Product data sheet
Characteristics

ATS430C59S6
Soft starter, Altivar Soft Starter ATS430, 590A, 208 to 600V AC, control supply 110 to 230V AC



Main

Range of product	Altivar Soft Starter ATS430
Product or component type	Soft starter
Product destination	Asynchronous motors
Product specific application	Standard industrial machines
Device short name	ATS430
Network number of phases	3 phases
Utilisation category	AC-3A AC-53A
[Ue] rated operational voltage	208...600 V AC (- 15...10 %)
Supply frequency	50...60 Hz - 20...20 %
[Ie] rated operational current	Normal duty: 590 A in line (at <40 °C)
Service factor	100
Torque control	True
IP degree of protection	IP00
Motor power kW	160 KW at 230 V in line normal duty 315 KW at 400 V in line normal duty 355 KW at 440 V in line normal duty 400 KW at 500 V in line normal duty 400 KW at 525 V in line normal duty
Motor power hp	200 Hp at 230 V normal duty 400 Hp at 460 V normal duty 500 Hp at 575 V normal duty
Communication port protocol	Modbus serial

Complementary

Device connection	In line
Overload current	400 % Ie for 13 s
On-load factor	50 %
Operating rate	10 cyc/h
[Uc] control circuit voltage	110...230 V AC 50...60 Hz - 15...10 %
Apparent power	70 VA
Integrated motor overload protection	True
Accuracy class	Class 10E

Protection type	Phase failure: mains Thermal protection: mains Thermal protection: starter Current overload: motor Motor underload: motor Excessive acceleration time: motor Motor phase loss detection: motor Protection against line phase inversion: mains External thermal protection: motor Short-circuit between motor phase and earth: motor
Output current drift	150…700 %
Rated current pwr loss specification	590 A
Power loss static current independent	19 W
Power loss per device current dependent	122 W
Power losses	5655 W during starting at 40 °C at 400% In
Standards	EN/IEC 60947-4-2 UL 60947-4-2 IEC 60664-1
Product certifications	cULus[RETURN]CE[RETURN]UKCA[RETURN]CCC[RETURN]RCM[RETURN]EAC[RETURN]KC
Marking	CULus CE UKCA CCC RCM EAC KC
[Uc] control circuit voltage	24 V DC
Discrete input number	4
Discrete input type	(STOP) digital input, 4.4 kOhm (RUN) digital input, 4.4 kOhm (DI3) digital input, 4.4 kOhm (DI4) digital input, 4.4 kOhm
Input compatibility	STOP: digital input level 1 PLC conforming to EN/IEC 61131-2 RUN: digital input level 1 PLC conforming to EN/IEC 61131-2 DI3: digital input level 1 PLC conforming to EN/IEC 61131-2 DI4: digital input level 1 PLC conforming to EN/IEC 61131-2
Discrete input logic	Digital input STOP at State 0: 0...< 5 V and <= 2 mA at State 1: > 11 V, >= 5 mA Digital input RUN at State 0: 0...< 5 V and <= 2 mA at State 1: > 11 V, >= 5 mA Digital input DI3 at State 0: 0...< 5 V and <= 2 mA at State 1: > 11 V, >= 5 mA Digital input DI4 at State 0: 0...< 5 V and <= 2 mA at State 1: > 11 V, >= 5 mA
Relay output number	2
Relay output type	Relay outputs R1A, R1C NO Relay outputs R1B, R1C NC Relay outputs R2A, R2C NO
Minimum switching current	100 MA at 12 V DC for relay outputs
Maximum switching current	Relay outputs 2 A / 250 V AC for AC-15 100000 cycles following IEC 60947-5-1 Relay outputs 2 A / 30 V DC for DC-13 150000 cycles following IEC 60947-5-1
Analogue input number	1
Analogue input type	PTC1 : PTC temperature probe PTC2 : PTC temperature probe
Analogue output number	1
Analogue output type	Current output AQ1 : 0...20 mA/4...20 mA , impedance< 500 Ohm Voltage output AQ1 : 0...10 V , impedance> 470 Ohm
Communication port protocol	Modbus serial RJ45 Modbus serial open style (DO, D1, PE, COM)
Connector type	1 RJ45 Open style
Physical interface	2-wire RS 485 - connector(s): RJ45 2-wire RS 485 - connector(s): open style (DO, D1, PE, COM)
Transmission frame	RTU : 1 RJ45 RTU : open style (DO, D1, PE, COM)
Transmission rate	4.8…38.4 kbps for Modbus serial RJ45 0.3...115.2 kbps for Modbus serial open style (DO, D1, PE, COM)
Data format	8 bits, odd, even or no parity, 1 or 2 bits to stop for Modbus serial RJ45 8 bits, configurable odd, even or no parity for Modbus serial open style (DO, D1, PE, COM)
Number of addresses	0…247 for Modbus serial
Method of access	Slave Modbus serial
Type of polarization	No impedance for Modbus serial

Display screen available	True
Operating position	Vertical +/- 10 degree
Height	455 Mm
Width	304 Mm
Depth	296.5 Mm
Net weight	24.50 Kg
Internal bypass	True
Function available	Single direction Pre-heating Power monitoring Condition monitoring User management Ports and services hardening Security event logging Cybersecure firmware update Small motor test
Material declaration	True

Environment

Electromagnetic compatibility	Conducted and radiated emissions level A conforming to IEC 60947-4-2 Electrostatic discharge level 3 conforming to IEC 61000-4-2 Immunity to radiated radio-electrical interference level 3 conforming to IEC 61000-4-3 Immunity to electrical transients level 4 conforming to IEC 61000-4-4 Voltage/Current impulse level 3 conforming to IEC 61000-4-5 Damped oscillating waves level 3 conforming to IEC 61000-4-18 Immunity to conducted disturbances radio-frequency level 3 conforming to IEC 61000-4-6
Pollution degree	Level 3
[Uimp] rated impulse withstand voltage	6 KV
[Ui] rated insulation voltage	600 V
Environmental class (during operation)	Class 3C3 according to IEC 60721-3-3 Class 3S3 according to IEC 60721-3-3
Ambient air temperature for operation	-25…40 °C (without derating) 40…60 °C (with current derating of 1 % per °C above 40 °C)
Ambient air temperature for storage	-40…70 °C
Ambient air transport temperature	-40…70 °C
Operating altitude	<= 2000 m without derating > 2000...4800 m with current derating 1 % per 100 m above 2000 m
Relative humidity	5…95 % without condensation or dripping water conforming to EN/IEC 60068-2-3
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)	1 gn at 13…200 Hz
Maximum acceleration under vibratory load (during storage)	4 gn at 9…200 Hz 1.5 gn at 200…500 Hz
Maximum acceleration under vibratory load (during transport)	4 gn at 9…200 Hz 1.5 gn at 200…500 Hz
Maximum acceleration under shock impact (during operation)	15 gn at 11 ms
Maximum acceleration under shock load (during storage)	10 gn at 11 ms
Maximum acceleration under shock load (during transport)	10 gn at 11 ms

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	53.000 Cm
Package 1 Width	40.000 Cm
Package 1 Length	60.000 Cm
Package 1 Weight	32.500 Kg

Offer Sustainability

Recyclability potential, in %	69
Total lifecycle Carbon footprint	13 892 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	425.6034024115732
Carbon footprint of the manufacturing phase [A1 to A3]	426 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	6.255223244005092
Carbon footprint of the distribution phase [A4]	6 kg CO2 eq.
Carbon footprint of the installation phase [A5]	7.570273174473311
Carbon footprint of the installation phase [A5]	8 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	13392.31704185507
Carbon footprint of the use phase [B2, B3, B4, B6]	13 392 kg CO2 eq.
Sustainable packaging	No
Carbon footprint of the end-of-life phase [C1 to C4]	60.6060376510419
Carbon footprint of the end-of-life phase [C1 to C4]	61 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	13892
Packaging made with recycled cardboard	No
Packaging without single use plastic	No
SCIP Number	35ac1b83-4691-4b2e-936b-d6719483bc92
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