Lista sa podacima o proizvodima

Specifikacije

frekventni regulator ATV71 - 11kW-15HP - 480V - EMC filter- grafički terminal

ATV71HD11N4

Obustavljeno: 27. 1. 2021.

Discontinued

Osnovne informacije

Grupa Proizvoda	Altivar 71
Tip Proizvoda Ili Komponente	Frekventni regulator
Specifične Primene Proizvoda	Kompleksne, snažne mašine
Ime Komponente	ATV71
Snaga Motora Kw	11 kW, trofazne pri 380...480 V
Snaga Motora Hp	15 hp, trofazne pri 380...480 V
Maksimalna Dužina Kabla Motora	50 m oklopljen kabl 100 m neoklopljen kabl
Power Supply Voltage	380...480 V - 15...10 %
Broj Faza Mreže	Trofazne
Linijska Struja	30 A za 480 V trofazne 11 kW / 15 hp 36,6 A za 380 V trofazne 11 kW / 15 hp
Emc Filter	Integrisani
Način Spajanja	Sa hladnjakom
Prividna Snaga	24,1 kVA pri 380 V trofazne 11 kW / 15 hp
Linijska Struja Kratkog Spoja Isc	22 kA za trofazne
Nazivna Izlazna Struja	21 A pri 4 kHz 460 V trofazne 11 kW / 15 hp 27,7 A pri 4 kHz 380 V trofazne 11 kW / 15 hp
Maksimalna Prelazna Struja	41,6 A za 60 s trofazne 11 kW / 15 hp 45,7 A za 2 s trofazne 11 kW / 15 hp
Izlazna Frekvencija	0,1…599 Hz
Nazivna Prekidačka Frekvencija	4 kHz
Prekidačka Frekvencija	1...16 kHz podesivo 4...16 kHz sa faktorom smanjenja karakteristika
Profil Upravljanja Asinhronim Motorom	ENA (Energy adaptation) sistem za neuravnotežena opterećenja U/f upravljanje (2 ili 5 tačaka) Fluks vektorska kontrola bez senzora (SFVC) (napon ili struja) Fluks vektorska kontrola (FVC) sa senzorom (struja)
Tip Polarizacije	Bez impedanse za Modbus

Dopunske informacije

Namena Proizvoda	Sinhroni motori Asinhroni motori
Power Supply Voltage Limits	323…528 V
Power Supply Frequency	50...60 Hz +5...5 %

Power Supply Frequency Limits	47.5...63 Hz
Opseg Brzina	1…100 za asinhroni motor u otvorenoj petlji, bez povratne sprege 1…1000 za asinhroni motor u zatvorenoj petlji sa enkoderom 1…50 za sinhroni motor u otvorenoj petlji, bez povratne sprege
Tačnost Brzine	+/- 0.01 % nominalne brzine u zatvorenoj petlji sa enkoderom 0.2 Tn do Tn +/- 10 % nominalnog klizanja bez brzinske sprege 0.2 Tn do Tn
Tačnost Momenta	+/- 15 % u otvorenoj petlji, bez povratne sprege +/- 5 % u zatvorenoj petlji sa enkoderom
Prelazni Nadmoment	170 % nazivnog momenta motora +/- 10 % za 60 s svakih 10 minuta 220 % nazivnog momenta motora +/- 10 % za 2 s
Moment Kočenja	<= 150 % sa kočionim ili otpornikom za dizalice 30 % bez kočionog otpornika
Profil Upravljanja Sinhronim Motorom	Vektorsko upravljanje bez povratne informacije o brzini
Podešavanje Petlje	Podesivi PI regulator
Kompenzacija Klizanja Motora	Podesiva Može se ukinuti Automatska bez obzira na opterećenje Nedostupna u U/f upravljanju (2 ili 5 tačaka)
Diagnostic	Zanapona frekventnog regulatora: 1 LED (crvena)
Izlazni Napon	<= napon napajanja
Izolacija	Električna između napajanja i upravljanja
Type Of Cable For Mounting In An Enclosure	Sa NEMA tip 1 setom: 3 žica(e)UL 508 kabl pri 40 °C, bakar 75 °C / PVC Sa IP21 ili IP31 setom: 3 žica(e)IEC kabl pri 40 °C, bakar 70 °C / PVC Bez seta za montažu: 1 žica(e)IEC kabl pri 45 °C, bakar 70 °C / PVC Bez seta za montažu: 1 žica(e)IEC kabl pri 45 °C, bakar 90 °C / XLPE/EPR
Električna Veza	Priključak, kapacitet stezaljke: 2.5 mm², AWG 14 (AI1-/AI1+, AI2, AO1, R1A, R1B, R1C, R2A, R2B, LI1...LI6, PWR) Priključak, kapacitet stezaljke: 16 mm², AWG 4 (L1/R, L2/S, L3/T, U/T1, V/T2, W/T3, PC/-, PO, PA/+, PA, PB)
Moment Pritezanja	0,6 N.m (AI1-/AI1+, AI2, AO1, R1A, R1B, R1C, R2A, R2B, LI1...LI6, PWR) 3 N.m, 26.5 lb.in (L1/R, L2/S, L3/T, U/T1, V/T2, W/T3, PC/-, PO, PA/+, PA, PB)
Napajanje	Interno napajanje za potenciometar (1 do 10 kΩ): 10.5 V DC +/- 5 %, <10 mA, tip zaštite: zaštita od preopterećenja i kratkog spoja Interno napajanje: 24 V DC (21…27 V), <200 mA, tip zaštite: zaštita od preopterećenja i kratkog spoja
Broj Analognih Ulaza	2
Tip Analognog Ulaza	AI1-/AI1+ bipolarni diferencijalni napon: +/- 10 V DC 24 V maksimalno, rezolucija 11 bitova + znak AI2 softverski podesiva struja: 0...20 mA, impedansa: 242 Ohm, rezolucija 11 bitova AI2 softverski podesiv napon: 0...10 V DC 24 V maksimalno, impedansa: 30000 Ohm, rezolucija 11 bitova
Input Sampling Time	2 milisekundi +/- 0.5 ms (AI1-/AI1+) - analogni ulaz(i) 2 milisekundi +/- 0.5 ms (AI2) - analogni ulaz(i) 2 milisekundi +/- 0.5 ms (LI1...LI5) - digitalni ulaz(i) 2 milisekundi +/- 0.5 ms (LI6)ako je konfigurisan kao digitalni ulaz - digitalni ulaz(i)
Vreme Odziva	<= 100 ms u STO (Safe Torque Off) AO1 2 ms, tolerancija +/- 0.5 ms za analogni izlaz(e) R1A, R1B, R1C 7 ms, tolerancija +/- 0.5 ms za digitalni izlaz(e) R2A, R2B 7 ms, tolerancija +/- 0.5 ms za digitalni izlaz(e)
Absolute Accuracy Precision	+/- 0.6 % (AI1-/AI1+) za temperaturne promene od 60 °C +/- 0.6 % (AI2) za temperaturne promene od 60 °C +/- 1 % (AO1) za temperaturne promene od 60 °C
Greška Linearnosti	+/- 0.15 % maksimalne vrednosti (AI1-/AI1+, AI2) +/- 0.2 % (AO1)
Broj Analognih Izlaza	1

Tip Analognog Izlaza	AO1 softverski podesivi digitalni izlaz 10 V 20 mA AO1 softverski podesiva struja 0...20 mA, impedansa: 500 Ω, rezolucija 10 bitova AO1 softverski podesivi napon 0...10 V DC, impedansa: 470 Ω, rezolucija 10 bitova
Broj Digitalnih Izlaza	2
Tip Digitalnih Izlaza	Podesiva funkcija releja: (R1A, R1B, R1C) NO/NC - 100000 ciklusa Podesiva funkcija releja: (R2A, R2B) NO - 100000 ciklusa
Minimalna Struja Preklapanja	3 mA pri 24 V DC za podesiva funkcija releja
Maksimalna Struja Preklapanja	R1, R2: 2 A pri 250 V AC induktivno opterećenje, cos phi = 0,4 R1, R2: 2 A pri 30 V DC induktivno opterećenje, cos phi = 0,4 R1, R2: 5 A pri 250 V AC rezistivno opterećenje, cos phi = 1 R1, R2: 5 A pri 30 V DC rezistivno opterećenje, cos phi = 1
Broj Digitalnog Ulaza	7
Tip Digitalnih Ulaza	LI1...LI5: podesivi 24 V DC sa nivo 1 PLC, impedansa: 3500 Ω LI6: podesiv izbornim prekidačem 24 V DC sa nivo 1 PLC, impedansa: 3500 Ω LI6: PTC sonda - podesiv izbornim prekidačem 0…6, impedansa: 1500 Ohm PWR: sigurnosni ulaz 24 V DC, impedansa: 1500 Ohm u skladu sa ISO 13849-1 nivo d
Logika Digitalnog Ulaza	Negativna logika (sink) (LI1...LI5), > 16 V (stanje 0), < 10 V (stanje 1) Pozitivna logika (source) (LI1...LI5), < 5 V (stanje 0), > 11 V (stanje 1) Negativna logika (sink) (LI6)ako je konfigurisan kao digitalni ulaz, > 16 V (stanje 0), < 10 V (stanje 1) Pozitivna logika (source) (LI6)ako je konfigurisan kao digitalni ulaz, < 5 V (stanje 0), > 11 V (stanje 1)
Rampe Ubrzanja I Usporenja	S, U ili korisnički definisano Automatska adaptacija rampe ako je premašena mogućnost kočenja, sa otpornikom Linearno podesivo zasebno od 0.01 do 9000 s
Kočenje Do Mirovanja	Sa ubacivanjem DC struje
Tip Zaštite	Protiv prekoračenja brzine: frekventni regulator Protiv gubitka ulazne faze: frekventni regulator Kvar na upravljačkom kolu: frekventni regulator Zaštita od gubitka ulazne faze: frekventni regulator Prenapon napajanja: frekventni regulator Podnapon napajanja: frekventni regulator Prekostrujna između izlaznih faza i uzemljenja: frekventni regulator Zaštita od pregrevanja: frekventni regulator Prenaponi na DC bus-u: frekventni regulator Kratki spoj između faza motora: frekventni regulator Termička zaštita: frekventni regulator Gubitak faze motora: motor Ukidanje napajanja izlaza: motor Termička zaštita: motor
Otpornost Izolacije	> 1 mOhm 500 V DC tokom 1 minuta prema uzemljenju
Rezolucija Frekvencije	Analogni ulaz: 0.024/50 Hz Displej: 0.1 Hz
Protokol Komunikacionog Porta	CANopen Modbus
Tip Priključka	1 RJ45 (na prednjem delu) za Modbus 1 RJ45 (na priključku) za Modbus Muški SUB-D 9 na RJ45 za CANopen
Fizički Interfejs	2-žični RS 485 za Modbus
Paket Podataka Za Prenos	RTU za Modbus
Brzina Prenosa	4800 bps, 9600 bps, 19200 bps, 38.4 Kbps za Modbus na priključku 9600 bps, 19200 bps za Modbus na prednjem delu 20 kbps, 50 kbps, 125 kbps, 250 kbps, 500 kbps, 1 Mbps za CANopen
Format Podataka	8 bitova, 1 stop, parno za Modbus na prednjem delu 8 bitova, neparno parno ili nekonfigurisana parnost za Modbus na priključku
Broj Adresa	1…127 za CANopen 1…247 za Modbus
Način Pristupa	Slave CANopen

Označavanje	CE
Radni Položaj	Vertikalno +/- 10 stepeni
Visina	295 mm
Dubina	213 mm
Širina	210 mm
Masa Proizvoda	8 kg
Funkcionalnost	Potpuna
Posebne Primene	Ostale aplikacije
Opciona Kartica	Komunikaciona kartica za CC-Link "Controller inside" programabilna kartica Komunikaciona kartica za DeviceNet Komunikaciona kartica za Ethernet/IP Komunikaciona kartica za Fipio I/O kartica za proširenje Komunikaciona kartica za Interbus-S Interfejs kartica za enkoder Komunikaciona kartica za Modbus Plus Komunikaciona kartica za Modbus TCP Komunikaciona kartica za Modbus/Uni-Telway Kranska kartica Komunikaciona kartica za Profibus DP Komunikaciona kartica za Profibus DP V1

Okruženje

Nivo Buke	57,4 dB u skladu sa 86/188/EEC
Dielektrična Snaga	3535 V DC između uzemljenja i energetskih priključaka 5092 V DC između kontrolnih i napojnih priključaka
Elektromagnetna Kompatibilnost	1.2/50 µs - 8/20 µs test otpornosti udara nivo 3 u skladu sa IEC 61000-4-5 Test otpornosti emisije vezane sa vodovima nivo 3 u skladu sa IEC 61000-4-6 Test otpornosti električnih brzih prelaza (EFT)/kratak signal nivo 4 u skladu sa IEC 61000-4-4 Test otpornosti elektrostatičkog pražnjenja nivo 3 u skladu sa IEC 61000-4-2 Test otpornosti na emisije vezane sa zračenjem EM polja nivo 3 u skladu sa IEC 61000-4-3 Test otpornosti propada i prekida napona u skladu sa IEC 61000-4-11
Standardi	EN/IEC 61800-5-1 UL tip 1 EN 61800-3 okruženja 2 kategorija C3 EN/IEC 61800-3 IEC 60721-3-3 klasa 3S2 EN 55011 klasa A grupa 2 IEC 60721-3-3 klasa 3C1 EN 61800-3 okruženja 1 kategorija C3
Sertifikacija Proizvoda	NOM 117 C-Tick GOST UL CSA
Stepen Zaprljanosti	2 u skladu sa EN/IEC 61800-5-1
Ip Stepen Zaštite	IP20
Otpornost Na Vibracije	1 gn (f= 13…200 Hz) u skladu sa EN/IEC 60068-2-6 1.5 mm između pikova (f= 3…13 Hz) u skladu sa EN/IEC 60068-2-6
Otpornost Na Udare	15 gn za 11 milisekundi u skladu sa EN/IEC 60068-2-27
Relativna Vlažnost	5…95 % bez kondenzacije u skladu sa IEC 60068-2-3 5…95 % bez kapljica vode u skladu sa IEC 60068-2-3
Temperatura Okoline Za Rad	-10…50 °C (bez smanjenja karakteristika)
Temperatura Okoline Za Skladištenje	-25…70 °C

Nadmorska Visina Za Rad Uređaja	<= 1000 m bez smanjenja karakteristika 1000...3000 m sa smanjenjem vrednosti struje 1 % na 100 m

Ugovorna garancija

Garancija	18 meseci

Održivost

Oznaka **Green Premium^{TM}** je posvećenost kompanije Schneider Electric isporuci proizvoda sa ekološkim performansama najboljim u klasi. Green Premium obećava usaglašenost sa najnovijim propisima, transparentnost u pogledu uticaja na životnu sredinu, kao i sa cirkularnim i niskonaponskim CO_2 proizvodima.

Vodič za procenu održivosti proizvoda je bela knjiga koja razjašnjava globalne standarde za oznaku ekološke prihvatljivosti i način tumačenja ekoloških izjava.

Saznajte više o oznaci Green Premium >

Vodič za procenu održivosti proizvoda >

RoHS/REACh

Performanse dobrobiti

Bez Žive

Informacije O Rohs Izuzecima	Da

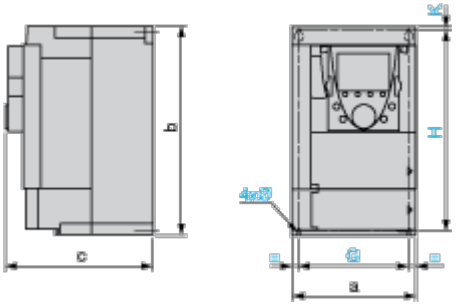
Sertifikacija i standardi

Eu Rohs Direktiva	Proaktivna usaglašenost (proizvod nije u zakonskom okviru direktive EU RoHS) EU RoHS deklaracija
Rohs Regulativa Za Kinu	RoHS deklaracija za Kinu
Weee	Ovaj proizvod je na tržištima Evropske unije neophodno odložiti u skladu sa specifičnim smernicama za prikupljanje otpada i nikako ne sme da dospe u kontejnere za otpatke.
Profil Cirkularnosti	Informacije o kraju radnog veka

Dimensions Drawings

UL Type 1/IP 20 Drives

Dimensions without Option Card



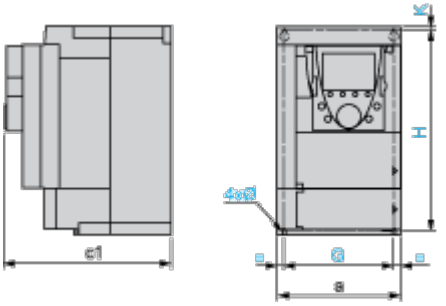
Dimensions in mm

a	b	c	G	H	K	Ø
210	295	213	190	283	6	6

Dimensions in in.

a	b	c	G	H	K	Ø
8.26	11.61	8.38	7.48	11.14	0.23	0.23

Dimensions with 1 Option Card (1)



Dimensions in mm

a	c1	G	H	K	Ø
210	236	190	283	6	6

Dimensions in in.

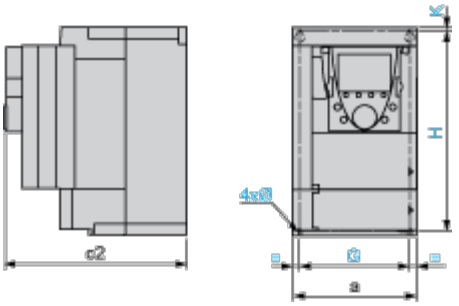
a	c1	G	H	K	Ø
8.26	9.29	7.48	11.14	0.23	0.23

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

Dimensions with 2 Option Cards (1)

Lista sa podacima o proizvodima

ATV71HD11N4



Dimensions in mm

a	c2	G	H	K	Ø
210	259	190	283	6	6

Dimensions in in.

a	c2	G	H	K	Ø
8.26	10.20	7.48	11.14	0.23	0.23

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

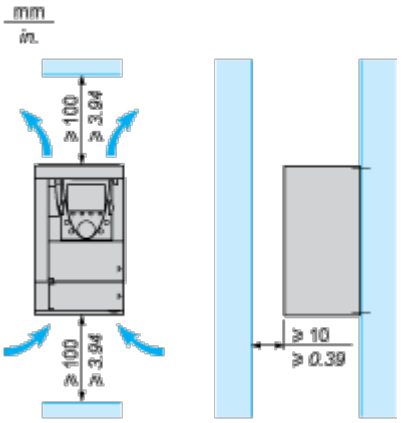
Mounting and Clearance

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:

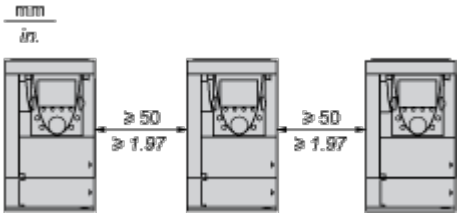
- Avoid placing it close to heating elements
- Leave sufficient free space to ensure that the air required for cooling purposes can circulate from the bottom to the top of the unit.

Clearance

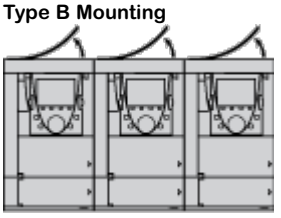


Mounting Types

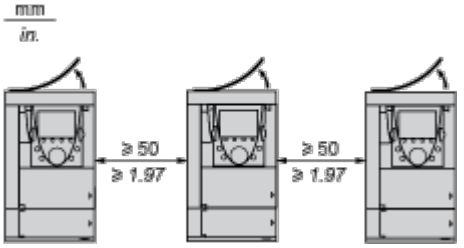
Type A Mounting



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).

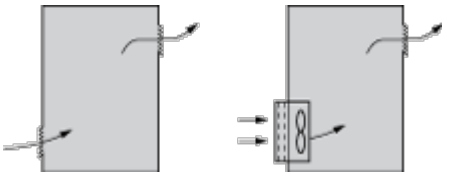
The protective blanking cover must be removed from ATV 71P•••N4Z drives when they are mounted in a dust and damp proof enclosure.

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.

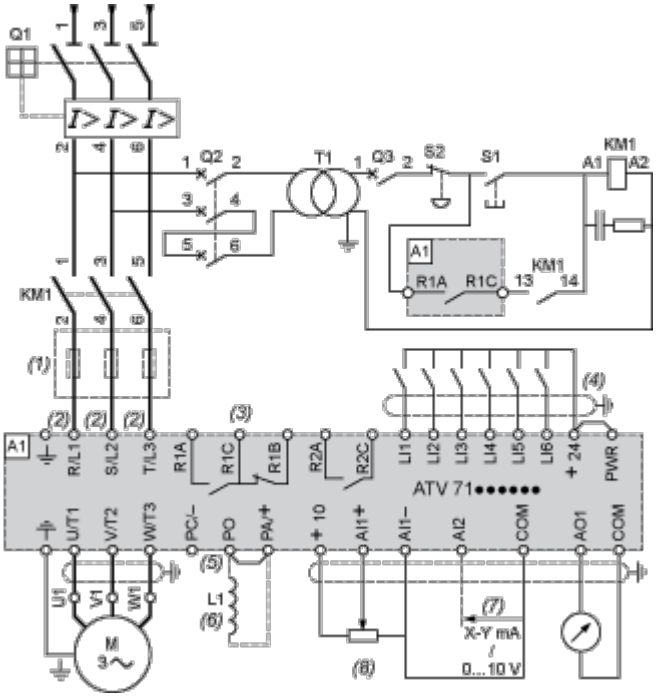
Dust and Damp Proof Metal Enclosure (IP 54)

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.

Connections and Schema

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, S2 XB4 B or XB5 A pushbuttons

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.

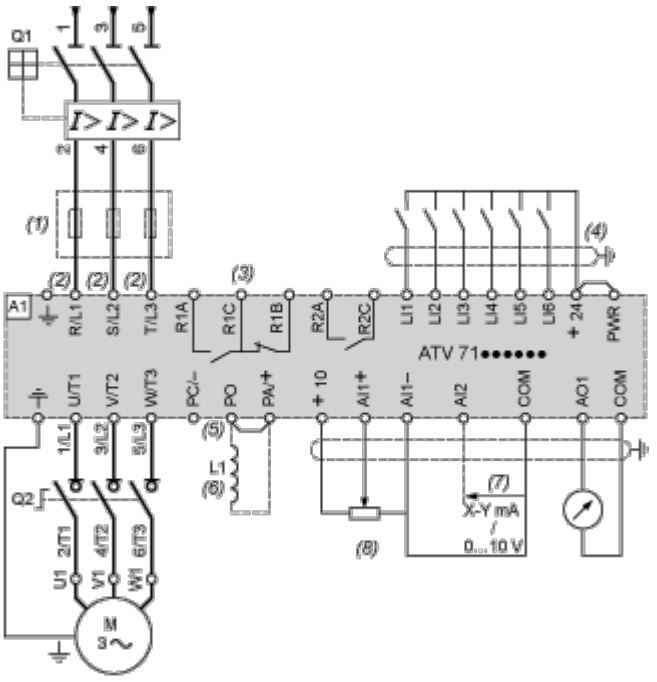
(7) Software-configurable current (0…20 mA) or voltage (0…10 V) analog input.

(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 Disconnector



A1 ATV71 drive

L1 DC choke

Q1 Circuit-breaker

Q2 Switch disconnector (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.

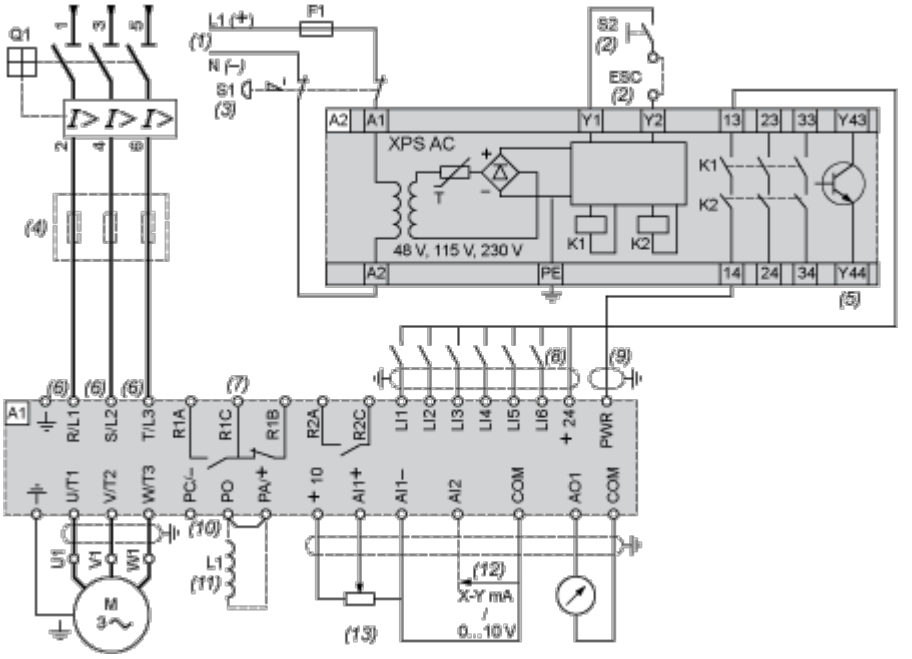
(7) Software-configurable current (0…20 mA) or voltage (0…10 V) analog input.

(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.

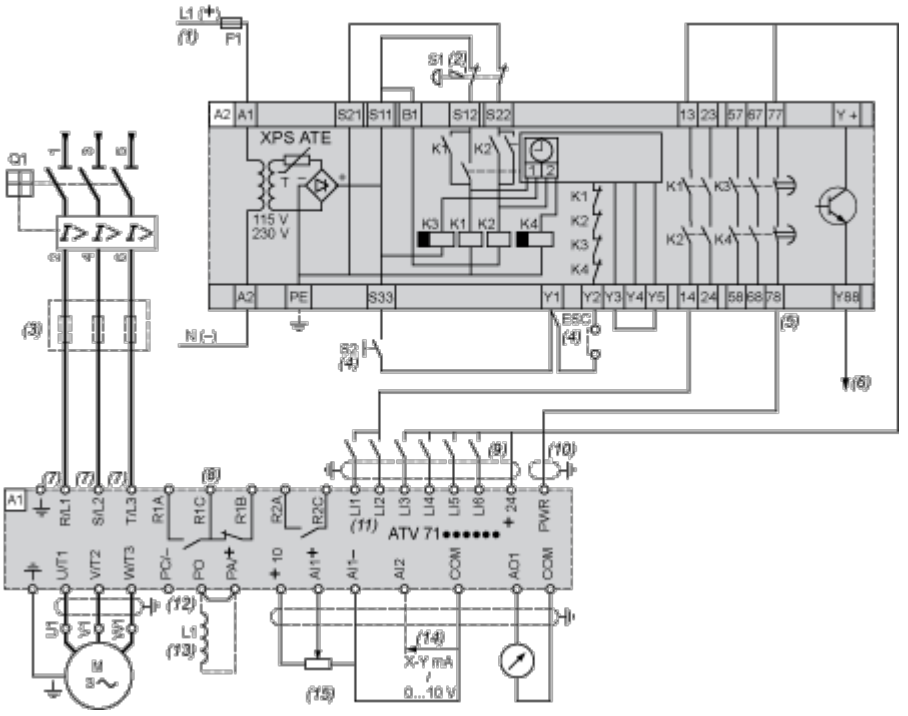
(12) Software-configurable current (0…20 mA) or voltage (0…10 V) analog input.

(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 (5) Preventa XPS ATE safety module for monitoring emergency stops and switches. One safety module can manage the "Power Removal" 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)).

(4) 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.

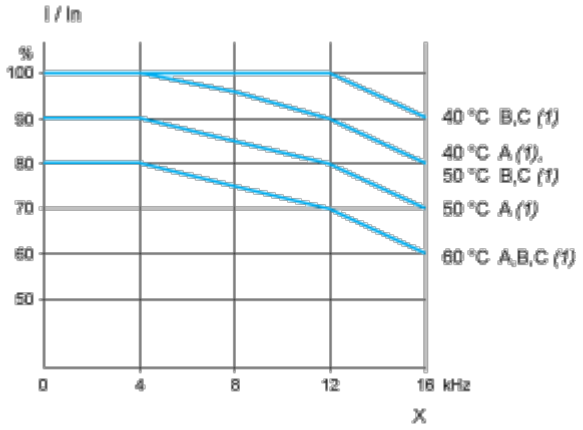
(15) Reference potentiometer.

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.

Performance Curves

Derating Curves

The derating curves for the drive nominal current (In) 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