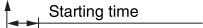
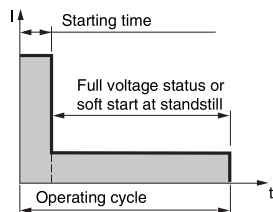


Low Power Mini Soft Starts

Characteristics

Electrical characteristics

Type of starter	ATS	U01N2●●LT		01N2●●LU	01N2●●QN	01N2●●RT
Category of use	Conforming to IEC 60947-4-2	AC-53b				
Rated AC supply voltage	3-phase only	200–480 Vac	200–240 Vac		380–415 Vac	440–480 Vac
AC line voltage tolerance		-15% to +10%				
Frequency		50 or 60 Hz ± 5%				
Output voltage		Maximum 3-phase voltage equal to AC supply voltage.				
Control supply voltage		24 Vac/dc ± 10%	No external control power needed.			
Rated operating current		6, 9, 12, 22, and 32 A				
Adjustable starting time		1–10 s				
Adjustable deceleration time		1–10 s				
Starting voltage		30–80% of motor's rated voltage				
Type of starter	ATSU01N2	06LT	09LT	12LT	22LT	32LT
Control power supply consumption		24 Vac/dc, 65 mA			24 Vac/dc, 100 mA	
Power dissipated	At full load at the end of starting	1.5 W	1.5 W	1.5 W	2.5 W	2.5 W
	During starting and stopping at 5 times the rated operating current	61.5 W	91.5 W	121.5 W	222.5 W	322.5 W
Type of starter	ATS01N2	06LU/QN/RT	09LU/QN/RT	12LU/QN/RT	22LU/QN/RT	32LU/QN/RT
Power dissipated	At full load at the end of starting	4 W	4 W	4 W	4.5 W	4.5 W
	During starting and stopping at 5 times the rated operating current	64 W	94 W	124 W	224.5 W	324.5 W
Type of starter		ATSU01N206LT to ATSU01N222LT ATS01N206●● to ATS01N222●●			ATSU01N232LT ATS01N232●●	
 Starting time	Starting time at 5 times the rated operating current	1 s	5 s		1 s	5 s
	Max. number of cycles per hour	310	20		180	10



ATS01 Control Terminals

ATSU01N2●●LT

R1A	R1C	COM	LI1	LI2	24V	BOOST	LO1
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ATS01N2 ●●LU/QN/RT

R1A	R1C	COM	LI1	LI2	LI+	BOOST	LO1
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Control Terminal Description	ATSU01N2●●LT	ATS01N2●●LU/QN/RT
24 V and COM or LI+ and COM Control power (electrical isolation between line power and control power)	24 V ±10% from external power supply Connect to terminals +24 V and COM Max. required current 100 mA	24 V from ATS01 internal power supply LI+ and COM Max. available current 10 mA No short-circuit or overload protection.
LI1, LI2, Boost Logic inputs Stop, Run and Boost (Kickstart) functions	27 kohms input impedance 40 Vdc maximum input signal Max. current 8 mA State 0 if signal < 5 V State 1 if signal > 13 V	
LO1 End of starting signal	Open collector logic output External power supply (minimum 6 Vdc, maximum 30 Vdc) Max current 200 mA	
R1A R1C Relay output Fault signal and isolation contactor control Relay contact is open when soft start is not running or when it is faulted.	Normally-open (N.O.) contact Minimum switching capacity: 10 mA at 6 Vdc Max. switching capacity on inductive load (cos φ = 0.5 and L/R = 20 ms): 2 A at 250 Vac or 30 Vdc (AC-15) Max. operating voltage 440 Vac	
LED signalling		
Green LED	Soft start power on	
Yellow LED	Voltage ramp complete, motor up to speed	

Overview:
pages 3–6

Dimensions:
page 10

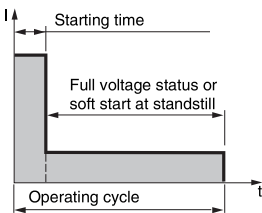
Selection:
pages 11–12

Wiring Diagrams:
pages 13–31

Torque Limiting Mini Soft Starts
Characteristics

Electrical characteristics

Type of starter		ATS01N1●●FT			
Category of use	Conforming to IEC 60947-4-2	AC-53b			
Rated AC supply voltage	single-phase three-phase	110–240 Vac 200–480 Vac			
AC line voltage tolerance		-15% to +10%			
Frequency		50 or 60 Hz ± 5%			
Output voltage		Maximum output voltage equal to AC supply voltage.			
Control supply voltage		110–220 Vac or 24 Vac/dc (± 10%)			
Rated operating current		3, 6, 9, and 12 A			
Adjustable starting time		1–5 s			
Starting voltage		30–80% of motor's rated voltage			
Type of starter	ATS01N1	03FT	06FT	09FT	12FT
Control power supply consumption		110 Vac, 30 mA 24 Vac/dc, 25 mA 240 Vac, 65 mA		110 Vac, 35 mA 24 Vac/dc, 30 mA 240 Vac, 80 mA	
Power dissipated	At full load at end of starting	4 W	1 W	1 W	1 W
	During starting and stopping at 5 times the rated operating current	19 W	31 W	46 W	61 W
Type of starter		ATS01N1●●FT			
	Starting time at 5 times the rated operating current	1 s		5 s	
	Max. number of cycles per hour	310		20	



ATS01 Control Terminals

CL1/0	CL2	24 V
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Control Terminal Description	110–230 Vac	24 Vac/dc
CL1/0 and CL2 or CL1/0 and 24 V Control power (electrical isolation between line power and control power)	Connect line supply to CL2 Connect neutral to CL1/0	Connect (+) to 24 V Connect (-) to CL1/0
LED signalling		
Green LED	Soft start power on	
Yellow LED	Voltage ramp complete, motor up to speed	