# ATV930U40N4

Schneider Electric · Altivar Process ATV930

Three-phase variable speed drive for 380...480 V supply, dual ND/HD rating, with built-in braking unit (dynamic brake transistor).

## Hardware

**Motor power (ND Normal Duty):** 4 kW (5 HP), overload up to 120% for 60 s
Motor power (HD Heavy Duty): 3 kW (– HP; official order table column shows '-' for this model; value not published by manufacturer, catalog p.25), overload up to 150% for 60 s
**Drive rating:** Dual-rated ND/HD per official catalog table (catalog p.2/5)
Switching frequency: 4 kHz nominal for U07N4...D45N4; 2.5 kHz for D55N4...C22N4 (automatic derating above nominal frequency)
**Output frequency:** 0.1...599 Hz
Motor control: Asynchronous motor — standard constant torque, variable standard torque, optimized torque mode (open-loop sensorless flux vector and closed-loop with encoder); Synchronous PM motor and synchronous reluctance motor — open-loop and closed-loop vector control per catalog p.10-12
**Integrated safety:** 1 STO (Safe Torque Off) function, SIL3 / Cat. PL e per IEC 61508 and ISO 13849-1
**Braking:** Built-in dynamic brake transistor (chopper) per catalog; external braking resistor required
**Minimum external brake resistor:** 34 Ω minimum per installation manual NHA80932 p.90-91

## I/O Specifications

Analog inputs (integrated): 3 inputs: 2 configurable as 0...10 V or 0/4-20 mA (with PTC/PT100/PT1000/KTY84 probe input); 1 configurable as 0...±10 V
**Digital inputs (integrated):** 8 inputs, 24 V DC, positive or negative logic
**Digital output (integrated):** 1 assignable, configurable as Pulse Train Output (PTO)
**Analog outputs (integrated):** 2 outputs configurable as 0...10 V or 0/4-20 mA
**Relay outputs (integrated):** 3 outputs: 1 NO/NC + 2 NO
**Safety function inputs:** 2 inputs for STO function
**I/O expansion (optional):** Up to 3 additional I/O modules (analog in, digital in, relay out) per catalog

## Communication

**Built-in ports:** 1 Ethernet dual-port switch (RJ45); 1 Modbus serial port (RJ45)
**Protocols:** EtherNet/IP and Modbus TCP (dual-port, built-in); Modbus RTU/TCP serial
Communication expansion: 1 option slot for fieldbus modules (PROFINET, PROFIBUS DP V1, CANopen, DeviceNet, EtherCAT, POWERLINK)
**Cybersecurity:** Achilles Level 2 certified

## Electrical

**Supply voltage:** 380...480 V three-phase (-15%/+10%), 50/60 Hz
**ND Normal Duty — maximum input current:** 7.6 A at 380 V; 6.7 A at 480 V
**ND Normal Duty — apparent power:** 5.6 kVA at 380 V
**ND Normal Duty — maximum continuous output current In:** 9.3 A maximum at nominal switching frequency
**ND Normal Duty — maximum transient output current for 60 s:** 11.2 A (120% of In)
**HD Heavy Duty — maximum input current:** 6.0 A at 380 V; 5.4 A at 480 V
**HD Heavy Duty — apparent power:** 4.5 kVA at 380 V
**HD Heavy Duty — maximum continuous output current In:** 7.2 A maximum at nominal switching frequency
**HD Heavy Duty — maximum transient output current for 60 s:** 10.8 A (150% of In)
**SCCR (prospective line short-circuit current):** 50 kA maximum per catalog table
**EMC filter:** Category C2 EMC filter for U07N4...D45N4; category C3 EMC filter above D45N4 per catalog footnote (6)

## Environmental

Environmental class: IEC 60721-3-3 class 3C3 / 3S3 / 3M3 (except frame size 7) per installation manual NHA80932 p.44
Certifications: UL 508C, UL61800-5-1, EN/IEC 61800-3 (category C2/C3), EN/IEC 61800-5-1, IEC 61508, IEC 13849-1, Achilles Level 2, REACH, SEMI F47-0706 per catalog p.9
Altitude derating: up to 1000 m no derating; 1000-3000 m, derate nominal current by 1% per additional 100 m per installation manual NHA80932
**Operating temperature:** -15 to +50 °C standard, derating up to 60 °C per catalog p.17 (wall-mount IP21, ≤160 kW)
**Storage temperature:** -40 to +70 °C per catalog p.17
**Relative humidity:** 5 to 95% non-condensing per IEC 60068-2-3, catalog p.17
**Protection rating:** IP21/UL Type 1

## Physical

Power dissipation: 142 W total (ND Normal Duty) / 108 W total (HD Heavy Duty) at nominal load per installation manual NHA80932 p.125-127
**Required minimum air flow:** 38 m3/h per installation manual NHA80932 p.125-127
Dimensions (H×W×D): 350 x 144 x 206 mm (per official catalog p.84/85/86 dimension table, converted from W×H×D)
**Weight:** 4.600 kg (10.141 lb) per catalog table
**Terminal tightening torque:** 2.5 N·m per installation manual NHA80932 p.179 (Frame 1-3 power terminals)
**Installation clearance:** 100 mm above and below, 10 mm front per installation manual NHA80932 p.122 (Frame 1-5)

## Lifecycle

Current: Altivar Process ATV930 wall-mounting drive; official Schneider Electric catalog active (catalog Nov 2019).
**(Last verified:** 2026-10)