Fişă tehnică produs

Specificatii

Variator De Viteza - 22Kw- 400V - 3 Faze - Atv340

ATV340D22N4

Principale

gama de produse	Altivar Machine ATV340
Tip produs sau componenta	Variator de viteza
aplicatie specifica produsului	Machine
mod de montare	Cabinet mount
varianta	Standard version
Port protocol de comunicatie	Serial Modbus
card optional	modul de comunicare, Profibus DP V1 modul de comunicare, PROFINET modul de comunicare, DeviceNet modul de comunicare, CANopen modul de comunicare, EtherCAT
numar faze in retea	3 faze
frecventa de alimentare	50...60 Hz +/- 5 %
[Us] tensiune nominala de alimentare	380...480 V - 15...10 %
curent nominal de iesire	46,0 A
putere motor kW	30 kW pentru serviciu normal 22 kW pentru pentru sarcini grele
putere motor hp	40 CP pentru serviciu normal 30 CP pentru pentru sarcini grele
filtru EMC	Class C3 EMC filter integrated
grad de protectie IP	IP20

Suplimentare

numar intrare discreta	5
tip de intrare discreta	PTI programmable as pulse input 0…30 kHz, 24 V c.c. (30 V) DI1...DI5 cuplu de siguranță, 24 V c.c. (30 V), impedanță: 3.5 kOhm programabile
number of preset speeds	16 preset speeds
numar iesire discreta	2,0
tip de iesire discreta	Programmable output DQ1, DQ2 30 V c.c. 100 mA
numarul intrarii analogice	2
tip de intrare analogica	AI1 curent configurabil soft 0...20 mA, impedanță: 250 Ohm, rezoluție 12 biti AI1 sonda de temperatura configurabila cu soft sau senzor de nivel de apa AI1 tensiune configurabilă soft 0...10 V c.c., impedanță: 31.5 kOhm, rezoluție 12 biti AI2 tensiune configurabilă soft - 10...10 V c.c., impedanță: 31.5 kOhm, rezoluție 12 biti
numarul iesirii analogice	1

tip iesire analogica	Tensiune configurabilă soft AQ1 0...10 V c.c. 470 Ohm, rezoluție 10 bits Curent configurabil soft AQ1 0...20 mA 500 Ohm, rezoluție 10 bits
numarul iesirii releu	2
tensiune de iesire	<= tensiunea de alimentare
tip releu iesire	Ieșiri releu R1A Ieșiri releu R1C 100000 cic Ieșiri releu R2A Ieșiri releu R2C 100000 cic
curent maxim de comutatie	Relay output R1C pornit rezistiv sarcina, cos phi = 1 3 A la 250 V c.a. Relay output R1C pornit rezistiv sarcina, cos phi = 1 3 A la 30 V c.c. Relay output R1C pornit inductiv sarcina, cos phi = 0,4 si stanga/dreapta = 7 ms 2 A la 250 V c.a. Relay output R1C pornit inductiv sarcina, cos phi = 0,4 si stanga/dreapta = 7 ms 2 A la 30 V c.c. Relay output R2C pornit rezistiv sarcina, cos phi = 1 5 A la 250 V c.a. Relay output R2C pornit rezistiv sarcina, cos phi = 1 5 A la 30 V c.c. Relay output R2C pornit inductiv sarcina, cos phi = 0,4 si stanga/dreapta = 7 ms 2 A la 250 V c.a. Relay output R2C pornit inductiv sarcina, cos phi = 0,4 si stanga/dreapta = 7 ms 2 A la 30 V c.c.
curentul minim de comutare	Relay output R1B 5 mA la 24 V c.c. Relay output R2C 5 mA la 24 V c.c.
interfata fizica	RS 485 cu 2 fire
tipul conectorului	1 RJ45
metoda de acces	Slave Modbus RTU
rata de transmisie	4.8 kbit/s 9.6 kbit/s 19.2 kbit/s 38.4 kbit/s
cadrul de transmisie	RTU
numarul de adrese	1…247
format date	8 biti, configurabil impar, par sau fara paritate
tip de polarizare	Fara impedanta
4 quadrant operation possible	Adevarat
profil de control al motorului asincron	Cuplu variabil standard Constanta de cuplu standard Mod de cuplu optim
profil de control al motorului sincron	Permanent magnet motor Reluctance motor
grad de poluare	2 conformitate cu IEC 61800-5-1
frecventa maxima de iesire	0,599 kHz
rampe de accelerare si decelerare	Reglabil liniar separat, de la 0,01 la 9999 s S, U sau personalizat
compensare alunecare motor	Reglabil Poate fi suprimat Automat indiferent de sarcina Not available in permanent magnet motor law
frecventa de comutare	2...16 kHz reglabil 6...16 kHz cu
frecventa de comutare nominala	4 kHz
franare sau imobil	Cu injectie c.c.
Brake chopper integrated	Adevarat

curent de linie	60,1 A la 380 V (serviciu normal) 48,6 A la 480 V (serviciu normal) 63,5 A la 380 V (pentru sarcini grele) 50,6 A la 480 V (pentru sarcini grele)
curent de linie	63,5 A la 380 V without line choke (pentru sarcini grele) 50,5 A la 480 V without line choke (pentru sarcini grele) 67,9 A la 480 V with external line choke (serviciu normal) 54,4 A la 380 V with external line choke (pentru sarcini grele) 64,1 A la 480 V with external line choke (pentru sarcini grele) 50,8 A la 380 V with external line choke (serviciu normal)
Curent maxim de intrare	63,5 A
Maximum output voltage	480 V
putere aparenta	45,1 kVA la 480 V (serviciu normal) 42,1 kVA la 480 V (pentru sarcini grele)
curent tranzitoriu maxim	68,2 A in timpul 60 s (serviciu normal) 69 A in timpul 60 s (pentru sarcini grele) 83,7 A in timpul 2 s (serviciu normal) 83 A in timpul 2 s (pentru sarcini grele)
conexiune electrica	Borna cu surub, capacitate de prindere: 0.2...2.5 mm² pentru control Borna cu surub, capacitate de prindere: 6...25 mm² pentru motor Borna cu surub, capacitate de prindere: 10...25 mm² pentru line side Borna cu surub, capacitate de prindere: 10...25 mm² pentru DC bus
curent de scurtcircuit prezumat Isc	22 kA
Base load current at high overload	46,0 A
Base load current at low overload	62,0 A
puterea disipata in W	Convectie naturala 28 W la 380 V 4 kHz (pentru sarcini grele) Convectie fortata 486 W la 380 V 4 kHz (pentru sarcini grele) Convectie naturala 39 W la 380 V 4 kHz (serviciu normal) Convectie fortata 631 W la 380 V 4 kHz (serviciu normal)
conexiune electrica	Control borna cu surub 0.2...2.5 mm² AWG 24...AWG 12 Motor borna cu surub 6...25 mm² AWG 8...AWG 3 Line side borna cu surub 10...25 mm² AWG 6...AWG 3 DC bus borna cu surub 10...25 mm² AWG 6...AWG 3
cu functia de siguranta Safely Limited Speed (SLS)	Adevarat
cu functia de siguranta Safe brake management (SBC/SBT)	Adevarat
cu functia de siguranta Safe Operating Stop (SOS)	Fals
cu functia de siguranta Safe Position (SP)	Fals
cu functia de siguranta Safe programmable logic	Fals
cu functia de siguranta Safe Speed Monitor (SSM)	Fals
cu functia de siguranta Safe Stop 1 (SS1)	Adevarat
cu functia de siguranta Safe Stop 2 (SS2)	Fals
cu functia de siguranta Safe torque off (STO)	Adevarat
cu functia de siguranta Safely Limited Position (SLP)	Fals
cu functia de siguranta Safe Direction (SDI)	Fals

tip de protectie	Protectie termica motor Safe torque off motor Pierderea de fază a motorului motor Protectie termica variator Safe torque off variator Supraincalzire variator Supracurent variator Output overcurrent between motor phase and earth variator Output overcurrent between motor phases variator Short-circuit between motor phase and earth variator Scurtcircuit între fazele motorului variator Pierderea de fază a motorului variator DC Bus overvoltage variator Supratensiune în linia de alimentare variator Scăderea tensiunii de alimentare variator Input supply loss variator Exceeding limit speed variator Defectarea circuitului de comandă variator
latime	180,0 mm
inaltime	385,0 mm
adancime	249,0 mm
greutate produs	10,2 kg
curent la iesire continuu	62 A la 4 kHz pentru serviciu normal 46 A la 4 kHz pentru pentru sarcini grele

Mediu

altitudinea de functionare	<= 3000 m with current derating above 1000m
pozitie de operare	Vertical +/- 10 grade
certificari produs	UL CSA TÜV EAC CTick
marcaj	CE
standarde	IEC 61800-3 IEC 61800-5-1 IEC 60721-3 IEC 61508 IEC 13849-1 UL 618000-5-1 UL 508C
stil de asamblare	Cu radiator
compatibilitate electromagnetica	Test de imunitate la descarcari electrostatice nivel 3 conforming to IEC 61000-4-2 Test de imunitate la frecventa radio radiata nivel 3 conforming to IEC 61000-4-3 Tranzienți rapizi/test de imunitate la impulsuri de ionizare nivel 4 conforming to IEC 61000-4-4 1.2/50 µs - 8/20 µs test de imunitate la supratensiuni nivel 3 conforming to IEC 61000-4-5 Test de imunitate la radiofrecvență condusă nivel 3 conforming to IEC 61000-4-6
clasa de mediu (in timpul functionarii)	Clasa 3C3 in conformitate cu IEC 60721-3-3-3 Class 3S3 according to IEC 60721-3-3
acceleratia maxima in cazul unui impact de soc (in timpul functionarii)	70 m/s² at 22 ms
acceleratia maxima sub tensiune de vibratie (in timpul functionarii)	5 m/s² at 9...200 Hz
deformarea maxima sub sarcină vibratorie (in timpul functionarii)	1.5 mm at 2...9 Hz
Permitted relative humidity (during operation)	Class 3K5 according to EN 60721-3
volumul aerului de racire	128,0 m3/h
tip de racire	Convectie fortata

categorie de supratensiune	Class III
bucla de reglare	Regulator PID reglabil
nivel de zgomot	56,7 dB
Grad de poluare	2
Temperatura de transport a aerului ambiental	-40…70 °C
temperatura ambientala de utilizare	-15…50 °C fără declasare (pozitie verticala) 50…60 °C cu (pozitie verticala)
temperatura ambietala pentru depozitare	-40…70 °C
izolatie	Intre alimentare si bornele de control

Unitati de ambalare

Unitate de masura pentru prima forma de impachetare	PCE
Număr de produse în pachet	1
Inaltime prima forma de impachetare	30,000 cm
Latime prima forma de impachetare	56,000 cm
Lungime prima forma de impachetare	34,000 cm
Greutate colet(Lbs)	11,900 kg
Unitate de masura pentru a doua forma de impachetare	P06
Numar unitati in a doua forma de impachetare	2
Inaltime a doua forma de impachetare	75,000 cm
Latime a doua forma de impachetare	60,000 cm
Lungime a doua forma de impachetare	80,000 cm
Greutate a doua forma de impachetare	36,800 kg

Garanţie contractuală

Garantie (in luni)	18

Environmental Data

Schneider Electric isi propune sa atinga nivelul Net Zero pana in 2050 prin parteneriate la nivelul lantului de aprovizionare, materiale cu impact mai redus si circularitate, prin campania „Use Better, Use Longer, Use Again” pentru a extinde durata de viata a produselor si reciclabilitatea.

Environmental Data explicate >

Cum evaluam sustenabilitatea produselor >

Amprenta de mediu

Amprenta de carbon totala pe durata de viata	**15 608 kg CO2 eq.**
Amprenta de carbon a fazei de fabricaţie [A1–A3]	**164 kg CO2 eq.**
Amprenta de carbon a fazei de distribuţie [A4]	**2 kg CO2 eq.**
Amprenta de carbon a fazei de instalare [A5]	**2 kg CO2 eq.**
Amprenta de carbon a fazei de utilizare [B2, B3, B4, B6]	**15 417 kg CO2 eq.**
Amprenta de carbon a fazei de sfârşit de viaţă [C1–C4]	**22 kg CO2 eq.**
Raport de mediu	**Profilul ambiental al produsului**

Use Better

Materiale si ambalare

Pachet cu carton reciclabil	**Da**
Ambalaj fara plastic	**Nu**
Numar SCIP	**B464d3d8-3d68-42fb-96c3-c1eaf1b135e1**
Directiva RoHS a UE	**Conform Prin Scutire**
Regulamentul REACh	**Referinţa conţine SVHC peste prag**

Eficienta energetica

Contributiila produs a fost evitata	**Da**

Use Longer

Prelungire durata de viata

Reparare	**Nu**

Use Again

Reambalare si refabricare

Potentialul de reciclabilitate, in %	**65**
Profil circularitate	**Informatii privind sfarsitul duratei de viata**
Preluare la sfarsitul duratei de viata	**Da**
Eticheta WEEE	**În Uniunea Europeana, produsele trebuie reciclate respectand sistemul specific de colectare a deseurilor si nu trebuie sa ajunga in pubelele de colectare a deseurilor menajere.**

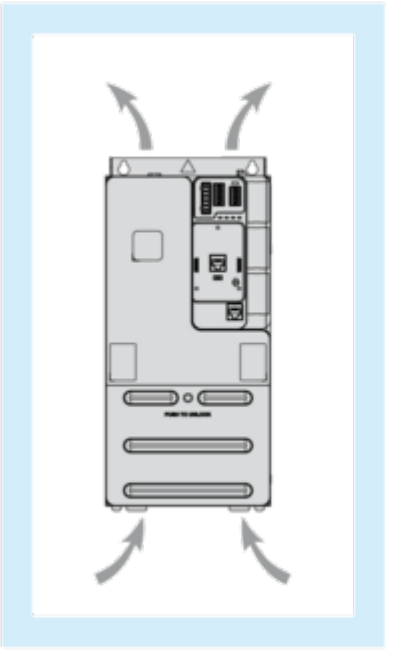
Dimensions Drawings

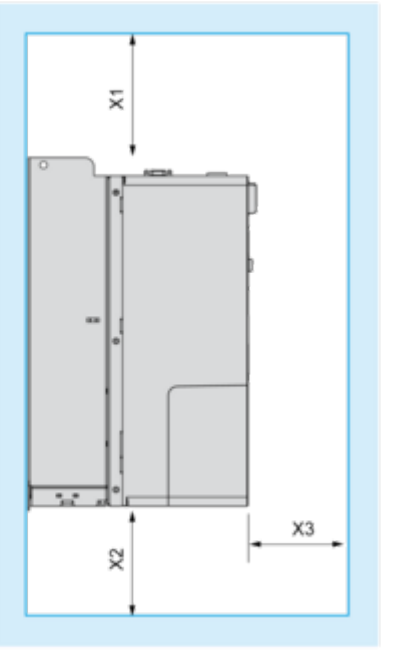
Dimensions

Views: Front - Left - Rear

Mounting and Clearance

Clearance

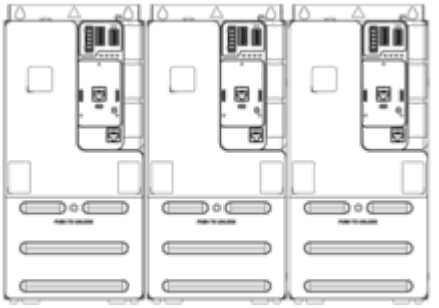




X1	X2	X3			
mm	**in.**	**mm**	**in.**	**mm**	**in.**
≥ 100	≥ 3.94	≥ 100	≥ 3.94	≥ 60	≥ 2.36

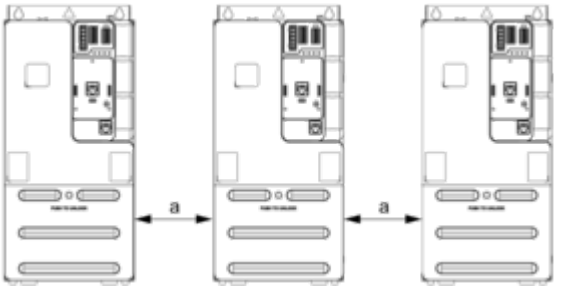
Mounting Types

Mounting Type A: Side by Side IP20



Possible, at ambient temperature ≤ 50 °C (122 °F)

Mounting Type B: Individual IP20

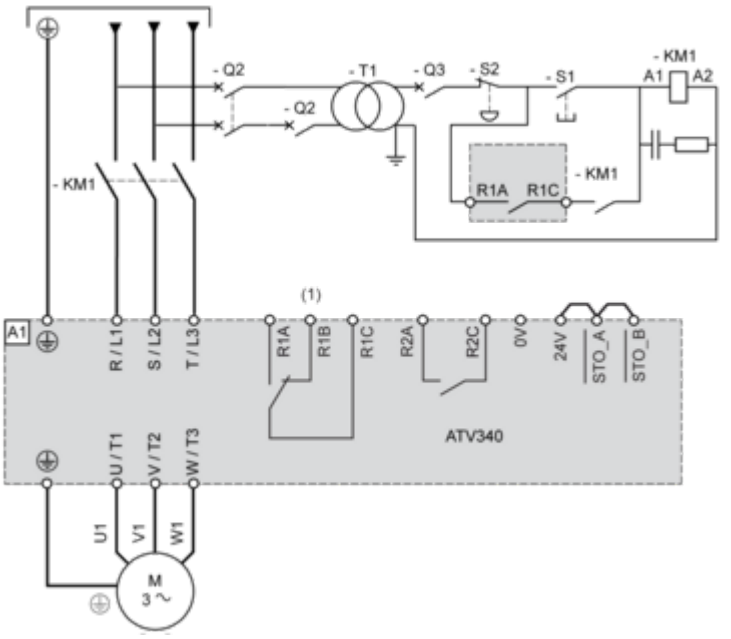


a ≥ 50 mm (1.97 in.) from 50...60°C, no restriction below 50°C

Connections and Schema

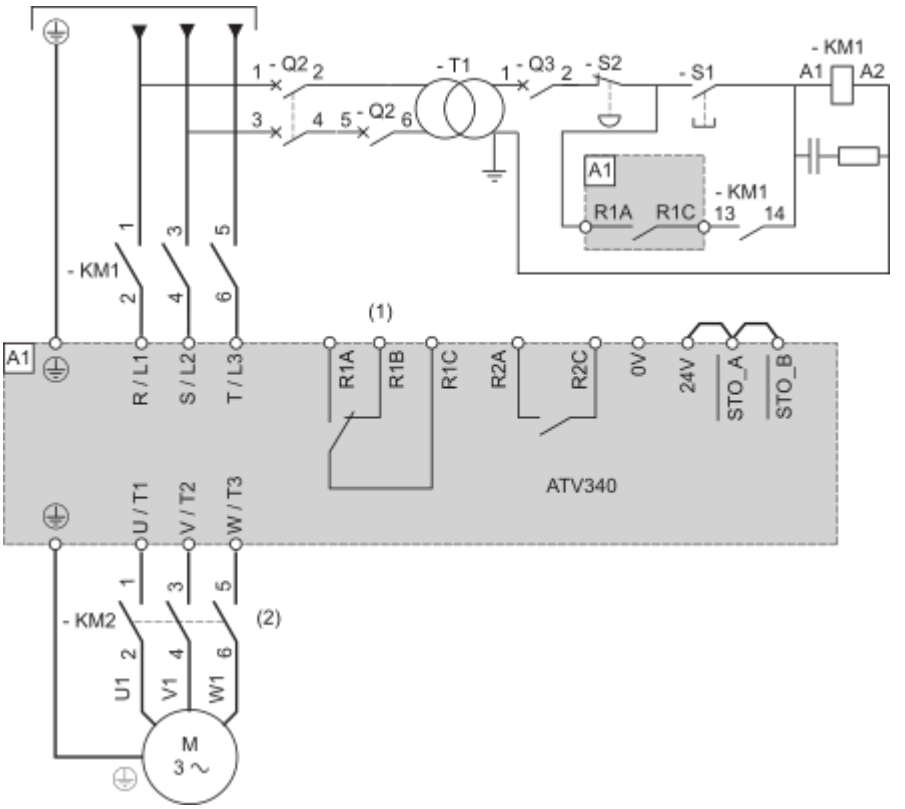
Connections and Schema

Three-phase Power Supply - Diagram With Line Contactor



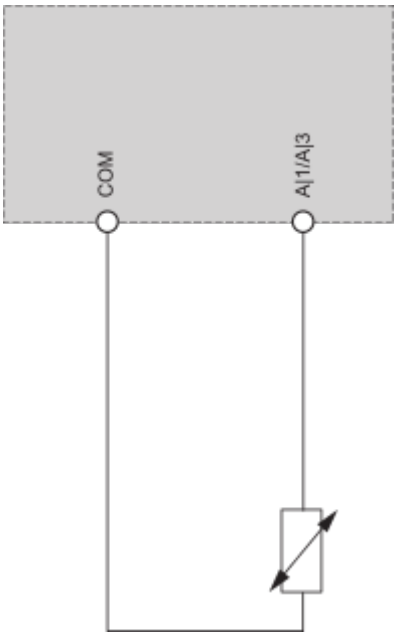
(1) : Use relay output R1 set to operating state Fault to switch Off the product once an error is detected.
NOTE :
• Press S1 until the initialization of the drive is finished.
• An external 24V power supply can be connected so that the control part of the drive is always power supplied.

Three-phase Power Supply - Diagram With Downstream Contactor

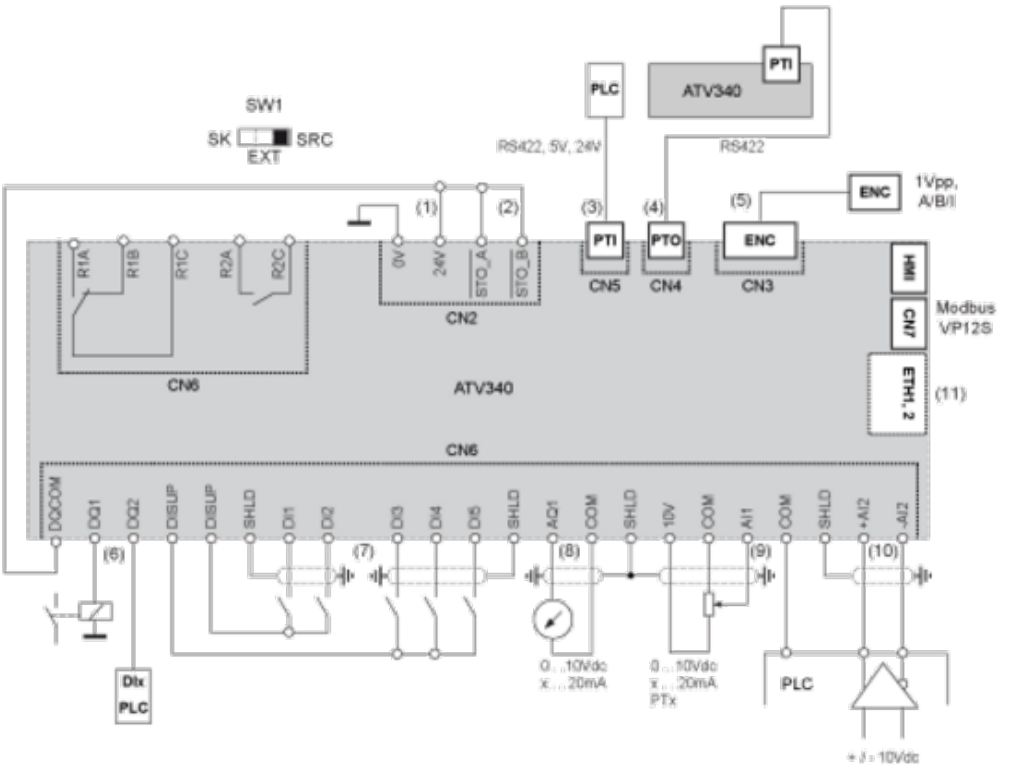


(1) : Use relay output R1 set to operating state Fault to switch Off the product once an error is detected.
(2) : Command of KM2 can be done by using the **[Output contactor cmd]** OCC function. For more information, refer to the programming manual.
NOTE :
• Close upstream contactor, then press S1 after the initialization of the drive is finished.
• An external 24V power supply can be connected so that the control part of the drive is always power supplied.

Sensor Connection



Control Block Wiring Diagram

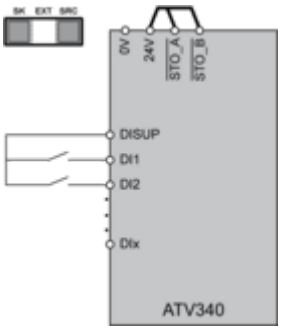


(1) : 24V In, Out, maximum supply current 200 mA is provided,
(2) : STO - Safe Torque Off, see ATV340 Embedded safety function manual NVE64143
(3) : PTI - Pulse Train In, from external source (eg.PLC) Pulse - Direction or A-B signals can be connected
(4) : PTO - Pulse Train Out, can be used to connect to a 2nd ATV340 PTI
(5) : To connect a motor position feedback encoder
(6) : Digital output, e.g. to connect a contactor, also usable as DI
(7) : Digital inputs
(8) : Analog output, e.g. to connect a meter
(9) : Analog input, e.g. from potentiometer
(10) : Differential analog input, e.g. as speed reference from external PLC differential, +/– 10 V
(11) : 2 advanced Ethernet ports ETH1, ETH2 (ATV340•••••E) or 2 Sercos III ports S3P1, S3P2 (ATV340•••••S)

Digital Inputs Wiring

Digital Inputs: Internal Supply

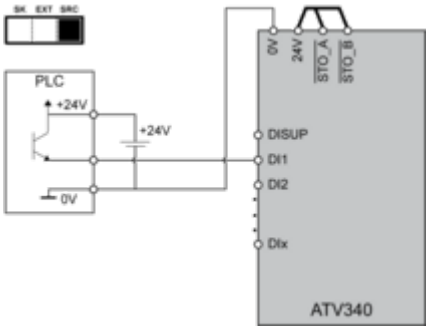
Using DISUP Signal



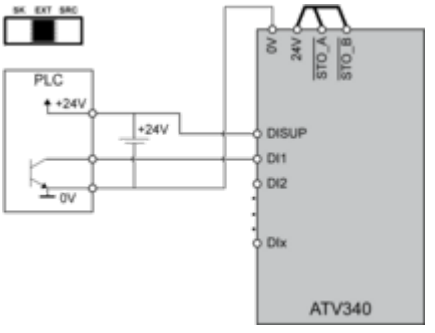
In SRC position DISUP outputs 24 V. In SK position DISUP is connected to 0 V.

Digital Inputs: External Supply

Positive Logic, Source, European Style

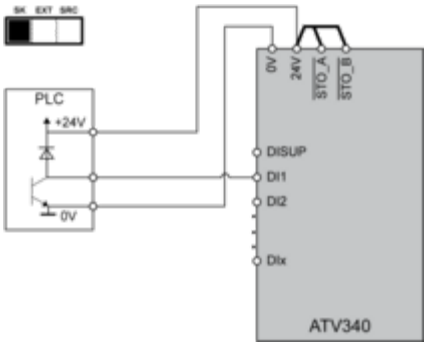


Negative Logic, Sink, Asian Style



Digital Inputs: Internal supply

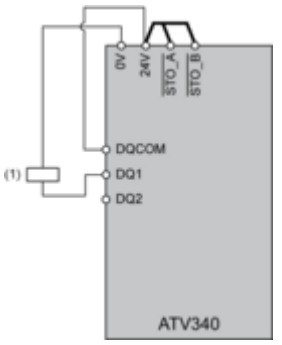
Negative Logic, Sink, Asian Style


SK EXT SRC
PLC
+24V
0V
0V
24V
STO_A
STO_B
DISUP
DI1
DI2
DIx
ATV340

Digital Outputs Wiring

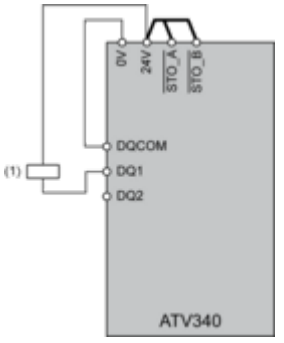
Digital Outputs: Internal Supply

Positive Logic, Source, European Style, DQCOM to +24V



(1) Relay or valve

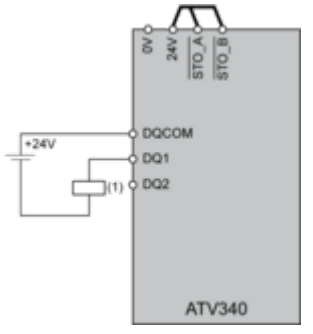
Negative Logic, Sink, Asian Style, DQCOM to 0V



(1) Relay or valve

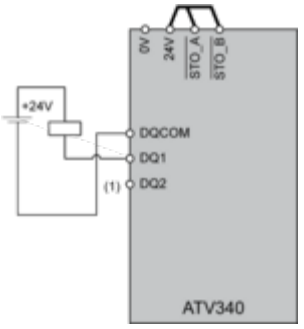
Digital Outputs: External Supply

Positive Logic, Source, European Style, DQCOM to +24V



(1) Relay or valve

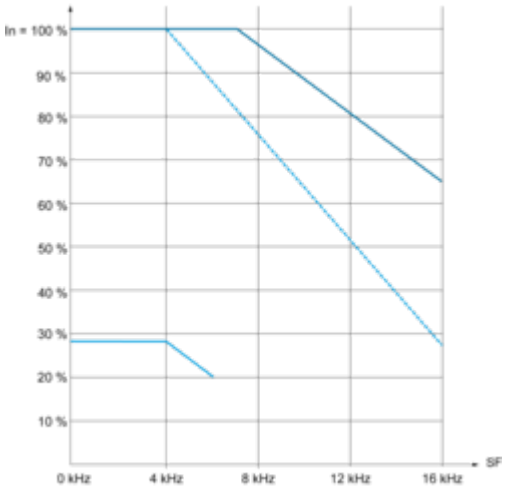
Negative Logic, Sink, Asian Style, DQCOM to 0V



(1) Relay or valve

Performance Curves

Derating Curves



40 °C (104 °F) - Mounting type A and B
50 °C (122 °F) - Mounting type B
60 °C (140 °F) - Mounting type B
In : Nominal Drive Current
SF : Switching Frequency

Technical Illustration

Dimensions

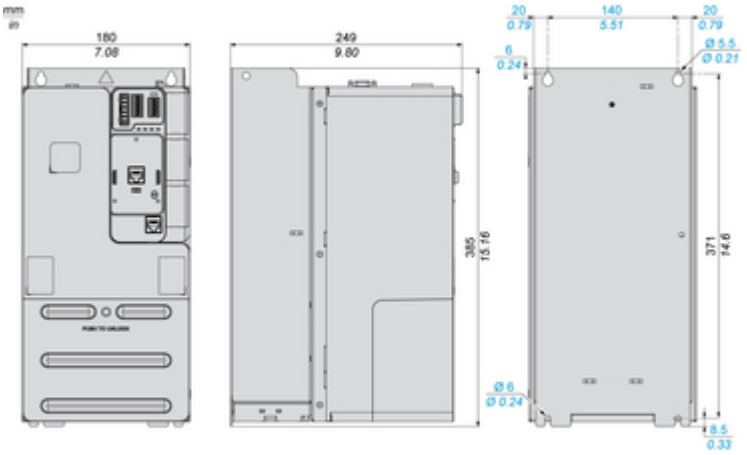


Image of product in real life situation