

Fișă tehnică produs

Specificatii



Variator de viteza, 0.37kw, 0.55hp, 200, 240V, 1ph, cu radiator

ATV12H037M2

Principale

gama de produse	Altivar 12
Tip produs sau componenta	Variator de viteza
aplicatie specifica produsului	Aparat simplu
mod de montare	Cabinet mount
Port protocol de comunicatie	Modbus
frecventa de alimentare	50/60 Hz +/- 5 %
[Us] tensiune nominala de alimentare	200...240 V - 15...10 %
curent nominal de iesire	2,4 A
putere motor kW	0,37 kW
putere motor hp	0,55 CP
filtru EMC	Integrat
grad de protectie IP	IP20
putere motor hp	0,55 CP

Suplimentare

numar intrare discreta	4
numar iesire discreta	2
numarul intrarii analogice	1
numarul iesirii analogice	1
numarul iesirii releu	1
interfata fizica	RS 485 cu 2 fire
tipul conectorului	1 RJ45
curent la iesire continuu	2,4 A la 4 kHz
metoda de acces	Server serial Modbus
frecventa de iesire a convertizorului	0,5...400 Hz
gama de viteza	1...20
perioada de esantionare	20 ms, toleranță +/- 1 ms pentru intrare logica 10 ms pentru ieșire analogică
eroare de liniaritate	+/- 0.3 % of maximum value pentru ieșire analogică
rezolutia frecventei	Intrare analogică convertor A/D, 10 biți Unitate de afisare 0.1 Hz
constanta de timp	20 ms +/- 1 ms pentru schimbarea referinței

rata de transmisie	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
serviciu de comunicare	Read holding registers (03) 29 words Scriere un sigur registru (06) 29 words Write multiple registers (16) 27 words Read/write multiple registers (23) 4/4 words Identificare dispozitiv de citire (43)
tip de polarizare	Fara impedanta
4 quadrant operation possible	Fals
profil de control al motorului asincron	Control vector de flux fara senzori Raport tensiune/frecventa (V/f) Raportul tensiune/frecventa la patrat
frecventa maxima de iesire	4 kHz
cuplu excesiv tranzitoriu	150...170 % of nominal motor torque depending on drive rating and type of motor
rampe de accelerare si decelerare	Liniar de la 0 la 999,9 s S U
compensare alunecare motor	Reglabil Presetare in fabrica
frecventa de comutare	2...16 kHz reglabil 4...16 kHz cu
frecventa de comutare nominala	4 kHz
franare sau imobil	Cu injectie c.c.
Brake chopper integrated	Fals
curent de linie	5,9 A la 100 V (pentru sarcini grele) 4,9 A la 120 V (pentru sarcini grele)
Curent maxim de intrare	4,9 A
Maximum output voltage	240 V
putere aparenta	1,2 kVA la 240 V (pentru sarcini grele)
curent tranzitoriu maxim	3,6 A in timpul 60 s (pentru sarcini grele) 4,0 A in timpul 2 s (pentru sarcini grele)
frecventa retea electrica	50...60 Hz
Relative symmetric network frequency tolerance	5 %
curent de scurtcircuit prezumat I_{sc}	1 kA
Base load current at high overload	2,4 A
puterea disipata in W	Natural 27,0 W
cu functia de siguranta Safely Limited Speed (SLS)	Fals
cu functia de siguranta Safe brake management (SBC/SBT)	Fals
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)	Fals
cu functia de siguranta Safe Stop 2 (SS2)	Fals
cu functia de siguranta Safe torque off (STO)	Fals
cu functia de siguranta Safely Limited Position (SLP)	Fals
cu functia de siguranta Safe Direction (SDI)	Fals
tip de protectie	Supratensiune în linia de alimentare Scăderea tensiunii de alimentare Supracurent între fazele de ieșire și pământ Protectie la supraîncalzire Scurtcircuit între fazele motorului Against input phase loss in three-phase Thermal motor protection via the drive by continuous calculation of I ² t
cuplu de strangere	0,8 N.m
izolatie	Electricintre alimentare si control
Cantitate pe set	Set de 1
latime	72 mm
inaltime	143 mm
adancime	121,2 mm
greutate produs	0,7 kg

Mediu

altitudinea de functionare	> 1000...2000 m cu declararea curentului cu 1 % pe 100 m <= 1000 m fără declarare
pozitie de operare	Vertical +/- 10 grade
certificari produs	NOM CSA C-Tick UL GOST RCM KC
marcaj	CE
standarde	UL 508C UL 618000-5-1 IEC 61800-5-1 IEC 61800-3
stil de asamblare	Cu radiator
compatibilitate electromagnetica	Tranzienți rapizi/test de imunitate la impulsuri de ionizare nivel 4 conforming to IEC 61000-4-4 Test de imunitate la descarcari electrostatice nivel 3 conforming to IEC 61000-4-2 Imunitate la perturbații conduse nivel 3 conforming to IEC 61000-4-6 Test de imunitate la frecventa radio radiata nivel 3 conforming to IEC 61000-4-3 Test de imunitate la supratensiuni nivel 3 conforming to IEC 61000-4-5 Test de imunitate la căderi de tensiune și întreruperi conforming to IEC 61000-4-11
clasa de mediu (in timpul functionarii)	Clasa 3C3 in conformitate cu IEC 60721-3-3-3 Clasa 3S2 in conformitate cu IEC 60721-3-3-3
acceleratia maxima in cazul unui impact de soc (in timpul functionarii)	150 m/s ² la 11 ms
acceleratia maxima sub tensiune de vibratie (in timpul functionarii)	10 m/s ² la 13...200 Hz
deformarea maxima sub sarcină vibratorie (in timpul functionarii)	1.5 mm la 2...13 Hz
categorie de supratensiune	Class III
bucla de reglare	Regulator PID reglabil

emisie electromagnetica	Emisii radiate environment 1 category C2 conformitate cu IEC 61800-3 2...16 kHz cablu de motor ecranat Emisii conduse with integrated EMC filter environment 1 category C1 conformitate cu IEC 61800-3 2, 4, 8, 12 and 16 kHz cablu de motor ecranat <5 m Emisii conduse with integrated EMC filter environment 1 category C2 conformitate cu IEC 61800-3 2...12 kHz cablu de motor ecranat <5 m Emisii conduse with integrated EMC filter environment 1 category C2 conformitate cu IEC 61800-3 2, 4 and 16 kHz cablu de motor ecranat <10 m Emisii conduse with additional EMC filter environment 1 category C1 conformitate cu IEC 61800-3 4...12 kHz cablu de motor ecranat <20 m Emisii conduse with additional EMC filter environment 1 category C2 conformitate cu IEC 61800-3 4...12 kHz cablu de motor ecranat <50 m Emisii conduse with additional EMC filter environment 2 category C3 conformitate cu IEC 61800-3 4...12 kHz cablu de motor ecranat <50 m
rezistenta la vibratii	1 gn (f = 13...200 Hz) conformitate cu IEC 60068-2-6 1.5 mm vârf la vârf (f = 3...13 Hz) - variator nemontat pe șina DIN simetrică - conformitate cu IEC 60068-2-6
rezistenta la socuri	15 gn pentru 11 ms conformitate cu IEC 60068-2-27
umiditate relativa	5...95 % fără condensare conformitate cu IEC 60068-2-3 5...95 % fără stropi de apă conformitate cu IEC 60068-2-3
nivel de zgomot	0 dB
Grad de poluare	2
Temperatura de transport a aerului ambiental	-25...70 °C
temperatura ambientală de utilizare	-10...40 °C fără declasare 40...60 °C cu declasarea curentului 2.2 % per °C
temperatura ambientală pentru depozitare	-25...70 °C

Unitati de ambalare

Unitate de masura pentru prima forma de impachetare	PCE
Numar unitati in prima forma de impachetare	1
Inaltime prima forma de impachetare	11,500 cm
Latime prima forma de impachetare	20,000 cm
Lungime prima forma de impachetare	18,700 cm
Greutate prima forma de impachetare	1,052 kg
Unitate de masura pentru a doua forma de impachetare	S06
Numar unitati in a doua forma de impachetare	45
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	59,530 kg

Garanție contractuală

Garantie	18 months
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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 >](#)

Use Better

 Materiale si ambalare	
Pachet cu carton reciclabil	Da
Ambalaj fara plastic	Da
Directiva RoHS UE	Conformitate proactiva (Produs in afara domeniului de aplicare a EU RoHS)
Numar SCIP	488b1fd0-df04-41cb-85a8-34a5a8230847
Regulamentul REACH	Declaratia REACH

 Eficienta energetica	
Contributiia produs a fost evitata	Yes

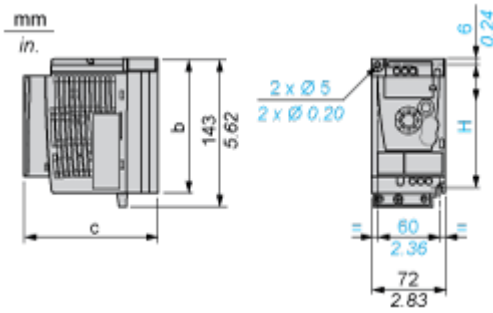
Use Again

 Reambalare si refabricare	
Profil circularitate	Informatii privind sfarsitul duratei de viata
Preluare la sfarsitul duratei de viata	No
DEEE	 Produsul trebuie sa fie eliminat de pe piata din Uniunea Europeana dupa colectarea specifica a deseurilor si sa nu ajunga niciodata in pubele de gunoi

Dimensions Drawings

Dimensions

Drive without EMC Conformity Kit



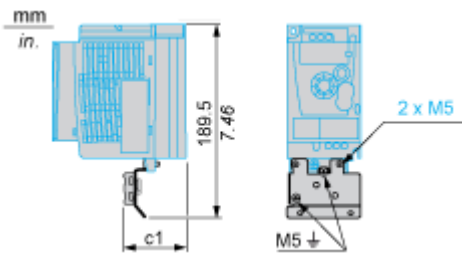
Dimensions in mm

b	c	H
130	121.2	120

Dimensions in in.

b	c	H
5.12	4.77	4.72

Drive with EMC Conformity Kit



Dimensions in mm

c1
53

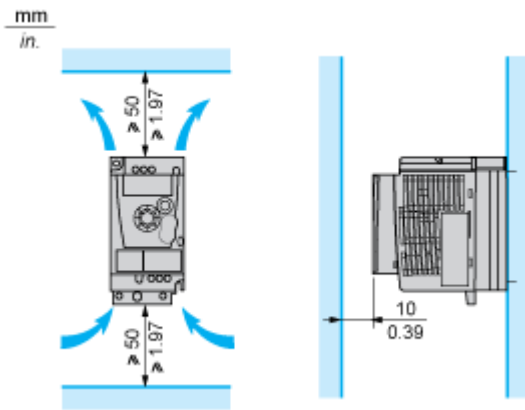
Dimensions in in.

c1
2.09

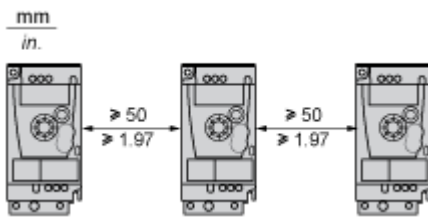
Mounting and Clearance

Mounting Recommendations

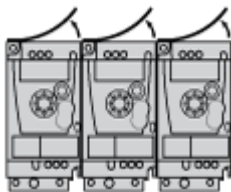
Clearance for Vertical Mounting



Mounting Type A

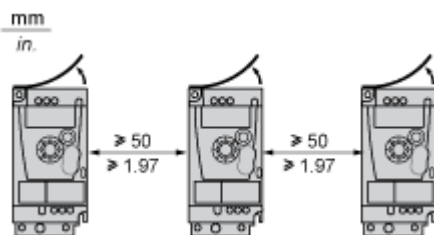


Mounting Type B



Remove the protective cover from the top of the drive.

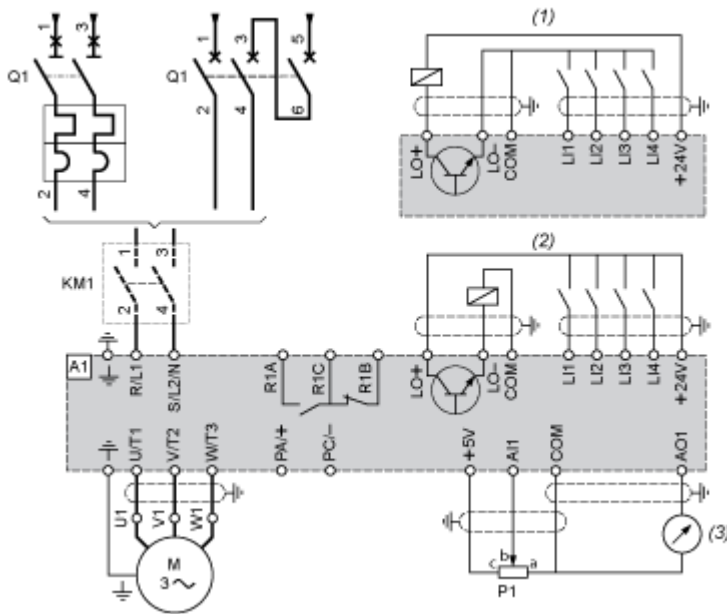
Mounting Type C



Remove the protective cover from the top of the drive.

Connections and Schema

Single-Phase Power Supply Wiring Diagram



A1 Drive

KM1 Contactor (only if a control circuit is needed)

P1 2.2 kΩ reference potentiometer. This can be replaced by a 10 kΩ potentiometer (maximum).

Q1 Circuit breaker

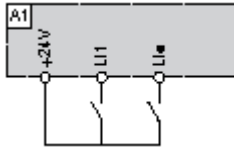
(1) Negative logic (Sink)

(2) Positive logic (Source) (factory set configuration)

(3) 0...10 V or 0...20 mA

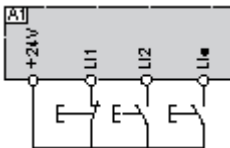
Recommended Schemes

2-Wire Control for Logic I/O with Internal Power Supply



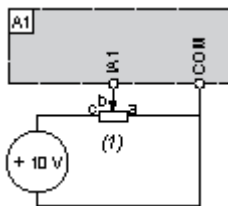
- LI1 : Forward
- LI• : Reverse
- A1 : Drive

3-Wire Control for Logic I/O with Internal Power Supply



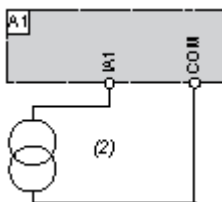
- LI1 : Stop
- LI2 : Forward
- LI• : Reverse
- A1 : Drive

Analog Input Configured for Voltage with Internal Power Supply



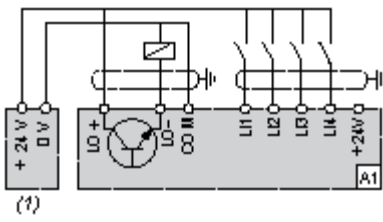
- (1) 2.2 kΩ...10 kΩ reference potentiometer
- A1 : Drive

Analog Input Configured for Current with Internal Power Supply



- (2) 0-20 mA 4-20 mA supply
- A1 : Drive

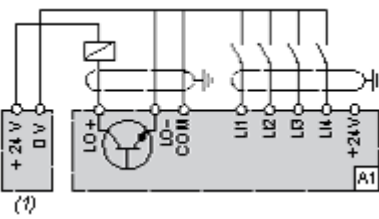
Connected as Positive Logic (Source) with External 24 vdc Supply



(1) 24 vdc supply

A1 : Drive

Connected as Negative Logic (Sink) with External 24 vdc supply

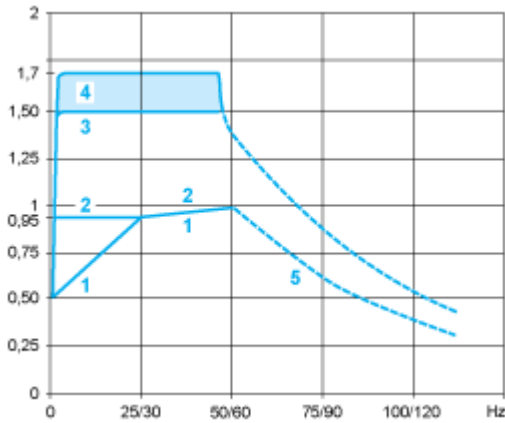


(1) 24 vdc supply

A1 : Drive

Performance Curves

Torque Curves



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

(1) For power ratings ≤ 250 W, derating is 20% instead of 50% at very low frequencies.

(2) The nominal motor frequency and the maximum output frequency can be adjusted from 0.5 to 400 Hz. The mechanical overspeed capability of the selected motor must be checked with the manufacturer.

Image of product / Alternate images

Alternative



