Product data sheet
Characteristics

ATS480C59Y
Soft starter, Altistart 480, 590A, 208 to 690V AC, control supply 110 to 230V AC



Main

Range of product	Altivar Soft Starter ATS480
Product or component type	Soft starter
Product destination	Asynchronous motors
Product specific application	Process and infrastructures
Device short name	ATS480
Network number of phases	3 phases
Utilisation category	AC-3A AC-53A
[Us] rated supply voltage	208...690 V - 15...10 %
Supply frequency	50...60 Hz - 20...20 %
[Ie] rated operational current	Normal duty: 590.0 A (at <40 °C)
Maximum permanent current	480.0 A at 40 °C for heavy duty
Torque control	True
IP degree of protection	IP00
Motor power kW	160.0 KW at 230 V in the motor supply line normal duty 132.0 KW at 230 V in the motor supply line heavy duty 315.0 KW at 400 V in the motor supply line normal duty 250.0 KW at 400 V in the motor supply line heavy duty 355.0 KW at 440 V in the motor supply line normal duty 250.0 KW at 440 V in the motor supply line heavy duty 400.0 KW at 500 V in the motor supply line normal duty 315.0 KW at 500 V in the motor supply line heavy duty 400.0 KW at 525 V in the motor supply line normal duty 315.0 KW at 525 V in the motor supply line heavy duty 560.0 KW at 660 V in the motor supply line normal duty 400.0 KW at 660 V in the motor supply line heavy duty 560.0 KW at 690 V in the motor supply line normal duty 500.0 KW at 690 V in the motor supply line heavy duty 250.0 KW at 230 V to the motor delta terminals heavy duty 400.0 KW at 400 V to the motor delta terminals normal duty 355.0 KW at 400 V to the motor delta terminals heavy duty
Motor power hp	150.0 Hp at 208 V heavy duty 200.0 Hp at 230 V normal duty 400.0 Hp at 460 V normal duty 350.0 Hp at 460 V heavy duty 500.0 Hp at 575 V normal duty 400.0 Hp at 575 V heavy duty
Option card	Communication module for Profibus DP V1 Communication module for Modbus TCP/EtherNet/IP Communication module for CANopen daisy chain Communication module for CANopen Sub-D Communication module for CANopen open style Communication module for PROFINET

Complementary

Device connection	In the motor supply line To the motor delta terminals
[Uc] control circuit voltage	110...230 V AC 50/60 Hz - 15...10 %
Apparent power	0.125 KVA
Integrated motor overload protection	True
Accuracy class	Class 10E
Protection type	Phase failure: line Integrated thermal protection: motor Thermal protection: starter Current overload: motor Underload: motor Excessive starting time, locked rotor: motor Motor phase loss: motor Line supply phase loss: line Line supply phase loss: motor Thermal protection: motor
Output current drift	150…700 %
Rated current pwr loss specification	590.0 A
Power loss static current independent	25.0 W
Power loss per device current dependent	1711.0 W
Standards	IEC 60947-4-2 UL 60947-4-2 IEC 60664-1
Product certifications	CE[RETURN]cULus[RETURN]CCC[RETURN]UKCA[RETURN]RCM[RETURN]EAC[RETURN]DN
Marking	CE CCC UKCA EAC RCM CULus
[Uc] control circuit voltage	24 V DC
Discrete input number	4
Discrete input type	(STOP) logic inputs, 3500 Ohm (RUN) logic inputs, 3500 Ohm (DI3) programmable as logic input, 3500 Ohm (DI4) programmable as logic input, 3500 Ohm
Input compatibility	STOP: discrete input level 1 PLC conforming to IEC 61131-2 RUN: discrete input level 1 PLC conforming to IEC 61131-2 DI3: discrete input level 1 PLC conforming to IEC 61131-2 DI4: discrete input level 1 PLC conforming to IEC 61131-2
Discrete input logic	Programmable digital input at State 0: < 5 V
Relay output number	3
Relay output type	Relay outputs R1A 1 NO Relay outputs R1B 1 NO Relay outputs RIC NO/NC programmable
Minimum switching current	100 MA at 12 V DC for relay outputs
Maximum switching current	Relay outputs 2 A at 250 V AC Relay outputs 2 A at 30 V DC Relay outputs
Discrete output number	2
Discrete output type	(DQ1) programmable digital output <= 30 V (DQ2) programmable digital output <= 30 V
Output compatibility	Open collector level 1 PLC conforming to IEC 65A-68
Analogue input number	1
Analogue input type	AI1/PTC PTC/Pt 100 temperature probe PTC2 PTC/Pt 100 temperature probe PTC3 PTC/Pt 100 temperature probe
Analogue output number	1
Analogue output type	Current output AQ1: 0...20 mA or 0...10 V, impedance <500 Ohm
Communication port protocol	Modbus serial
Connector type	1 RJ45
Communication data link	Serial
Physical interface	2-wire RS 485

Transmission rate	1200...256000 bit/s
Transmission frame	RTU
Data format	8 bits, configurable odd, even or no parity
Type of polarization	No impedance for Modbus serial
Number of addresses	0…227 for Modbus serial
Method of access	Slave Modbus serial
Function available	External bypass control Pre-heating Smoke extraction Multi-motor cascade Second motor set User management Ports and services hardening Security event logging Cybersecure firmware update Single direction
Display screen available	True
Operating position	Vertical +/- 10 degree
Height	670.0 Mm
Width	400.0 Mm
Depth	314.0 Mm
Net weight	51.4 Kg

Environment

Electromagnetic compatibility	Conducted and radiated emissions level A conforming to IEC 60947-4-2 Conducted and radiated emissions with bypass level B conforming to IEC 60947-4-2 Damped oscillating waves level 3 conforming to IEC 61000-4-12 Electrostatic discharge level 3 conforming to IEC 61000-4-11 Immunity to electrical transients level 4 conforming to IEC 61000-4-4 Immunity to radiated radio-electrical interference level 3 conforming to IEC 61000-4-3 Voltage/Current impulse level 3 conforming to IEC 61000-4-5
Pollution degree	Level 3
[Uimp] rated impulse withstand voltage	6 KV
[Ui] rated insulation voltage	690 V
Environmental class (during operation)	Class 3C3 according to IEC 60721-3-3 Class 3S2 according to IEC 60721-3-3
Relative humidity	0…95 % without condensation or dripping water conforming to IEC 60068-2-3
Ambient air temperature for operation	40…60 °C (with current derating of 2 % per °C) -15…40 °C (without derating)
Ambient air temperature for storage	-25…70 °C
Operating altitude	<= 1000 m without derating > 1000...4000 m with current derating 1 % per 100 m
Maximum deflection under vibratory load (during operation)	1.5 mm at 2...13 Hz
Maximum deflection under vibratory load (during storage)	1.75 mm at 2...9 Hz
Maximum deflection under vibratory load (during transport)	1.75 mm at 2...9 Hz
Maximum acceleration under vibrational stress (during operation)	10 m/s² at 13...200 Hz
Maximum acceleration under vibratory load (during storage)	15 m/s² at 200...500 Hz 10 m/s² at 9...200 Hz
Maximum acceleration under vibratory load (during transport)	15 m/s² at 200...500 Hz 10 m/s² at 9...200 Hz
Maximum acceleration under shock impact (during operation)	150 m/s² at 11 ms
Maximum acceleration under shock load (during storage)	100 m/s² at 11 ms
Maximum acceleration under shock load (during transport)	100 m/s² at 11 ms

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	55.0 Cm
Package 1 Width	53.0 Cm
Package 1 Length	81.0 Cm
Package 1 Weight	61.5 Kg

Offer Sustainability

Recyclability potential, in %	87
Total lifecycle Carbon footprint	39 292 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	454.2266745653176
Carbon footprint of the manufacturing phase [A1 to A3]	454 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	9.763675704681061
Carbon footprint of the distribution phase [A4]	10 kg CO2 eq.
Carbon footprint of the installation phase [A5]	27.04550696664379
Carbon footprint of the installation phase [A5]	27 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	38734.05651775061
Carbon footprint of the use phase [B2, B3, B4, B6]	38 734 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	No
Carbon footprint of the end-of-life phase [C1 to C4]	66.50479027111747
Carbon footprint of the end-of-life phase [C1 to C4]	67 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	39292
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	4a414825-09af-4572-9f8d-eb756d062409
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which
End of life manual availability	End Of Life Information
Removable battery	Yes
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection and

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised