

# ATS48M12Q

soft starter for asynchronous motor - ATS48 -  
1045 A - 230..415 V - 250..710 kW

## Main

Commercial Status	Commercialised
Range of product	Altistart 48
Product or component type	Soft starter
Product destination	Asynchronous motors
Product specific application	Pumping and ventilation machine Severe and standard applications
Component name	ATS48
Power supply voltage	230...415 V (- 15...10 %)
Motor power kW	500 kW at 400 V (connection in the motor supply line) for severe applications 500 kW at 230 V (connection to the motor delta terminals) for standard applications 355 kW at 230 V (connection in the motor supply line) for standard applications 250 kW at 230 V (connection in the motor supply line) for severe applications 710 kW at 400 V (connection to the motor delta terminals) for severe applications 630 kW at 400 V (connection in the motor supply line) for standard applications
Power dissipation in W	3497 W for standard applications 2865 W for severe applications
Utilisation category	AC-53A
Type of start	Start with torque control (current limited to 5 In)
Icl nominal current	2078 A (connection to the motor delta terminals) for standard applications 1732 A (connection in the motor supply line) for standard applications 1200 A (connection in the motor supply line) for standard applications 1000 A (connection in the motor supply line) for severe applications
IP degree of protection	IP00

## Complementary

Assembly style	With heat sink
Function available	External bypass (optional)
Power supply voltage limits	195...456 V
Power supply frequency	50...60 Hz (- 5...5 %)
Power supply frequency limits	47.5...63 Hz
Device connection	In the motor supply line To the motor delta terminals
Factory setting current	1045 A
Control circuit voltage	220 - 15 % to 415 + 10 %, 50/60 Hz
Control circuit consumption	80 W
Discrete output number	2
Discrete output type	(R3) relay outputs motor powered NO (R2) relay outputs end of starting relay NO (R1) relay outputs fault relay NO (LO2) logic output 0 V common configurable (LO1) logic output 0 V common configurable
Output absolute accuracy precision	+/- 5 %
Minimum switching current	Relay outputs 10 mA at 6 V DC

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Maximum switching current	Relay outputs 1.8 A at 30 V DC inductive load, $\cos \phi = 0.5$ , L/R = 20 ms Relay outputs 1.8 A at 230 V AC inductive load, $\cos \phi = 0.5$ , L/R = 20 ms Logic output 0.2 A at 30 V DC
Discrete input number	5
Discrete input type	(Stop, Run, LI3, LI4) logic, $\leq 8$ mA 4300 Ohm PTC, 750 Ohm at 25 °C
Discrete input voltage	24 V ( $\leq 30$ V)
Discrete input logic	(Stop, Run, LI3, LI4) positive logic state 0 < 5 V and < 2 mA, state 1 > 11 V and > 5 mA
Starting current	Adjustable 0.4...1.3 Icl
Analogue output type	(AO) current output 0-20 mA or 4-20 mA $\leq 500$ Ohm
Communication port protocol	Modbus
Connector type	1 RJ45
Communication data link	Serial
Physical interface	RS485 multidrop
Transmission rate	4800, 9600 or 19200 bps
Max nodes number	31
Protection type	Thermal protection (starter) Thermal protection (motor) Phase failure (line)
Marking	CE
Type of cooling	Forced convection
Operating position	Vertical +/- 10 degree
Height	890 mm
Width	770 mm
Depth	315 mm
Product weight	115 kg

## Environment

Electromagnetic compatibility	Voltage/Current impulse conforming to IEC 61000-4-5 level 3 Immunity to radiated radio-electrical interference conforming to IEC 61000-4-3 level 3 Immunity to electrical transients conforming to IEC 61000-4-4 level 4 Electrostatic discharge conforming to IEC 61000-4-2 level 3 Damped oscillating waves conforming to IEC 61000-4-12 level 3 Conducted and radiated emissions conforming to IEC 60947-4-2 level A
Standards	EN/IEC 60947-4-2
Product certifications	CCC CSA C-Tick DNV GOST NOM 117 SEPRO TCF UL
Vibration resistance	1.5 mm ( $f = 2...13$ Hz) conforming to EN/IEC 60068-2-6 1 gn ( $f = 13...200$ Hz) conforming to EN/IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to EN/IEC 60068-2-27
Noise level	60 dB
Pollution degree	Level 3 conforming to IEC 60664-1
Relative humidity	$\leq 95$ % without condensation or dripping water conforming to EN/IEC 60068-2-3
Ambient air temperature for operation	-10...40 °C without derating > 40...60 °C with current derating of 2 % per °C
Ambient air temperature for storage	-25...70 °C
Operating altitude	> 1000...2000 m with current derating of 2.2 % per additional 100 m $\leq 1000$ m without derating

## Contractual warranty

Period	18 months
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