

Soft Starter Bypass Calculator

Compare motor running current and a service-factor reference current with an entered soft-starter bypass rating for an early equipment review.

Generated October 10, 2026

<https://www.elecatrix.com/circuits-components/soft-starter-bypass-calculator/>

Inputs

Input	Value	Unit
Motor FLA	80	A
Running load	90	% FLA
Service factor reference	1.15	x
Entered bypass rating	100	A

Results

Result	Value	Unit
Running current	72	A
Service-factor reference current	92	A
Bypass rating margin	8	A
Bypass utilization	92	%

Status

Status	Value	Unit
Bypass note	Entered bypass rating meets or exceeds reference current	

Calculation details

Detail	Value	Unit
Calculation basis	Motor FLA is scaled by running-load percent and service-factor reference, then compared with entered bypass rating.	
Bypass boundary	Bypass current comparison only; soft-starter selection, SCCR, overloads, duty, and code review remain external.	

Formulas

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Running current=Motor FLA x Running load percent/100

Service-factor reference current=Motor FLA x Service factor

Bypass rating margin=Entered bypass rating-Reference current

Bypass utilization=Reference current/Entered bypass rating x 100

Warnings and limitations

This comparison does not select or approve a soft starter, bypass contactor, overload, SCCR, short-circuit protection, duty cycle, or code-compliant motor controller.