

# Ficha técnica del producto

## Características

# ATV12HU22M2

variable speed drive ATV12 - 2.2kW - 3hp -  
200..240V - 1ph - with heat sink



## Principal

|                                       |                                                                                                                  |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Range of product                      | Altivar 12                                                                                                       |
| Tipo de producto o componente         | Variador de velocidad                                                                                            |
| Destino del produc                    | Motores asíncronos                                                                                               |
| Product specific application          | Máquina simple                                                                                                   |
| Assembly style                        | Con disipación de calor                                                                                          |
| Nombre de componente                  | ATV12                                                                                                            |
| Quantity per set                      | Juego de 1                                                                                                       |
| Filtro CEM                            | Integrado                                                                                                        |
| Ventilador integrado                  | Con                                                                                                              |
| Número de fases de la red             | 1 fase                                                                                                           |
| [Us] tensión de alimentación asignada | 200...240 V - 15...10 %                                                                                          |
| Potencia del motor en kW              | 2.2 kW                                                                                                           |
| Motor power hp                        | 3 hp                                                                                                             |
| Protocolo del puerto de comunicación  | Modbus                                                                                                           |
| Corriente de línea                    | 24 A 200 V<br>20.2 A 240 V                                                                                       |
| Rango de velocidades                  | 1...20                                                                                                           |
| Sobrepasar transitorio                | 150...170 % of nominal motor torque depending on drive rating and type of motor                                  |
| Async motor control profile           | Relación de frecuencia/tensión cuadrática<br>Control vector flujo sin detector<br>Voltaje/Frecuencia ratio (V/f) |
| IP degree of protection               | IP20 without blanking plate on upper part                                                                        |
| Nivel de ruido                        | 45 dB                                                                                                            |

## Complementario

|                            |                             |
|----------------------------|-----------------------------|
| Frecuencia de alimentación | 50/60 Hz +/- 5 %            |
| Type of connector          | 1 RJ45 Modbus on front face |
| Interfaz física            | 2-wire RS 485 Modbus        |

|                                      |                                                                                                                                                                                                                                                                                                       |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Marco de transmisión                 | RTU Modbus                                                                                                                                                                                                                                                                                            |
| Velocidad de transmisión             | 4800 bit/s<br>9600 bit/s<br>19200 bit/s<br>38400 bit/s                                                                                                                                                                                                                                                |
| Número de direcciones                | 1...247 Modbus                                                                                                                                                                                                                                                                                        |
| Servicio de comunicación             | Read holding registers (03) 29 words<br>Write single register (06) 29 words<br>Write multiple registers (16) 27 words<br>Read/Write multiple registers (23) 4/4 words<br>Read device identification (43)                                                                                              |
| Corriente de cortocircuito de la red | $\leq 1$ kA                                                                                                                                                                                                                                                                                           |
| Continuous output current            | 10 A 4 kHz                                                                                                                                                                                                                                                                                            |
| Máxima corriente transitoria         | 15 A 60 s                                                                                                                                                                                                                                                                                             |
| Speed drive output frequency         | 0.5...400 Hz                                                                                                                                                                                                                                                                                          |
| Frecuencia de conmutación nominal    | 4 kHz                                                                                                                                                                                                                                                                                                 |
| Switching frequency                  | 2...16 kHz adjustable<br>4...16 kHz with derating factor                                                                                                                                                                                                                                              |
| Par de frenado                       | Up to 70 % of nominal motor torque without braking resistor                                                                                                                                                                                                                                           |
| Compensación desliz. motor           | Regulable<br>Predet. de fábrica                                                                                                                                                                                                                                                                       |
| Tensión de salida                    | 200...240 V 3 phases                                                                                                                                                                                                                                                                                  |
| Electrical connection                | Terminal 5.5 mm <sup>2</sup> AWG 10 L1, L2, L3, U, V, W, PA, PC                                                                                                                                                                                                                                       |
| Par de apriete                       | 1.2 N.m                                                                                                                                                                                                                                                                                               |
| Aislamiento                          | Eléctrico entre alimentación y control                                                                                                                                                                                                                                                                |
| Supply                               | Internal supply for reference potentiometer 5 V DC 4.75...5.25 V 10 mA overload and short-circuit protection<br>Internal supply for logic inputs 24 V DC 20.4...28.8 V 100 mA overload and short-circuit protection                                                                                   |
| Analogue input number                | 1                                                                                                                                                                                                                                                                                                     |
| Analogue input type                  | Tensión configurable AI1 0...10 V 30 kOhm<br>Tensión configurable AI1 0...5 V 30 kOhm<br>Corriente configurable AI1 0...20 mA 250 Ohm                                                                                                                                                                 |
| Discrete input number                | 4                                                                                                                                                                                                                                                                                                     |
| Entrada discreta                     | Programmable LI1...LI4 24 V 18...30 V                                                                                                                                                                                                                                                                 |
| Discrete input logic                 | Negative logic (sink) $> 16$ V $< 10$ V 3.5 kOhm<br>Positive logic (source) $0...< 5$ V $> 11$ V                                                                                                                                                                                                      |
| Duración de muestreo                 | 20 ms +/- 1 ms logic input<br>10 ms analogue input                                                                                                                                                                                                                                                    |
| Error lineal                         | +/- 0.3 % of maximum value analogue input                                                                                                                                                                                                                                                             |
| Analogue output number               | 1                                                                                                                                                                                                                                                                                                     |
| Tipo de salida analógica             | Tensión configurable por software AO1 0...10 V 470 Ohm 8 bits<br>Corriente configurable por software AO1 0...20 mA 800 Ohm 8 bits                                                                                                                                                                     |
| Discrete output number               | 2                                                                                                                                                                                                                                                                                                     |
| Salida discreta                      | Logic output LO+, LO-<br>Protected relay output R1A, R1B, R1C 1 C/O                                                                                                                                                                                                                                   |
| Corriente mínima de conmutación      | 5 mA 24 V DC logic relay                                                                                                                                                                                                                                                                              |
| Maximum switching current            | 2 A 250 V AC inductive $\cos \phi = 0.4$ L/R = 7 ms logic relay<br>2 A 30 V DC inductive $\cos \phi = 0.4$ L/R = 7 ms logic relay<br>3 A 250 V AC resistive $\cos \phi = 1$ L/R = 0 ms logic relay<br>4 A 30 V DC resistive $\cos \phi = 1$ L/R = 0 ms logic relay                                    |
| Rampas de aceleración y deceleración | Lineal de 0 a 999,9 s<br>S<br>U                                                                                                                                                                                                                                                                       |
| Braking to standstill                | By DC injection $\leq 30$ s                                                                                                                                                                                                                                                                           |
| Protection type                      | Against input phase loss in three-phase<br>Thermal motor protection via the drive by continuous calculation of I <sup>2</sup> t<br>Line supply overvoltage<br>Line supply undervoltage<br>Overcurrent between output phases and earth<br>Overheating protection<br>Short-circuit between motor phases |

|                                                      |                                                                                               |
|------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Resolución de frecuencia                             | 0.1 Hz display unit<br>Converter A/D, 10 bits analog input                                    |
| Constante de tiempo                                  | 20 ms +/- 1 ms for reference change                                                           |
| Marcado                                              | CE                                                                                            |
| Posición de funcionamiento                           | Vertical +/- 10 grados                                                                        |
| Altura                                               | 142 mm                                                                                        |
| Anchura                                              | 105 mm                                                                                        |
| Profundidad                                          | 156.2 mm                                                                                      |
| Peso del producto                                    | 1,4 kg                                                                                        |
| Functionality                                        | Básico                                                                                        |
| Specific application                                 | Equipamiento comercial                                                                        |
| Selección de la aplicación del variador de velocidad | Commercial equipment : mixer<br>Commercial equipment : other application<br>Textile : ironing |
| Motor starter type                                   | Variador de velocidad                                                                         |

## Entorno

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compatibilidad electromagnética        | Immunity to conducted disturbances level 3 EN/IEC 61000-4-6<br>Surge immunity test level 3 EN/IEC 61000-4-5<br>Voltage dips and interruptions immunity test EN/IEC 61000-4-11<br>Electrical fast transient/burst immunity test level 4 EN/IEC 61000-4-4<br>Electrostatic discharge immunity test level 3 EN/IEC 61000-4-2<br>Radiated radio-frequency electromagnetic field immunity test level 3 EN/IEC 61000-4-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Electromagnetic emission               | Radiated emissions environment 1 category C2 EN/IEC 61800-3 2...16 kHz shielded motor cable<br>Conducted emissions with integrated EMC filter environment 1 category C1 EN/IEC 61800-3 2, 4, 8, 12 and 16 kHz shielded motor cable 5 m<br>Conducted emissions with additional EMC filter environment 1 category C1 EN/IEC 61800-3 4...12 kHz shielded motor cable 20 m<br>Conducted emissions with additional EMC filter environment 1 category C2 EN/IEC 61800-3 4...12 kHz shielded motor cable 50 m<br>Conducted emissions with additional EMC filter environment 2 category C3 EN/IEC 61800-3 4...12 kHz shielded motor cable 50 m<br>Conducted emissions with integrated EMC filter environment 1 category C2 EN/IEC 61800-3 4...16 kHz shielded motor cable 5 m<br>Conducted emissions with integrated EMC filter environment 1 category C2 EN/IEC 61800-3 2, 4, 8, 12 and 16 kHz shielded motor cable 10 m |
| Certificaciones de producto            | CSA<br>C-Tick<br>GOST<br>NOM<br>UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Resistencia a las vibraciones          | 1 gn EN/IEC 60068-2-6 13...200 Hz<br>1.5 mm peak to peak EN/IEC 60068-2-6 3...13 Hz drive unmounted on symmetrical DIN rail                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Resistencia a los choques              | 15 gn EN/IEC 60068-2-27 11 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Humedad relativa                       | 5...95 % without condensation IEC 60068-2-3<br>5...95 % without dripping water IEC 60068-2-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Temperatura ambiente de almacenamiento | -25...70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Ambient air temp for op                | -10...50 °C cubierta protectora de la parte superior del motor extraída<br>50...60 °C con disminución de corriente de 2,2 % por grada                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Altitud máxima de funcionamiento       | > 1000...2000 m with current derating 1 % per 100 m<br><= 1000 m without derating                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## Sostenibilidad de la oferta

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|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Estado de la oferta sostenible | Producto Green Premium                                                                                                                                                                                                   |
| RoHS (código de fecha: AASS)   | Conforme - desde 0901 - Schneider Electric declaration of conformity<br> <a href="#">Schneider Electric declaration of conformity</a> |
| REACH                          | La referencia no contiene SVHC<br><a href="#">La referencia no contiene SVHC</a>                                                                                                                                         |
| Product environmental profile  | Disponible<br> <a href="#">Perfil medioambiental</a>                                                                                  |

|                                |                                                          |
|--------------------------------|----------------------------------------------------------|
| Product end of life instructio | Disponible<br><a href="#">Manual de gestión residuos</a> |
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## Garantía contractual

|        |           |
|--------|-----------|
| Period | 18 months |
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