe, predictable shutdowns.

Sensor compatibility is universal—resolver, Hall, sin/cos, digital SSI—so existing feedback hardware can be retained. And the embedded calibration tool (live mapping with basic / standard / expert levels) shortens time-to-tune from prototype to series, allowing real-time refinement of torque and speed behavior.

MVC-200: controlled power you can integrate quickly—built to deliver more, more reliably, for longer.

FULLY VERSATILE INVERTER

NATIVE DUAL-DRIVE, SUSTAINED CURRENT

DUAL-DRIVE, ONE BOX:
Dual-drive, one box — drives two independent 3-phase motors or a single 3/6-phase machine; replaces two inverters and shortens the harness.

MORE PHASE CURRENT, MORE TORQUE:
Continuous phase RMS up to 1000 Arms.

PEAK PHASE CURRENT:
Short-term phase peak up to 1200 Arms for stronger launches and recoveries.

POWER:
Power that holds — 200 kW continuous, 240 kW peak with 500 A bus continuous and 600 A for 60 s: headroom that stays usable under load.

THERMAL STABILITY:
Fast install, stable temps, minimal derating on long pulls.

MOTOR-EDITOR INSIDE:
Live mapping with Basic / Standard / Expert access — tune torque/speed in minutes, from prototype to series.

UNIVERSAL FEEDBACK:
Resolver, Hall, sin/cos, digital SSI, digital encoder; keep existing sensors and wiring.

BUILT-IN AUXILIARIES CONTROL:
Built-in auxiliaries control — extra I/O lets the inverter act as an embedded VCL for pumps, valves, and fans.

FIELD-HARD ENCLOSURE :
Field-hard enclosure — IP65, −40 °C to +85 °C, compact 12 kg form factor (425×350×177 mm).

FIELD-HARD ENCLOSURE :
Lower total system cost — fewer boxes, shorter harnesses, faster time-to-series, and higher torque delivered per kilogram.

MORE INFORMATION ON WWW.XAP.FR

▶ ELECTRICAL SOLUTIONS & POWERTRAIN: *HVC-200*

ELECTRICAL SPECIFICATIONS

Nominal voltage	400 V DC
Voltage range	300 V to 550 V DC
Continuous power	200 kW (at 400 V)
Peak power	240 kW (short duration)
Continuous current	500 A DC
Sustained peak current	600 A DC for >1 minute
Power protections	Overcurrent, bus over/undervoltage, over-heating, IGBT short-circuit, sensor falut detection
Derating	Sustains 600 A for >1 minute without immediate performance drop
DC connections (battery)	High-current terminals (studs/plates) — recommended cables 50–70 mm²
Motor phase outputs	6 terminals (U,V,W / X,Y,Z in dual-drive) — recommended cables 35–50 mm²
Signal connector	I/O + sensors harness (industrial type, e.g., multi-way AMPSEAL)
Grounding	Dedicated chassis ground point

ENVIRONMENT AND COMPLIANCE

Ingress protection	IP65
Vibration/shock	Motorsport/industrial-grade design (profiles to be defined per project)
EMC	integrated filters and protections (test reports on request)

COOLING & THERMAL

Cooling	Liquid (water)
Ports	Push-fit Ø 10 mm (inlet/outlet)
Operating temperature range	–40 °C to +85 °C

INTERFACES, I/O & CONNECTIVITY

Logic supply	8–75 V DC (TBC if variant differs)
Bus	2× CAN-FD (independent bit rates) Isolated USB (setup/diagnostics)
Inputs/Outputs	8 analog inputs 5 digital inputs 2 High side outpit 5 A (PWN possible)
Supported sensors	Resolver, Hall, sin/cos, digital SSI (digital resolver), digital encoder
Safety function	Logic Power Latched (controlled safe state before shutdown)
Emergency stops/ interlocks	Dedicated inputs (HV lock, doors, contactors)
Additional I/O	Logic inputs/outputs for auxiliaries (pumps, valves, fans) — acts as an embedded VCL
Formats/Protocols	Documented CAN frames (DBC), diagnostics & firmware update via USB

MOTOR CONTROL & ALGORITHMS

Drive modes	1 three-phase motor 1 six-phase motor 2 three-phase motors
Supported machine types	Permanent-magnet motors PMSM / BLDC, internal- or external-rotor
Algorithms	Flux Oriented Control (FOC) for high-dynamic torque/speed regulation
Embedded calibration	Live mapping with basic / standard / expert access levels

MECHANICS & POWER CONNECTIONS

Overall dimensions	425 × 350 × 177 mm
Weight	12 kg

REFERENCES

PF0953	HVC 200 INVERTER

XAP TECHNOLOGY
SOLUTIONS FOR YOUR FUTURE

MORE INFORMATION ON
HTTPS://STORE.XAP.FR

XAP TECHNOLOGY
298, rue des Entrepreneurs - 30420 Calvisson - FRANCE
Tél : +33 (0)4 66 02 94 94
Email: contact@xap.fr