



Teknisk informasjon

Produktspekter	Altivar 71
Produkt eller type komponent	Frekvensomformer
Produktspesifikk applikasjon	Complex, high-power machines
Type komponent	ATV71
Motoreffekt kW	15 kW, 3 faser på 380...480 V
Motoreffekt hk	20 hp, 3 faser på 380...480 V
Maks motorkabel lengde	50 M skjermet kabel 100 m uskjermet kabel
Power supply voltage	380...480 V - 15...10 %
Antall faser i nettverket	3 faser
Nettstrøm	39 A for 480 V 3 faser 15 kW / 20 hp 48 A for 380 V 3 faser 15 kW / 20 hp
EMC filter	Integrert
Monteringsmåte	Med kjølelegeme
Tilsynelatende effekt	31,6 kVA på 380 V 3 faser 15 kW / 20 hp
Maks kortslutningsnivå Isc	22 kA for 3 faser
Nominell utgangsstrøm	27 A på 4 kHz 460 V 3 faser 15 kW / 20 hp 33 A på 4 kHz 380 V 3 faser 15 kW / 20 hp
Maksimale transient strøm	49,5 A for 60 s 3 faser 15 kW / 20 hp 54,5 A for 2 s 3 faser 15 kW / 20 hp
Utgangsfrekvens	0,1...599 Hz
Nominell svitsjefrekvens	4 kHz
Switching frequency	1...16 kHz Justrbar 4...16 kHz med belastningsfaktor
Motorkontroll metode	ENA (Energy tilpasning) system for ubalanserte laster Sensorløs fluks vektor kontroll (SFVC) (spenning eller strøm vektor) Fluks vektor kontroll (FVC) med sensor (strømvektor) Spennings- / frekvensforhold (2 eller 5 poeng)
Polarisasjonstype	Ingen impedans for Modbus

Komplementær

Produsert i	Synchronous motors Asynkrone motorer
Power supply voltage limits	323...528 V
Power supply frequency	50...60 Hz - 5...5 %
Power supply frequency limits	47.5...63 Hz
Hastighetsområde	1...100 for asynkrone motor i åpen sløyfe-modus, uten turtalls tilbakemeldinger 1...1000 for asynkrone motor i lukket modus med givertilbakeføring 1...50 for synkrone motor i åpen sløyfe-modus, uten turtalls tilbakemeldinger
Hastighet nøyaktighet	+/- 0.01 % av nominell hastighet i lukket modus med givertilbakeføring 0.2 Tn to Tn +/- 10 % of nominal slip uten turtalls tilbakemeldinger 0.2 Tn to Tn
Dreiemoment nøyaktighet	+/- 15 % i åpen sløyfe-modus, uten turtalls tilbakemeldinger +/- 5 % i lukket modus med givertilbakeføring
Forbigående overbelastning (vridmoment)	170 % av nominelt motormoment +/- 10 % for 60 s hvert 10. minutt 220 % av nominelt motormoment +/- 10 % for 2 s

Bremsemoment	<= 150 % med bremsing eller heise motstand 30 % uten bremsemotstand
Synkronmotor kontroll	Vector control without speed feedback
Reguleringssløyfe	Justerbar PI regulator
Motor slip kompensasjon	Justrbar Not available in voltage/frequency ratio (2 or 5 points) Automatic whatever the load Suppressable
Diagnostic	Drive voltage: 1 LED (Rød)
Utgangsspenning	<= strømforsyningsspenning
Isolasjon	Electrical between power and control
Type of cable for mounting in an enclosure	With a NEMA Type1 kit: 3 ledning(er)UL 508 kabel på 40 °C, kobber 75 ° C / PVC With an IP21 or an IP31 kit: 3 ledning(er)IEC kabel på 40 °C, kobber 70 ° C / PVC Without mounting kit: 1 ledning(er)IEC kabel på 45 °C, kobber 70 ° C / PVC Without mounting kit: 1 ledning(er)IEC kabel på 45 °C, kobber 90 ° C / XLPE/EPR
Elektrisk tilkobling	Klemme, klem kapasitet: 2.5 mm ² , AWG 14 (AI1-/AI1+, AI2, AO1, R1A, R1B, R1C, R2A, R2B, LI1...LI6, PWR) Klemme, klem kapasitet: 35 mm ² , AWG 2 (L1/R, L2/S, L3/T, U/T1, V/T2, W/T3, PC/-, PO, PA/+, PA, PB)
Tiltrekningsmoment	0,6 N.M (AI1-/AI1+, AI2, AO1, R1A, R1B, R1C, R2A, R2B, LI1...LI6, PWR) 5,4 N.m, 47.7 lb.in (L1/R, L2/S, L3/T, U/T1, V/T2, W/T3, PC/-, PO, PA/+, PA, PB)
Forsyning	Internal supply for reference potentiometer (1 to 10 kOhm): 10.5 V DC +/- 5 %, <10 mA, type beskyttelse: overspenning og kortslutnings beskyttelse Internal supply: 24 V DC (21...27 V), <200 mA, type beskyttelse: overspenning og kortslutnings beskyttelse
Antall analoge innganger	2
Analogue input type	AI1-/AI1+ bipolar differensiell spenning: +/- 10 V DC 24 V max, oppløsning 11 bits + sign AI2 programvare-konfigurerbar strøm: 0...20 mA, impedans: 242 Ohm, oppløsning 11 bits AI2 programvare-konfigurerbar spenning: 0...10 V DC 24 V max, impedans: 30000 Ohm, oppløsning 11 bits
Input sampling time	2 Ms +/- 0.5 ms (AI1-/AI1+) - analog input 2 Ms +/- 0.5 ms (AI2) - analog input 2 Ms +/- 0.5 ms (LI1...LI5) - discrete input 2 ms +/- 0.5 ms (LI6) hvis konfigurert som logisk inngang - discrete input
Responstid	<= 100 ms i STO (Safe Torque Off) AO1 2 ms, toleranse +/- 0.5 ms for analog output R1A, R1B, R1C 7 ms, toleranse +/- 0.5 ms for discrete output R2A, R2B 7 ms, toleranse +/- 0.5 ms for discrete output
Absolute accuracy precision	+/- 0.6 % (AI1-/AI1+) ved en temperaturendring 60 ° C +/- 0.6 % (AI2) ved en temperaturendring 60 ° C +/- 1 % (AO1) ved en temperaturendring 60 ° C
Lineær feil	+/- 0.15 % of maksimal verdi (AI1-/AI1+, AI2) +/- 0.2 % (AO1)
Analog utgangsnummer	1
Analog utgangstype	AO1 programvare-konfigurerbar logisk utgang 10 V 20 mA AO1 programvare-konfigurerbar strøm 0...20 mA, impedans: 500 Ohm, oppløsning 10 bits AO1 programvare-konfigurerbar spenning 0...10 V DC, impedans: 470 Ohm, oppløsning 10 bits
Antall digitale utganger	2
Digitale utganger	Konfigurerbar relé logikk: (R1A, R1B, R1C) NO/NC - 100000 sykluser Konfigurerbar relé logikk: (R2A, R2B) Nei - 100000 sykluser
Minimum brytestrøm	3 mA på 24 V DC for konfigurerbar relé logikk
Maximum svitsjestrøm	R1, R2: 2 A på 250 V AC Induktiv last, cos phi = 0,4 R1, R2: 2 A på 30 V DC Induktiv last, cos phi = 0,4 R1, R2: 5 A på 250 V AC Ohmsk last, cos phi = 1 R1, R2: 5 A på 30 V DC Ohmsk last, cos phi = 1
Digital inngangsnummer	7
Digital inngangstype	LI1...LI5: programmerbar 24 V DC med nivå 1 PLC, impedans: 3500 Ohm LI6: programmerbar bryter 24 V DC med nivå 1 PLC, impedans: 3500 Ohm LI6: bytte-konfigurerbar PTC probe 0...6, impedans: 1500 Ohm PWR: sikkerhetsinngang 24 V DC, impedans: 1500 Ohm i samsvar med ISO 13849-1 nivå d

Diskrét inngangs logikk	Negativ logikk (sink) (LI1...LI5), > 16 V (state 0), < 10 V (state 1) Positiv logikk (kilde) (LI1...LI5), < 5 V (state 0), > 11 V (state 1) Negativ logikk (sink) (LI6)hvis konfigurert som logisk inngang, > 16 V (state 0), < 10 V (state 1) Positiv logikk (kilde) (LI6)hvis konfigurert som logisk inngang, < 5 V (state 0), > 11 V (state 1)
Akselerasjons- og retardasjonsramper	Automatisk tilpasning av rampen hvis bremsekapasitet overskrides, ved hjelp av motstand Lineær justerbare separat fra 0,01 til 9000 s S, U eller tilpasset
Bremsing til stillstand	Ved DC-bremsing
Beskyttelsestype	Mot overskridelse av hastighetsgrenser: drive Mot bortfall av nettfase: drive Break on the control circuit: drive Input phase breaks: drive Line supply overvoltage: drive Line supply undervoltage: drive Overspenning mellom utgangsfaser og jording: drive Overopphetingsvern: drive Overspenninger på DC bus: drive Short-circuit between motor phases: drive Thermal protection: drive Mot brudd av motorfase: Motor Power removal: Motor Thermal protection: Motor
Isolasjonsmotstand	> 1 mOhm 500 V DC i 1 minutt til jorden
Frekvensoppløsning	Analog inngang: 0.024/50 Hz Display unit: 0,1 Hz
Kommunikasjonsport protokoll	Modbus CANopen
Type konektor	1 RJ45 (on front face) for Modbus 1 RJ45 (on terminal) for Modbus Han SUB-D 9 på RJ45 for CANopen
Fysisk interface	2-tråds RS 485 for Modbus
Ramme for overføring	RTU for Modbus
Overføringshastighet	4800 bps, 9600 bps, 19200 bps, 38.4 Kbps for Modbus on terminal 9600 bps, 19200 bps for Modbus on front face 20 kbps, 50 kbps, 125 kbps, 250 kbps, 500 kbps, 1 Mbps for CANopen
Dataformat	8 bits, en stop, lik paritet for Modbus on front face 8 biter, odd selv eller ingen konfigurerbar paritet for Modbus on terminal
Antall adresser	1...127 for CANopen 1...247 for Modbus
Tilgangsmetode	Slave CANopen
Merking	CE
Driftsposisjon	Vertikal +/- 10 grader
Høyde	400 mm
Dybde	213 mm
Bredde	230 mm
Vekt	13 kg
Funksjonalitet	Full
Specific application	Andre applikasjoner
Funksjonskort	Kommunikasjon kort for CC-Link Controller inside programmable card Kommunikasjon kort for DeviceNet Kommunikasjon kort for EtherNet/IP Kommunikasjon kort for Fipio I/O utvidelses kort Kommunikasjon kort for Interbus-S Grensesnittkort for enkoder Kommunikasjon kort for Modbus Plus Kommunikasjon kort for Modbus TCP Kommunikasjon kort for Modbus/Uni-Telway Overhead crane card Kommunikasjon kort for Profibus DP Kommunikasjon kort for Profibus DP V1

Miljø

Støynivå	60,2 dB i samsvar med 86/188/EEC
Dielektrisk styrke	3535 V DC mellom jord og effektklemmer 5092 V DC mellom kontroll og effektklemmer
Elektromagnetisk kompatibilitet	1.2/50 µs - 8/20 µs surge immunity test nivå 3 i samsvar med IEC 61000-4-5 Immunitetstest for ledet radiofrekvens nivå 3 i samsvar med IEC 61000-4-6 Electrical fast transient/burst immunity test nivå 4 i samsvar med IEC 61000-4-4 Immunitetstest for elektrostatisk utladning nivå 3 i samsvar med IEC 61000-4-2 Strålings radiofrekvente elektromagnetiske felt immunitet test nivå 3 i samsvar med IEC 61000-4-3 Spenningsfall og avbrudd immunitet test i samsvar med IEC 61000-4-11
Standarder	IEC 61800-3 miljø 2 kategori C3 IEC 60721-3-3 class 3S2 EN 55011 klasse A gruppe 2 IEC 60721-3-3 class 3C1 IEC 61800-3 miljø 1 kategori C3 UL Type 1 IEC 61800-5-1 IEC 61800-3
Produktsertifikater	CSA[RETURN]UL[RETURN]C-Tick[RETURN]NOM 117[RETURN]GOST
Forurensningsgrad	2 i samsvar med IEC 61800-5-1
IP-grad	IP20
Vibrasjonsmotstand	1 gn (f= 13...200 Hz) i samsvar med IEC 60068-2-6 1.5mm topp til topp (f= 3...13 Hz) i samsvar med IEC 60068-2-6
Støtmotstand	15 gn for 11 ms i samsvar med IEC 60068-2-27
Relativ fuktighet	5...95 % uten kondens i samsvar med IEC 60068-2-3 5...95 % uten dryppende vann i samsvar med IEC 60068-2-3
Omgivelsestemperatur for drift	-10...50 °C (uten lastreduksjon)
Omgivelsestemperatur for lagring	-25...70 °C
Driftshøyde	<= 1000 m uten lastreduksjon 1000...3000 m med dagens effektreduksjon 1% per 100 m

Forpakkingsinformasjon

Enhetstype pakke 1	PCE
Antall enheter i pakke 1	1
Pakke 1 Høyde	36,0 cm
Pakke 1 Bredde	60,0 cm
Pakke 1 Vekt	41,0 cm
Package 1 Weight	15,458 kg
Enhetstype pakke 2	P06
Antall enheter i pakke 2	2
Pakke 2 Høyde	75,0 cm
Pakke 2 Bredde	60,0 cm
Pakke 2 Lengde	80,0 cm
Pakke 2 Vekt	39,416 kg

Bærekraftig

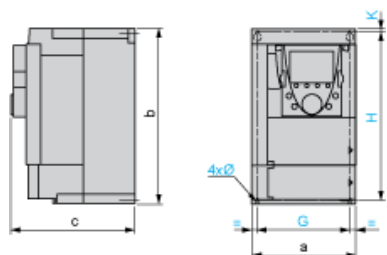
Produktets miljøstatus	Green Premium miljømerket produkt
EU RoHS-direktiv	Proaktivt i samsvar (Produktet inngår ikke i EUs RoHS direktivet) EU RoHS-erklæring
Kvikksølvfri	Ja
Kinas RoHS-forskrift	Kinas RoHS-Erklæring
Informasjon om RoHS-unntak	Ja
Produktets livssyklus	Informasjon Om Levetidsslutt
WEEE	Innen EU må produktet avhendes i henhold til bestemte regler for avfallshåndtering og aldri kastes som husholdningsavfall.

Garantiperiode

Garanti	18 months
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UL Type 1/IP 20 Drives

Dimensions without Option Card



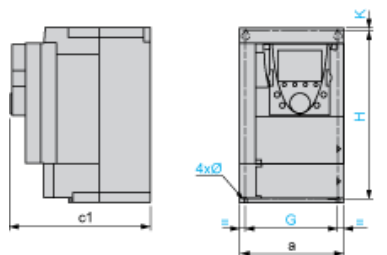
Dimensions in mm

a	b	c	G	H	K	Ø
230	400	213	210	386	8	6

Dimensions in in.

a	b	c	G	H	K	Ø
9.05	15.75	8.38	8.26	15.20	0.31	0.23

Dimensions with 1 Option Card (1)



Dimensions in mm

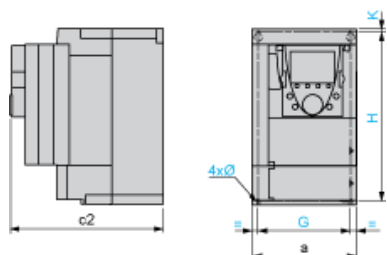
a	c1	G	H	K	Ø
230	236	210	386	8	6

Dimensions in in.

a	c1	G	H	K	Ø
9.05	9.29	8.26	15.20	0.31	0.23

(1) Option cards: I/O extension cards, communication cards or "Controller Inside" programmable card.

Dimensions with 2 Option Cards (1)



Dimensions in mm

a	c2	G	H	K	Ø
230	259	210	386	8	6

Dimensions in in.

a	c2	G	H	K	Ø
9.05	10.20	8.26	15.20	0.31	0.23

(1) Option cards: I/O extension cards, communication cards or "Controller Inside" programmable card.

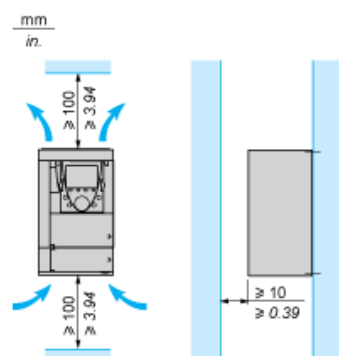
Mounting Recommendations

Depending on the conditions in which the drive is to be used, its installation will require certain precautions and the use of appropriate accessories.

Install the unit vertically:

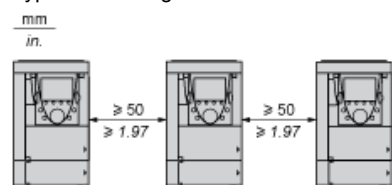
- Avoid placing it close to heating elements
- Leave sufficient free space to ensure that the air required for cooling purposes can circulate from the bottom to the top of the unit.

Clearance

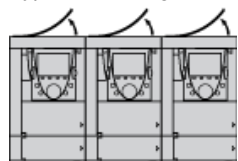


Mounting Types

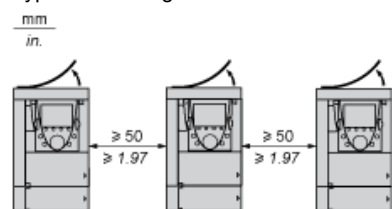
Type A Mounting



Type B Mounting



Type C Mounting



By removing the protective blanking cover from the top of the drive, the degree of protection for the drive becomes IP 20.

The protective blanking cover may vary according to the drive model (refer to the user guide).

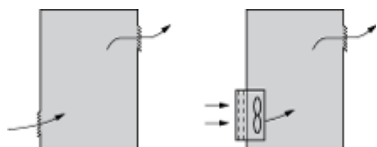
The protective blanking cover must be removed from ATV 71P...N4Z drives when they are mounted in a dust and damp proof enclosure.

Specific Recommendations for Mounting the Drive in an Enclosure

Ventilation

To ensure proper air circulation in the drive:

- Fit ventilation grilles.
- Ensure that there is sufficient ventilation. If there is not, install a forced ventilation unit with a filter. The openings and/or fans must provide a flow rate at least equal to that of the drive fans (refer to the product characteristics).



- Use special filters with IP 54 protection.
- Remove the blanking cover from the top of the drive.

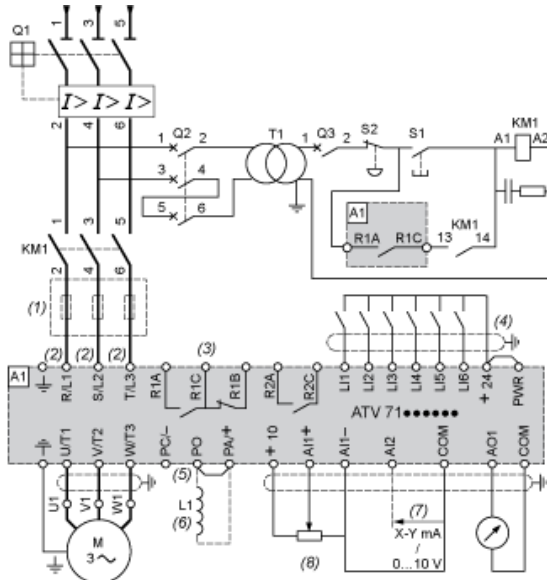
Dust and Damp Proof Metal Enclosure (IP 54)

The drive must be mounted in a dust and damp proof enclosure in certain environmental conditions: dust, corrosive gases, high humidity with risk of condensation and dripping water, splashing liquid, etc.

This enables the drive to be used in an enclosure where the maximum internal temperature reaches 50°C.

Wiring Diagram Conforming to Standards EN 954-1 Category 1, IEC/EN 61508 Capacity SIL1, in Stopping Category 0 According to IEC/EN 60204-1

Three-Phase Power Supply with Upstream Breaking via Contactor

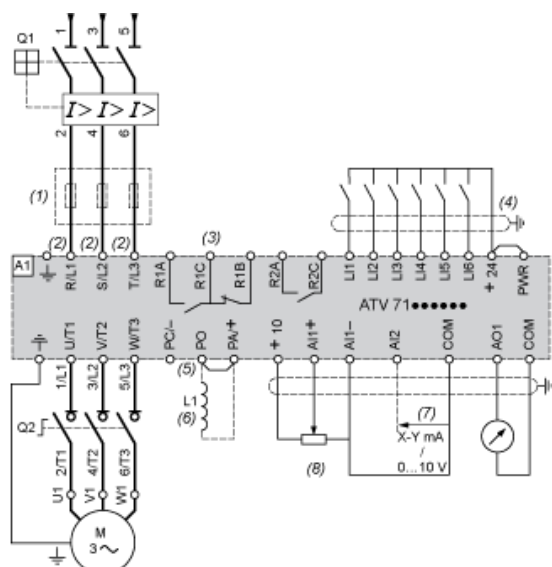


- A1 ATV71 drive
- KM1 Contactor
- L1 DC choke
- Q1 Circuit-breaker
- Q2 GV2 L rated at twice the nominal primary current of T1
- Q3 GB2CB05
- S1, XB4 B or XB5 A pushbuttons
- S2
- T1 100 VA transformer 220 V secondary
- (1) Line choke (three-phase); mandatory for ATV71HC11Y...HC63Y drives (except when a special transformer is used (12-pulse)).
- (2) For ATV71HC40N4 drives combined with a 400 kW motor, ATV71HC50N4 and ATV71HC40Y...HC63Y, refer to the power terminal connections diagram.
- (3) Fault relay contacts. Used for remote signalling of the drive status.
- (4) Connection of the common for the logic inputs depends on the positioning of the SW1 switch. The above diagram shows the internal power supply switched to the "source" position (for other connection types, refer to the user guide).
- (5) There is no PO terminal on ATV71HC11Y...HC63Y drives.
- (6) Optional DC choke for ATV71H...M3, ATV71HD11M3X...HD45M3X, ATV71•075N4...•D75N4 and ATV71P...N4Z drives. Connected in place of the strap between the PO and PA/+ terminals. For ATV71HD55M3X, HD75M3X, ATV71HD90N4...HC50N4 drives, the choke is supplied with the drive; the customer is responsible for connecting it.
- (7) Software-configurable current (0...20 mA) or voltage (0...10 V) analog input.
- (8) Reference potentiometer.

All terminals are located at the bottom of the drive. Fit interference suppressors on all inductive circuits near the drive or connected on the same circuit, such as relays, contactors, solenoid valves, fluorescent lighting, etc.

Wiring Diagram Conforming to Standards EN 954-1 Category 1, IEC/EN 61508 Capacity SIL1, in Stopping Category 0 According to IEC/EN 60204-1

Three-Phase Power Supply with Downstream Breaking via Switch Disconnecter



- A1 ATV71 drive
- L1 DC choke
- Q1 Circuit-breaker
- Q2 Switch disconnecter (Vario)
- (1) Line choke (three-phase), mandatory for ATV71HC11Y...HC63Y drives (except when a special transformer is used (12-pulse)).
- (2) For ATV71HC40N4 drives combined with a 400 kW motor, ATV71HC50N4 and ATV71HC40Y...HC63Y, refer to the power terminal connections diagram.
- (3) Fault relay contacts. Used for remote signalling of the drive status.
- (4) Connection of the common for the logic inputs depends on the positioning of the SW1 switch. The above diagram shows the internal power supply switched to the "source" position (for other connection types, refer to the user guide).
- (5) There is no PO terminal on ATV71HC11Y...HC63Y drives.
- (6) Optional DC choke for ATV71H...M3, ATV71HD11M3X...HD45M3X, ATV71•075N4...•D75N4 and ATV71P...N4Z drives. Connected in place of the strap between the PO and PA/+ terminals. For ATV71HD55M3X, HD75M3X, ATV71HD90N4...HC50N4 drives, the choke is supplied with the drive; the customer is responsible for connecting it.
- (7) Software-configurable current (0...20 mA) or voltage (0...10 V) analog input.
- (8) Reference potentiometer.

All terminals are located at the bottom of the drive. Fit interference suppressors on all inductive circuits near the drive or connected on the same circuit, such as relays, contactors, solenoid valves, fluorescent lighting, etc.

Wiring Diagram Conforming to Standards EN 954-1 Category 3, IEC/EN 61508 Capacity SIL2, in Stopping Category 0 According to IEC/EN 60204-1

Three-Phase Power Supply, Low Inertia Machine, Vertical Movement

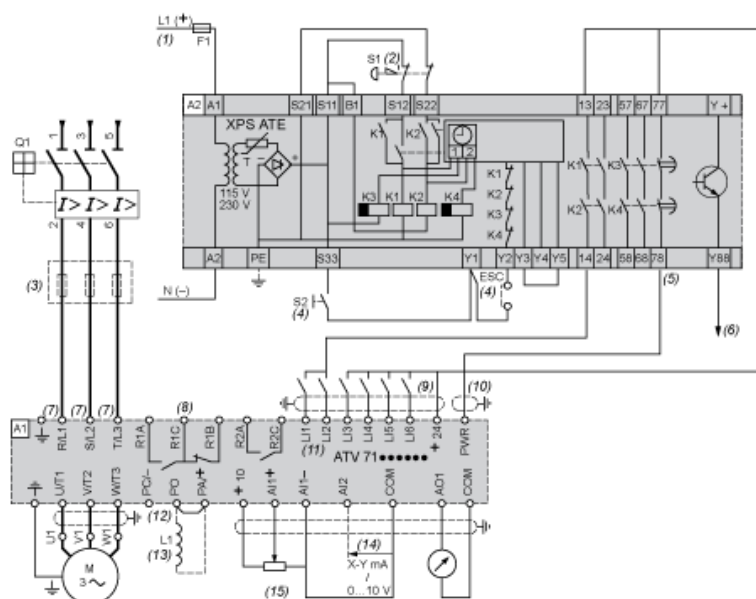


- A1 ATV71 drive
- A2 Preventa XPS AC safety module for monitoring emergency stops and switches. One safety module can manage the "Power Removal" function for several drives on the same machine. In this case, each drive must connect its PWR terminal to its + 24 V via the safety contacts on the XPS AC module. These contacts are independent for each drive.
- F1 Fuse
- L1 DC choke
- Q1 Circuit-breaker
- S1 Emergency stop button with 2 contacts
- S2 XB4 B or XB5 A pushbutton
- (1) Power supply: 24 Vdc or Vac, 48 Vac, 115 Vac, 230 Vac.
- (2) S2: resets XPS AC module on power-up or after an emergency stop. ESC can be used to set external starting conditions.
- (3) Requests freewheel stopping of the movement and activates the "Power Removal" safety function.
- (4) Line choke (three-phase), mandatory for and ATV71HC11Y...HC63Y drives (except when a special transformer is used (12-pulse)).
- (5) The logic output can be used to signal that the machine is in a safe stop state.
- (6) For ATV71HC40N4 drives combined with a 400 kW motor, ATV71HC50N4 and ATV71HC40Y...HC63Y, refer to the power terminal connections diagram.
- (7) Fault relay contacts. Used for remote signalling of the drive status.
- (8) Connection of the common for the logic inputs depends on the positioning of the SW1 switch. The above diagram shows the internal power supply switched to the "source" position (for other connection types, refer to the user guide).
- (9) Standardized coaxial cable, type RG174/U according to MIL-C17 or KX3B according to NF C 93-550, external diameter 2.54 mm / 0.09 in., maximum length 15 m / 49.21 ft. The cable shielding must be earthed.
- (10) There is no PO terminal on ATV71HC11Y...HC63Y drives.
- (11) Optional DC choke for ATV71H...M3, ATV71HD11M3X...HD45M3X, ATV71•075N4...•D75N4 and ATV71P...N4Z drives. Connected in place of the strap between the PO and PA/+ terminals. For ATV71HD55M3X, HD75M3X, ATV71HD90N4...HC50N4 drives, the choke is supplied with the drive; the customer is responsible for connecting it.
- (12) Software-configurable current (0...20 mA) or voltage (0...10 V) analog input.
- (13) Reference potentiometer.

All terminals are located at the bottom of the drive. Fit interference suppressors on all inductive circuits near the drive or connected on the same circuit, such as relays, contactors, solenoid valves, fluorescent lighting, etc.

Wiring Diagram Conforming to Standards EN 954-1 Category 3, IEC/EN 61508 Capacity SIL2, in Stopping Category 1 According to IEC/EN 60204-1

Three-Phase Power Supply, High Inertia Machine

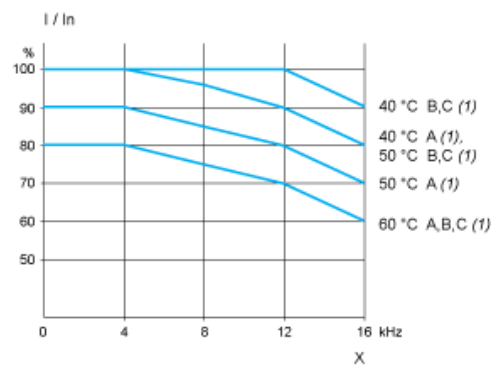


- A1 ATV71 drive
- A2 Preventa XPS ATE safety module for monitoring emergency stops and switches. One safety module can manage the "Power Removal"
- (5) safety function for several drives on the same machine. In this case the time delay must be adjusted on the drive controlling the motor that requires the longest stopping time. In addition, each drive must connect its PWR terminal to its + 24 V via the safety contacts on the XPS ATE module. These contacts are independent for each drive.
- F1 Fuse
- L1 DC choke
- Q1 Circuit-breaker
- S1 Emergency stop button with 2 N/C contacts
- S2 Run button
- (1) Power supply: 24 Vdc or Vac, 115 Vac, 230 Vac.
- (2) Requests controlled stopping of the movement and activates the "Power Removal" safety function.
- (3) Line choke (three-phase), mandatory for ATV71HC11Y...HC63Y drives (except when a special transformer is used (12-pulse)).
- S2: resets XPS ATE module on power-up or after an emergency stop. ESC can be used to set external starting conditions.
- (5) For stopping times requiring more than 30 seconds in category 1, use a Preventa XPS AV safety module which can provide a maximum time delay of 300 seconds.
- (6) The logic output can be used to signal that the machine is in a safe state.
- (7) For ATV71HC40N4 drives combined with a 400 kW motor, ATV71HC50N4 and ATV71HC40Y...HC63Y, refer to the power terminal connections diagram.
- (8) Fault relay contacts. Used for remote signalling of the drive status.
- (9) Connection of the common for the logic inputs depends on the positioning of the SW1 switch. The above diagram shows the internal power supply switched to the "source" position (for other connection types, refer to the user guide).
- (10) Standardized coaxial cable, type RG174/U according to MIL-C17 or KX3B according to NF C 93-550, external diameter 2.54 mm/0.09 in., maximum length 15 m/49.21 ft. The cable shielding must be earthed.
- (11) Logic inputs LI1 and LI2 must be assigned to the direction of rotation: LI1 in the forward direction and LI2 in the reverse direction.
- (12) There is no PO terminal on ATV71HC11Y...HC63Y drives.
- (13) Optional DC choke for ATV71H...M3, ATV71HD11M3X...HD45M3X, ATV71•075N4...•D75N4 and ATV71P...N4Z drives. Connected in place of the strap between the PO and PA/+ terminals. For ATV71HD55M3X, HD75M3X, ATV71HD90N4...HC50N4 drives, the choke is supplied with the drive; the customer is responsible for connecting it.
- (14) Software-configurable current (0...20 mA) or voltage (0...10 V) analog input.
- (15) Reference potentiometer.

All terminals are located at the bottom of the drive. Fit interference suppressors on all inductive circuits near the drive or connected on the same circuit, such as relays, contactors, solenoid valves, fluorescent lighting, etc.

Derating Curves

The derating curves for the drive nominal current (I_n) depend on the temperature, the switching frequency and the mounting type. For intermediate temperatures (e.g. 55°C), interpolate between 2 curves.



X Switching frequency
(1) Mounting type