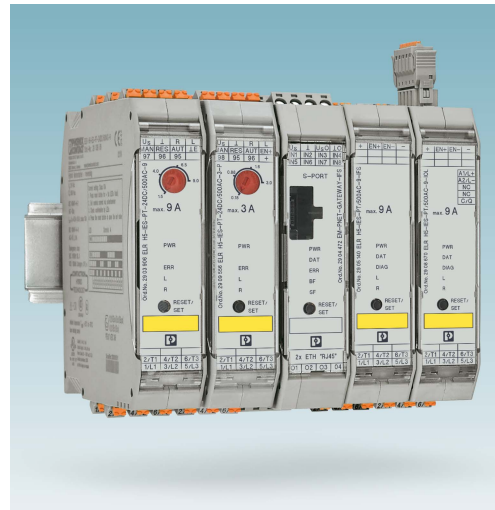


# CONTACTRON hybrid motorstarters

## Emergency tripping

Application note  
109239\_en\_00

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## 1 Description

When using motors with a high degree of efficiency (IE3 or IE4), you might have to consider high starting currents.

In accordance with the IEC 60947-4-2 product standard, CONTACTRON hybrid motor starters have been designed to allow for a maximum of 8 times the starting current of a motor.

Example: Compliant with the standard, the inrush current for 2.4 A devices is 19.2 A.

$$I_n = 2.4 \text{ A} * 8 = 19.2 \text{ A}$$

Additionally, CONTACTRON hybrid motor starters feature an emergency tripping mechanism triggered by higher currents (refer to the table below).

	Standard hybrid motor starters			Network-capable hybrid motor starters			Hybrid motor starters Pro		
	ELR W...-xI; ELR H...-x			ELR H...-x-IFS/-IOL			ELR H...-x-P		
	0.6 A	2.4 A	9 A	0.6 A	3 A	9 A	0.6 A	3 A	9 A
Current (typ.) $I_e$ <sup>1</sup>	10 A	33 A	45 A	10 A	33 A	60 A	10 A	33 A	60 A
Shutdown time (typ.)	300 ms	300 ms	1.8 s	300 ms	300 ms	300 ms	300 ms	300 ms	300 ms

<sup>1</sup> The maximum inrush current  $I_e$  must be below these values, e.g., for switching the inrush currents of IE3/IE4 motors. For information on actual inrush current values, refer to the documentation of the motor in question or contact the manufacturer.



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