



variable speed drive, Altivar Machine ATV340, 3kW, heavy duty, 400V, 3 phases

ATV340U30N4

Peamine

Tootevalik	Altivar Machine ATV340
Toote Või Komponenti Tüüp	Variable speed drive
Tootespetsiifiline Rakendus	Machine
Valik	Standard version
Paigaldusviis	Cabinet mount
Kommunikatsioonipordi Protokoll	Modbus serial
Option Card	communication module, Profibus DP V1 communication module, PROFINET communication module, DeviceNet communication module, CANopen communication module, EtherCAT
Võrgu Faaside Arv	3 phases
Supply Frequency	50...60 Hz +/- 5 %
[Us] Rated Supply Voltage	380...480 V - 15...10 %
Nominal Output Current	7,2 A
Motor Power Kw	4 kW normal duty 3 kW heavy duty
Motor Power Hp	3 hp heavy duty 5 hp normal duty
Emc Filter	Class C3 EMC filter integrated
Ip Degree Of Protection	IP20

Täiendav

Discrete Input Number	5
Discrete Input Type	PTI programmable as pulse input 0...30 kHz, 24 V DC 30 V) DI1...DI5 safe torque off, 24 V DC 30 V)3.5 kOhm programmable
Number Of Preset Speeds	16 preset speeds
Discrete Output Number	2,0
Discrete Output Type	Programmable output DQ1, DQ2 30 V DC 100 mA
Analogue Input Number	2
Analogue Input Type	AI1 software-configurable current 0...20 mA 250 Ohm 12 bits AI1 software-configurable temperature probe or water level sensor AI1 software-configurable voltage 0...10 V DC 31.5 kOhm 12 bits AI2 software-configurable voltage - 10...10 V DC 31.5 kOhm 12 bits
Analogue Output Number	2

Suurim lubatud võrreldavate toodete arv on täis. Avage jaotis Võrrele tooteid #.LNK# ja kustutage jätkamiseks mõni boode

Analogue Output Type	Software-configurable voltage AQ1 0...10 V DC 470 Ohm 10 bits Software-configurable current AQ1 0...20 mA 500 Ohm 10 bits
Relay Output Number	2
Väljundpinge	<= power supply voltage
Relay Output Type	Relay outputs R1A Relay outputs R1C 100000 tsüklid Relay outputs R2A Relay outputs R2C 100000 tsüklid
Maximum Switching Current	Relay output R1C Resisttiivne, cos phi = 1 3 A 250 V AC Relay output R1C Resisttiivne, cos phi = 1 3 A 30 V DC Relay output R1C induktsioon, cos phi = 0,4 7 ms 2 A 250 V AC Relay output R1C induktsioon, cos phi = 0,4 7 ms 2 A 30 V DC Relay output R2C Resisttiivne, cos phi = 1 5 A 250 V AC Relay output R2C Resisttiivne, cos phi = 1 5 A 30 V DC Relay output R2C induktsioon, cos phi = 0,4 7 ms 2 A 250 V AC Relay output R2C induktsioon, cos phi = 0,4 7 ms 2 A 30 V DC
Minimum Switching Current	Relay output R1B 5 mA 24 V DC Relay output R2C 5 mA 24 V DC
Füüsiline Liides	2-wire RS 485
Liitmiku Tüüp	1 RJ45
Method Of Access	Slave Modbus RTU
Ülekande Kiirus	4.8 kbit/s 9.6 kbit/s 19.2 kbit/s 38.4 kbit/s
Transmission Frame	RTU
Aadresside Arv	1...247
Data Format	8 bits, configurable odd, even or no parity
Type Of Polarization	No impedance
4 Quadrant Operation Possible	Tõeline
Asynchronous Motor Control Profile	Variable torque standard Optimized torque mode Constant torque standard
Synchronous Motor Control Profile	Reluctance motor Permanent magnet motor
Pollution Degree	2 IEC 61800-5-1
Maximum Output Frequency	0,599 kHz
Acceleration And Deceleration Ramps	Linear adjustable separately from 0.01...9999 s S, U or customized
Motor Slip Compensation	Not available in permanent magnet motor law Can be suppressed Automatic whatever the load Adjustable
Switching Frequency	2...16 kHz adjustable 7...16 kHz with derating factor
Nominal Switching Frequency	4 kHz
Braking To Standstill	By DC injection
Brake Chopper Integrated	Tõeline
Line Current	8,6 A 380 V normal duty) 6,8 A 480 V normal duty) 10,7 A 380 V heavy duty) 8,5 A 480 V heavy duty)

Line Current	10,7 A 380 V without line choke heavy duty) 8,5 A 480 V without line choke heavy duty) 8,6 A 380 V with external line choke normal duty) 6,8 A 480 V with external line choke normal duty) 6,6 A 380 V with external line choke heavy duty) 5,3 A 480 V with external line choke heavy duty)
Maximum Input Current	10,7 A
Maximum Output Voltage	480 V
Apparent Power	6,7 kVA 480 V normal duty) 7,1 kVA 480 V heavy duty)
Maximum Transient Current	10,2 A 60 s normal duty) 12,6 A 2 s normal duty) 13 A 2 s heavy duty) 11 A 60 s heavy duty)
Electrical Connection	Krúviklemm 1.5...4 mm² line side Krúviklemm 4...6 mm² DC bus Krúviklemm 1.5...4 mm² motor Krúviklemm 0.2...2.5 mm² control
Prospective Line I _{sc}	5 kA
Base Load Current At High Overload	7,2 A
Base Load Current At Low Overload	9,3 A
Power Dissipation In W	Natural convection 78 W 380 V 4 kHz heavy duty) Forced convection 78 W 380 V 4 kHz heavy duty) Natural convection 96 W 380 V 4 kHz normal duty) Forced convection 96 W 380 V 4 kHz normal duty)
Electrical Connection	Line side krúviklemm 1.5...4 mm² AWG 14...AWG 12 DC bus krúviklemm 4...6 mm² AWG 12...AWG 10 Motor krúviklemm 1.5...4 mm² AWG 14...AWG 12 Control krúviklemm 0.2...2.5 mm² AWG 24...AWG 12
With Safety Function Safely Limited Speed (Sl _s)	Töeline
With Safety Function Safe Brake Management (S _{bc} /S _{bt})	Töeline
With Safety Function Safe Operating Stop (S _{os})	False
With Safety Function Safe Position (S _p)	False
With Safety Function Safe Programmable Logic	False
With Safety Function Safe Speed Monitor (S _{sm})	False
With Safety Function Safe Stop 1 (S _{s1})	Töeline
With Sft Fct Safe Stop 2 (S _{s2})	False
With Safety Function Safe Torque Off (S _{to})	Töeline
With Safety Function Safely Limited Position (Sl _p)	False
With Safety Function Safe Direction (S _{di})	False

Protection Type	Terminline kaitse motor Safe torque off motor Motor phase loss motor Terminline kaitse drive Safe torque off drive Ülekuumenemine drive Overcurrent drive Output overcurrent between motor phase and earth drive Output overcurrent between motor phases drive Short-circuit between motor phase and earth drive Short-circuit between motor phases drive Motor phase loss drive DC Bus overvoltage drive Line supply overvoltage drive Line supply undervoltage drive Input supply loss drive Exceeding limit speed drive Break on the control circuit drive
Laius	85,0 mm
Kõrgus	270,0 mm
Sügavus	232,5 mm
Netokaal	2,1 kg
Continuous Output Current	9,3 A 4 kHz normal duty 7,2 A 4 kHz heavy duty

Keskkond

Operating Altitude	<= 3000 m with current derating above 1000m
Operating Position	Vertical +/- 10 degree
Toote Sertifikaadid	UL CSA TÜV EAC CTick
Märgistus	CE
Standardid	IEC 61800-3 IEC 61800-5-1 IEC 60721-3 IEC 61508 IEC 13849-1 UL 618000-5-1 UL 508C
Assembly Style	With heat sink
Electromagnetic Compatibility	Electrostatic discharge immunity test level 3 IEC 61000-4-2 Radiated radio-frequency electromagnetic field immunity test level 3 IEC 61000-4-3 Electrical fast transient/burst immunity test level 4 IEC 61000-4-4 1.2/50 µs - 8/20 µs surge immunity test level 3 IEC 61000-4-5 Conducted radio-frequency immunity test level 3 IEC 61000-4-6
Environmental Class (During Operation)	Class 3C3 according to IEC 60721-3-3 Class 3S3 according to IEC 60721-3-3
Maximum Acceleration Under Shock Impact (During Operation)	70 m/s² at 22 ms
Maximum Acceleration Under Vibrational Stress (During Operation)	5 m/s² at 9...200 Hz
Maximum Deflection Under Vibratory Load (During Operation)	1.5 mm at 2...9 Hz
Permitted Relative Humidity (During Operation)	Class 3K5 according to EN 60721-3
Volume Of Cooling Air	19,0 m³/h
Type Of Cooling	Forced convection
Ülepinge Kategooria	Class III

Regulation Loop	Adjustable PID regulator
Noise Level	51,2 dB
Saastumise Aste	2
Ambient Air Transport Temperature	−40...70 °C
Ambient Air Temperature For Operation	−15...50 °C without derating vertical position) 50...60 °C with derating factor vertical position)
Ladustamise Ümbritseva Õhu Temperatuur	−40...70 °C
Isolatsioon	Between power and control terminals

Pakendiüksused

Pakendi Tüüp 1	PCE
Ühikute Arv Pakendis 1	1
Package 1 Height	11,000 cm
Pakendi Laius 1	37,000 cm
Pakendi Pikkus 1	32,000 cm
Pakendi Kaal 1	2,900 kg
Pakendi Tüüp 2	S06
Ühikute Arv Pakendis 2	12
Pakendi Kõrgus 2	75,000 cm
Pakendi Laius 2	60,000 cm
Pakendi Pikkus 2	80,000 cm
Pakendi Kaal 2	47,000 kg

Jätkusuutlikus

Green Premium™ ökomärgistus on Schneider Electricu kohustus pakkuda tooteid oma klassi parima keskkonnatoimega. Green Premium lubab järgida uusimaid määrusi, keskkonnamõjude läbipaistvust ning ringid- ja madala CO₂-heitega tooteid.

Toote jätkusuutlikkuse hindamise juhend on valge raamat, mis selgitab globaalseid ökomärgise standardeid ja seda, kuidas keskkonnadeklaratsioone tõlgendada.

[Juhis kaubandusliku toote jätkusuutlikkuse hindamiseks >](#)



Läbipaistvus RoHS/REACH

Ressursi jõudlus

- ✓

Saadaval On Uuendatud
Komponendid

Heaolu tulemuslikkus

- ✓

Elavhõbedavaba

- ✓

Rohs Eranditeave

Jah

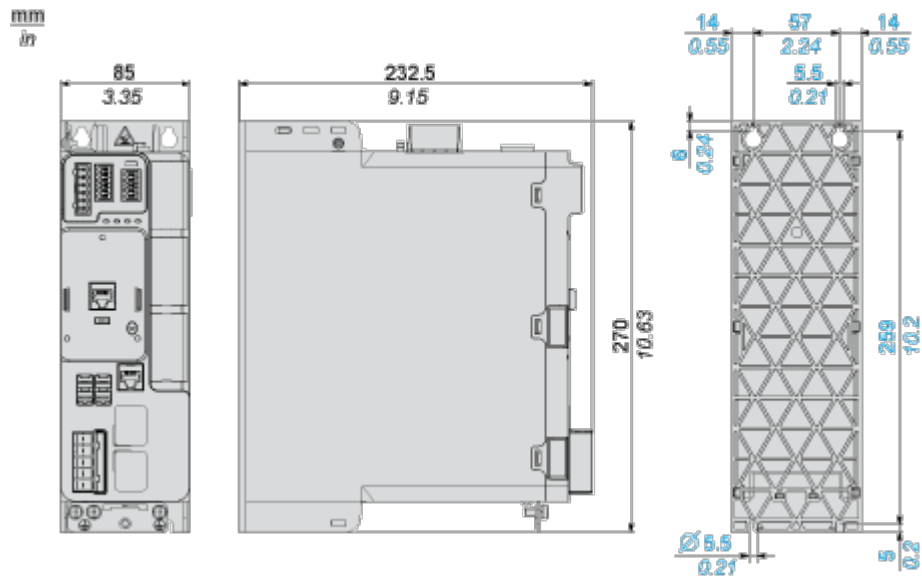
Sertifikaadid ja standardid

Reach-Määrus	REACH-deklaratsioon
Eli Rohs Direktiiv	Ennetav vastavus (toode ei jää EL-i RoHS seadustega määratud piiridesse)
Hiina Eohs Regulatsioon	Hiina RoHS deklaratsioon
Keskkonnaalane Avaldus	Toote keskkonnaprofiil
Weee	Tootest tuleb Euroopa Liidu turgudel vabaneda vastavuses erijäätmeseadustele ning see ei tohi sattuda olmeprügi sekka.
Ringlusprofiil	Kasutuselt kõrvaldamise teave

Dimensions Drawings

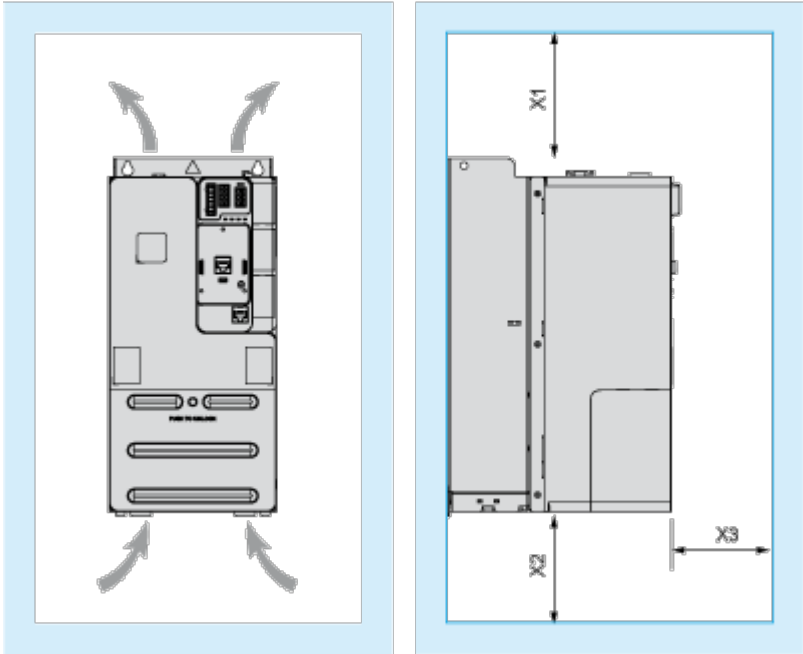
Dimensions

Views: Front - Left - Rear



Mounting and Clearance

Clearance



Dimensions in mm

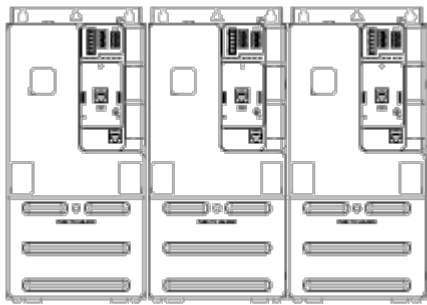
X1	X2	X3
100	100	60

Dimensions in in.

X1	X2	X3
3.94	3.94	2.36

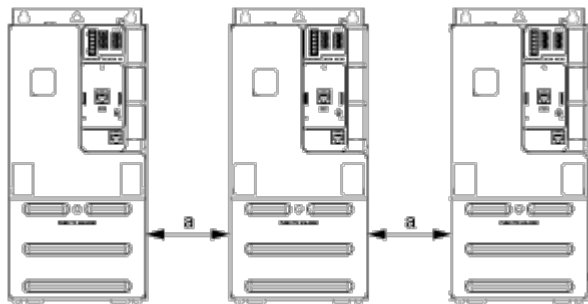
Mounting Types

Mounting Type A: Side by Side IP20



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

Mounting Type B: Individual IP20



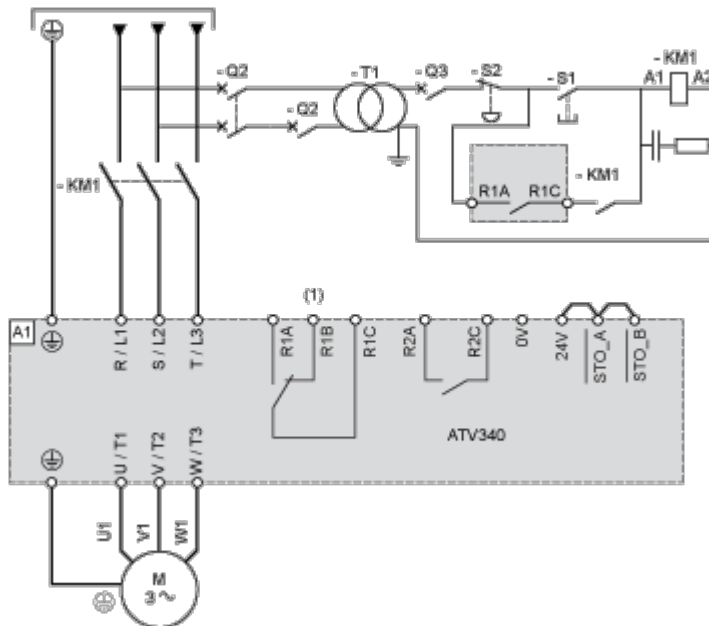
a  50 mm (1.97 in.) from 50...60°C, no restriction below 50°C

Connections and Schema

Connections and Schema

Three-phase Power Supply with Upstream Breaking via Line Contactor Without Safety Function STO

Connection diagrams conforming to standards ISO13849 category 1 and IEC/EN 61508 capacity SIL1, stopping category 0 in accordance with standard IEC/EN 60204-1.



- (1) Use relay output R1 set to operating state Fault to switch Off the product once an error is detected.

A1 : Drive

KM1 : Line Contactor

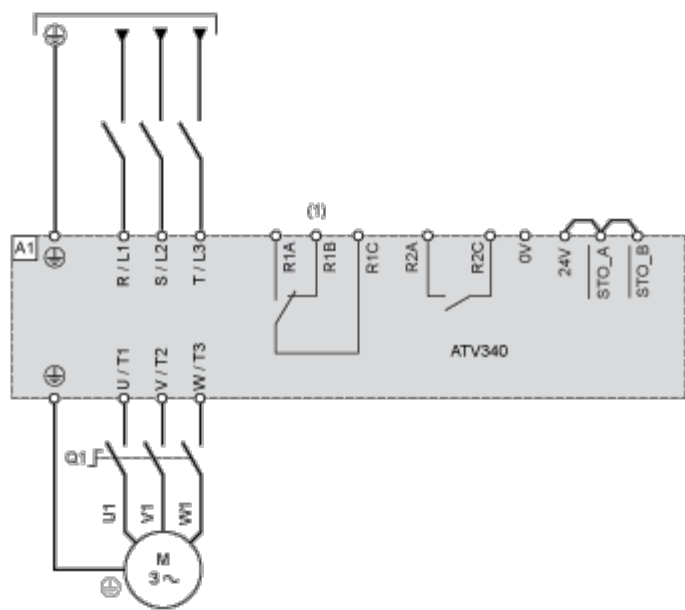
Q2, Q3 : Circuit breakers

S1 : Pushbutton

S2 : Emergency stop

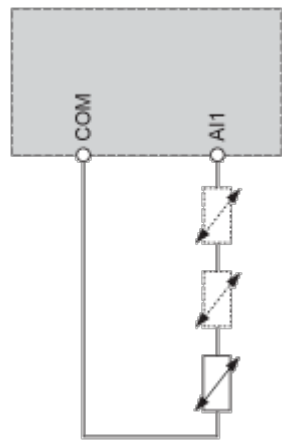
T1 : Transformer for control part

Three-phase Power Supply With Downstream Breaking via Switch Disconnecter



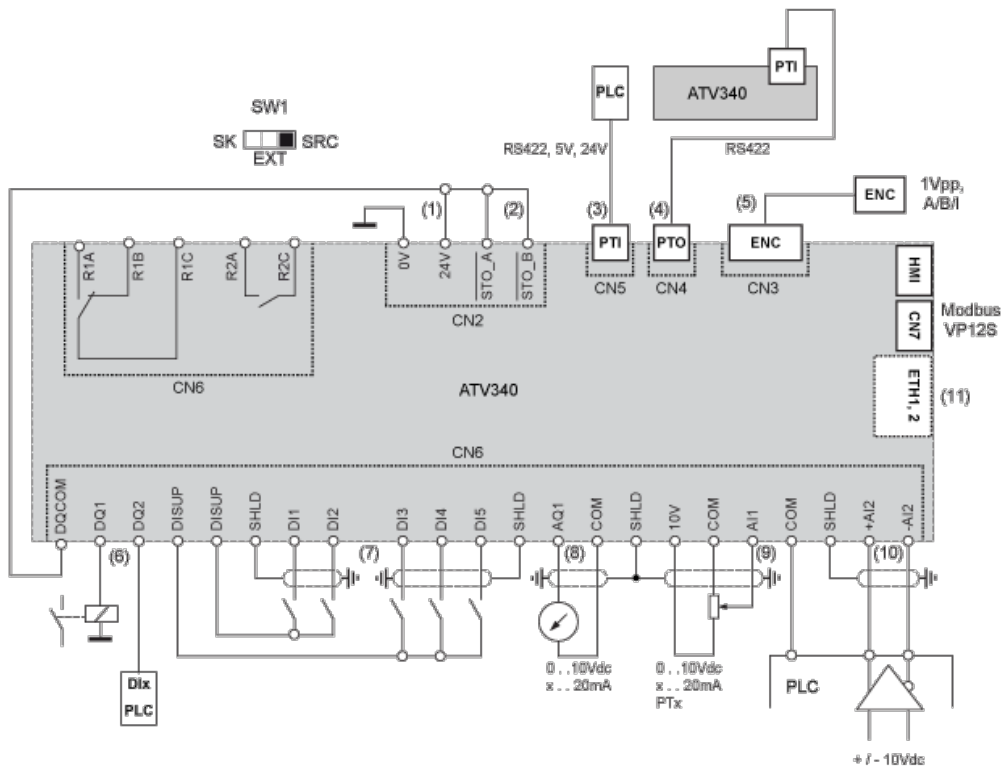
- (1) Use relay output R1 set to operating state Fault to switch Off the product once an error is detected.
- A1 : Drive
- Q1 : Switch disconnector

Sensor Connection



It is possible to connect either 1 or 3 sensors on terminals AI1.

Control Block Wiring Diagram



- (1) 24V supply (STO)
- (2) STO - Safe Torque Off
- (3) PTI - Pulse Train In
- (4) PTO - Pulse Train Out
- (5) Motor Encoder connection
- (6) Digital outputs
- (7) Digital inputs
- (8) Analog output
- (9) Analog input
- (10) Differential Analog Input
- (11) Ethernet port (only on Ethernet drive version)

SW1 : Sink/Source switch

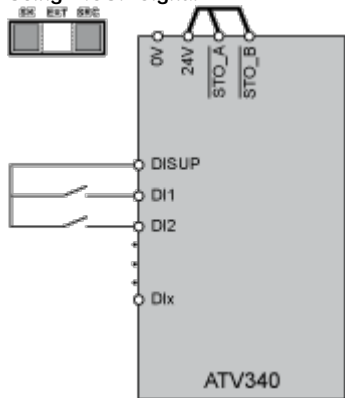
R1A, R1B, R1C : Fault relay

R2A, R2C : Sequence relay

Digital Inputs Wiring

Digital Inputs: Internal Supply

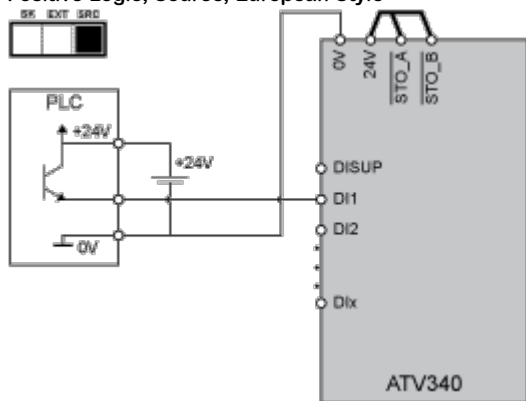
Using DISUP Signal



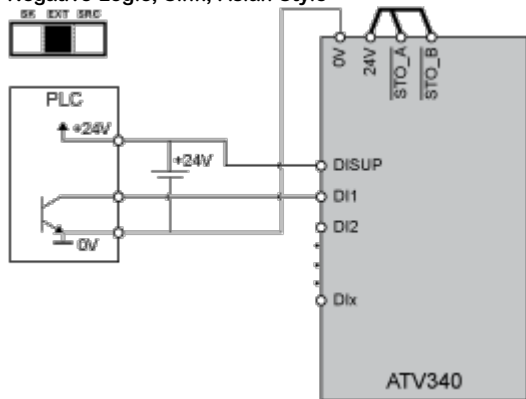
In SRC position DISUP outputs 24 V. In SK position DISUP is connected to 0 V.

Digital Inputs: External Supply

Positive Logic, Source, European Style

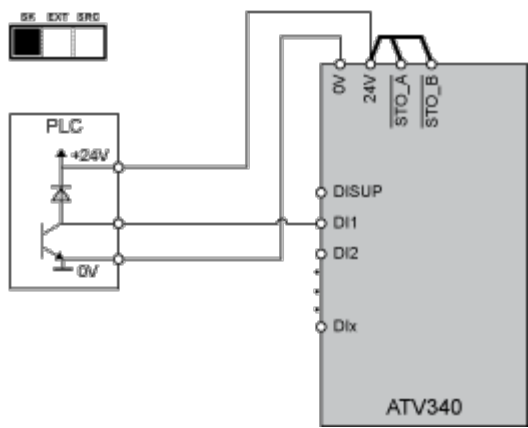


Negative Logic, Sink, Asian Style



Digital Inputs: Internal supply

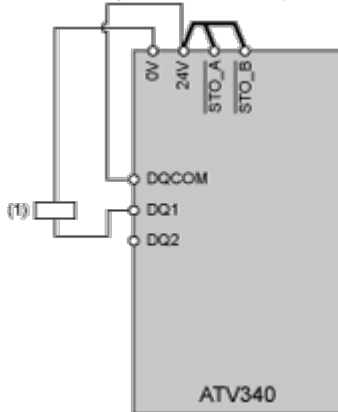
Negative Logic, Sink, Asian Style



Digital Outputs Wiring

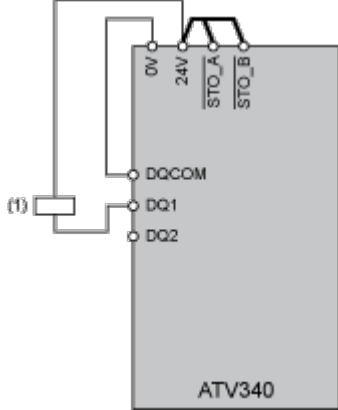
Digital Outputs: Internal Supply

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



(1) Relay or valve

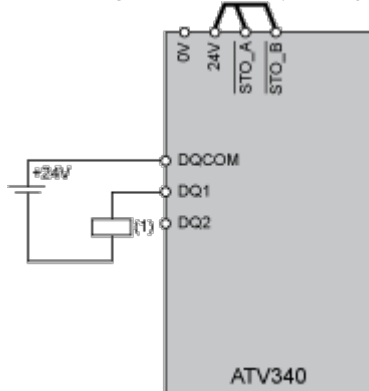
Negative Logic, Sink, Asian Style, DQCOM to 0V



(1) Relay or valve

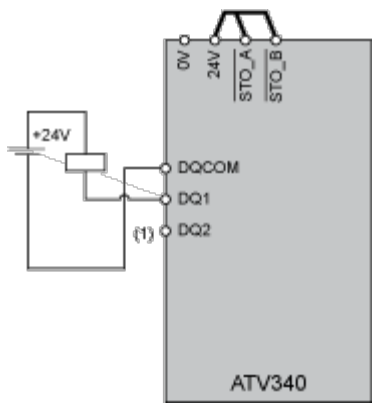
Digital Outputs: External Supply

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



(1) Relay or valve

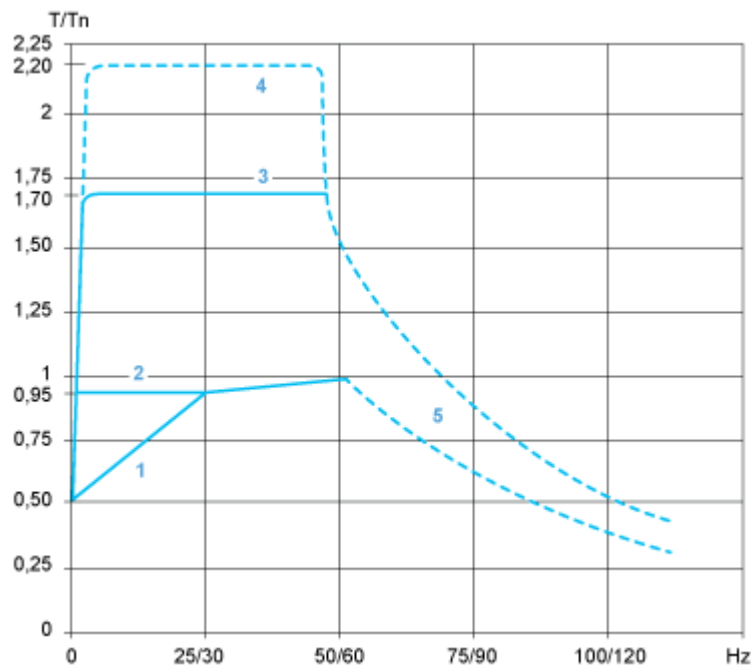
Negative Logic, Sink, Asian Style, DQCOM to 0V



(1) Relay or valve

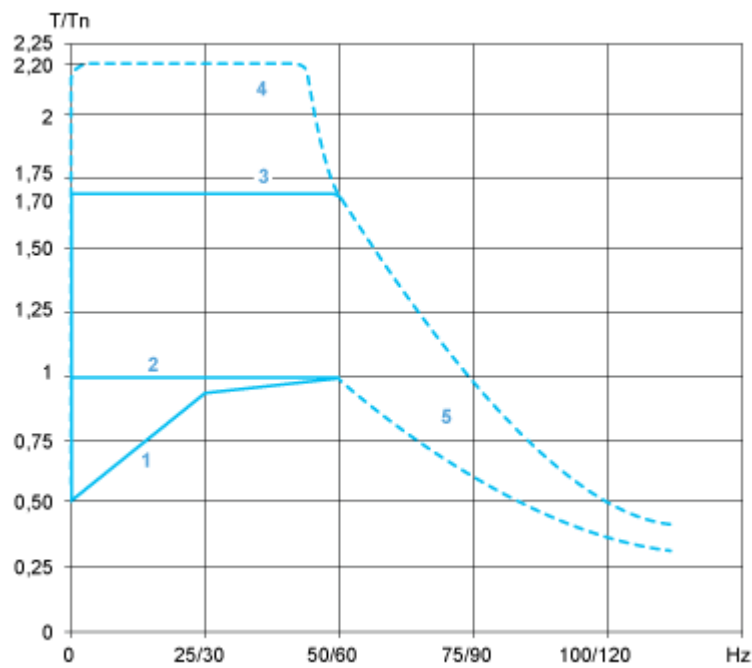
Performance Curves

Open Loop Applications



- 1 : Self-cooled motor: continuous useful torque
- 2 : Force-cooled motor: continuous useful torque
- 3 : Overtorque for 60 s maximum
- 4 : Transient overtorque for 2 s maximum
- 5 : Torque in overspeed at constant power

Closed Loop Applications



- 1 : Self-cooled motor: continuous useful torque
- 2 : Force-cooled motor: continuous useful torque
- 3 : Overtorque for 60 s maximum
- 4 : Transient overtorque for 2 s maximum
- 5 : Torque in overspeed at constant power