

# Series CEP7 Motor Protection

## Solid State Overload Relays



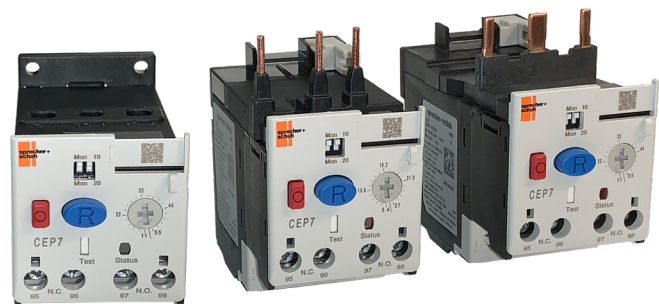
**SMART DEVICES**

# The new generation

The Sprecher+Schuh CEP7 Electronic Motor Overload Relay can help customers better protect their motors and avoid unplanned downtime due to motor failure. As the next generation of Sprecher+Schuh basic-tier electronic overload relays for our scalable solution portfolio, it more accurately measures a motor's current load, models its temperature and can de-energise the motor to help minimise potential equipment damage due to overheating.

The CEP7 overload relay is part of the Sprecher+Schuh integrated motor control system. It can mount directly to CA7 contactors up to 97A. The CEP7 basic model has two user-adjustable trip class settings of 10 and 20. The CEP7 advanced model has selectable trip class adjustment 10...30 and a plug-in port for front mount accessories.

Optional accessories and expansion modules can extend the functionality of the CEP7 overload relays, enhancing motor overload protection while maintaining a cost-effective solution.



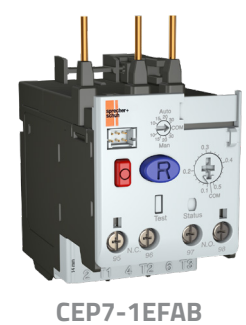
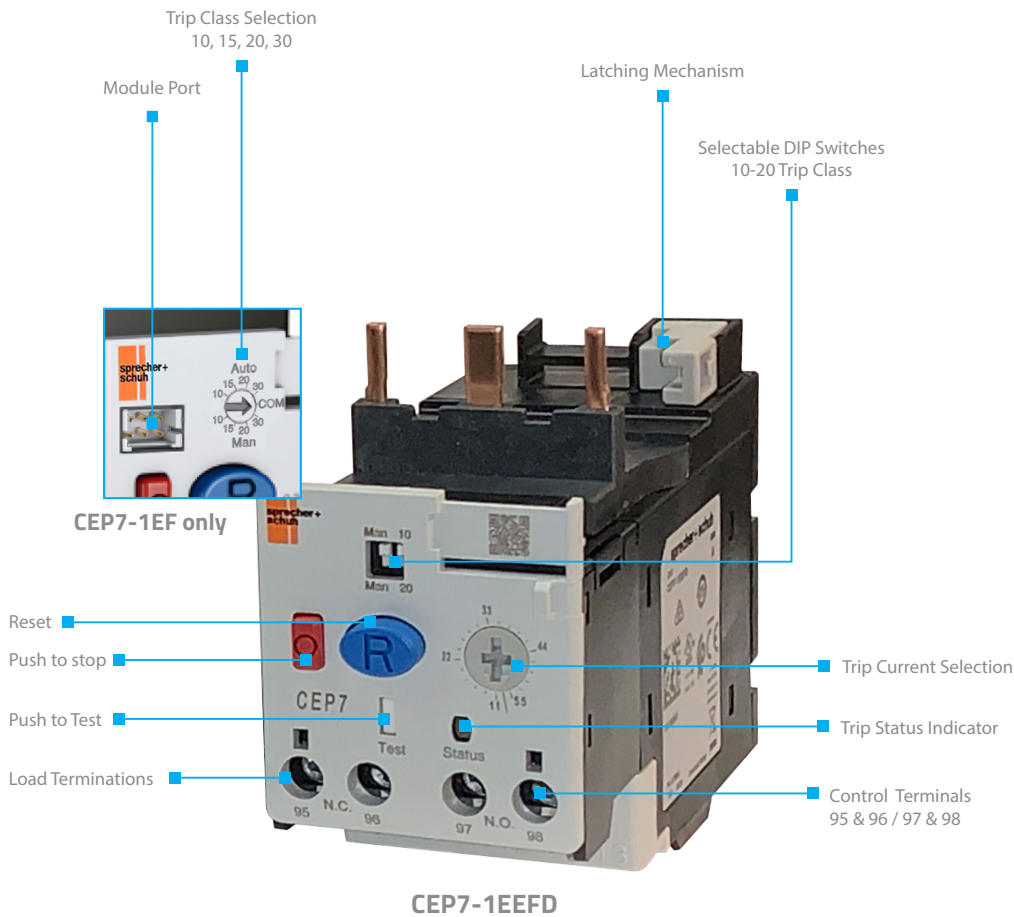
## Features and Benefits

- 5:1 wide current adjustment range to cover a variety of motor applications in a single device
- Selectable Trip Class
  - Dip Switch Selection of trip class 10, 20 on Basic model
  - Dial Selection of trip class 10, 15, 20, 30 on Advanced model
- Accurate and repeatable settings to help minimise commissioning time
- Higher efficiency and low heat dissipation versus traditional eutectic or bimetal relays
- Pass-thru model minimises number of power terminal connections
- Built-in thermal memory and phase loss detection helps protect your motor investment
- Single- and three-phase compatibility within the same unit allows for reduction in inventory SKUs'

## Additional Capabilities with Accessories:

- Jam & Ground Fault Protection
- Electronic Remote Reset
- Status Indication Display
- Anti-Tamper Shielding

# Features



## New Generation Advantage

- Selectable tripping class
- Choice of reset options
- More robust design
- Increased accuracy
- Improved motor protection
- Self-powered design
- Lowers energy requirements
- Reduces panel space
- Superior phase failure protection
- Improved flexibility

## Superior phase failure protection

The CEP7's on-board electronics are constantly monitoring all three phases. If the ASIC board senses that one phase is missing during a steady state running condition on a fully loaded motor, it will trigger in 3 seconds. If a single phase condition is present during starting, the CEP7 will trip within 8 seconds (for a motor >80% loaded). These times are much faster than any thermal bimetallic overload relay. In addition, CEP7 overload relays detect a 50% phase imbalance in the same way as a phase loss.

## Overload Relays (Direct Mount)

	For use with	Current Range [A]	Catalog No.	
Basic <sup>1)</sup>	CA7-9...23	0.1 - 0.5	CEP7-1EEAB	
		0.2 - 1	CEP7-1EEBB	
		1 - 5	CEP7-1EECB	
		3.2 - 16	CEP7-1EEDB	
		5.4 - 27	CEP7-1EEEB	
		CA7-30...55	5.4 - 27	CEP7-1EEED
		11 - 55	CEP7-1EEFD	
	CA7-60...97	20 - 100	CEP7-1EEGE	
Advanced <sup>2)</sup>	CA7-9...23	0.1...0.5	CEP7-1EFAB	
		0.2...1.0	CEP7-1EFBB	
		1.0...5.0	CEP7-1EFGB	
		3.2...16	CEP7-1EFDB	
		5.4...27	CEP7-1EFEB	
		CA7-30...55	5.4...27	CEP7-1EFED
		11...55	CEP7-1EFFD	
		CA7-60...97	20...100	CEP7-1EFGE

Contact your local NHP Sales representative for overload relays above 100 Amps.



CA7-37 contactor + CEP7-1EEFD overload

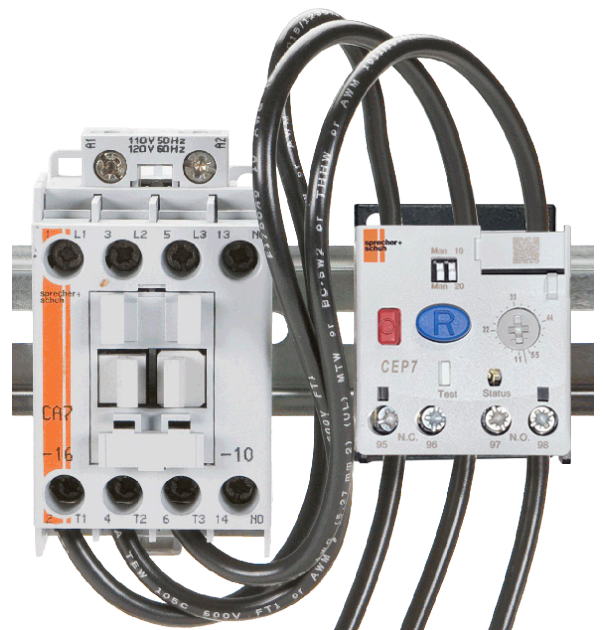
## Overload Relays (Pass-Thru Models)

	For use with	Current Range [A]	Catalog No.
	All contactors	1.0...5.0	CEP7-1EFCP
		3.2...16	CEP7-1EFD
		5.4...27	CEP7-1EFEP
		11...55	CEP7-1EFFP
		20...100	CEP7-1EFGP
Advanced <sup>3)</sup>	All contactors and external current transformers	30...150	CEP7-1EFHZ
		40...200	CEP7-1EFJZ
		60...300	CEP7-1EFKZ
		80...400	CEP7-1EFWZ
		100...500	CEP7-1EFLZ
		120...600	CEP7-1EFMZ
		160...800	CEP7-1EFNZ

CEP7-1EF\_Z models availability TBA



CEP7-1EFGP















DIN- Rail / Separate Mount  
Pass-thru model CEP7-1\_P

### Notes

- 1) Trip class 10, 20; manual reset only. Rated operating voltage 690V AC.
- 2) Trip class 10, 15, 20, 30; manual or automatic reset. Rated operating voltage 690V AC.
- 3) Trip class 10, 15, 20, 30; manual or automatic reset. Rated operating voltage 1000V AC.

## Accessories

Accessory	Description	For use with	Catalog No.
	Base Unit Anti-Tamper Shield	CEP7-1EE, CEP7-1EF	CEP7-1BC8
	Protection Accessory Anti-Tamper Shield	CEP7-1EGJ	CEP7-1EMC
	240V AC Remote Reset Solenoid 120V AC Remote Reset Solenoid 24V DC Remote Reset Solenoid	CEP7-1EE, CEP7-1EF	CEP7-1EMRA CEP7-1EMRD CEP7-1EMRZ
	DIN Rail/Panel Adapter for CEP7-1___B	CEP7-1EE, CEP7-1EF	CEP7-1EPB
	DIN Rail/Panel Adapter for CEP7-1___D	CEP7-1EE, CEP7-1EF	CEP7-1EPD
	DIN Rail/Panel Adapter for CEP7-1___E	CEP7-1EE, CEP7-1EF	CEP7-1EPE
	External Reset Adapter	CEP7-1EE, CEP7-1EF	CEP7-1ERA
	Accessory Panel/ DIN Mounting Kit	CEP7-1EGJ, CEP7-1ERR	CEP7-1EIKIT1
	Accessory Install Kit & Spare TBs	CEP7-1EGJ, CEP7-1ERR	CEP7-1EIKIT2
Accessory	Description	For use with	Catalog No.
	Universal Protection Module (Ground Fault / Jam)	CEP7-1EF..	CEP7-1EGJ
	Reset Adapter (Electronic Remote Reset)	CEP7-1EF..	CEP7-1ERR
	Remote indication Display with Reset	CEP7-1EGJ, CEP7-1ERR	CEP7-ERID
	Remote Indication Display - No Reset	CEP7-1EGJ, CEP7-1ERR	CEP7-1ERIDN

**Front Mount Modules**



**CEP7-ERID**

**Electronic Reset and Indication Display**

Display the status of a CEP7 from the front of a panel and features a reset button. Mounts in a standard 22mm push-button cutout.



**CEP7-1ERIDN**

**Indication Display (No Reset)**

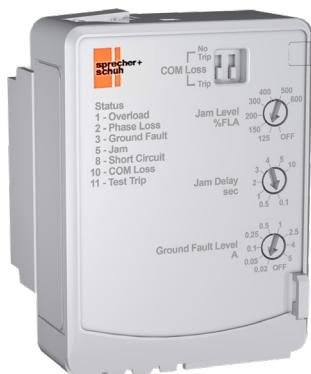
Displays the status of a CEP7 from the front of a panel. Mounts in a standard 22mm pushbutton cutout.



**CEP7-1ERR**

**Reset Adapter (Electronic Remote Reset)**

The Remote Reset/Indication Module is available for applications that require remote reset of CEP7 overload relays after a trip occurs. Side or Contactor mount options.



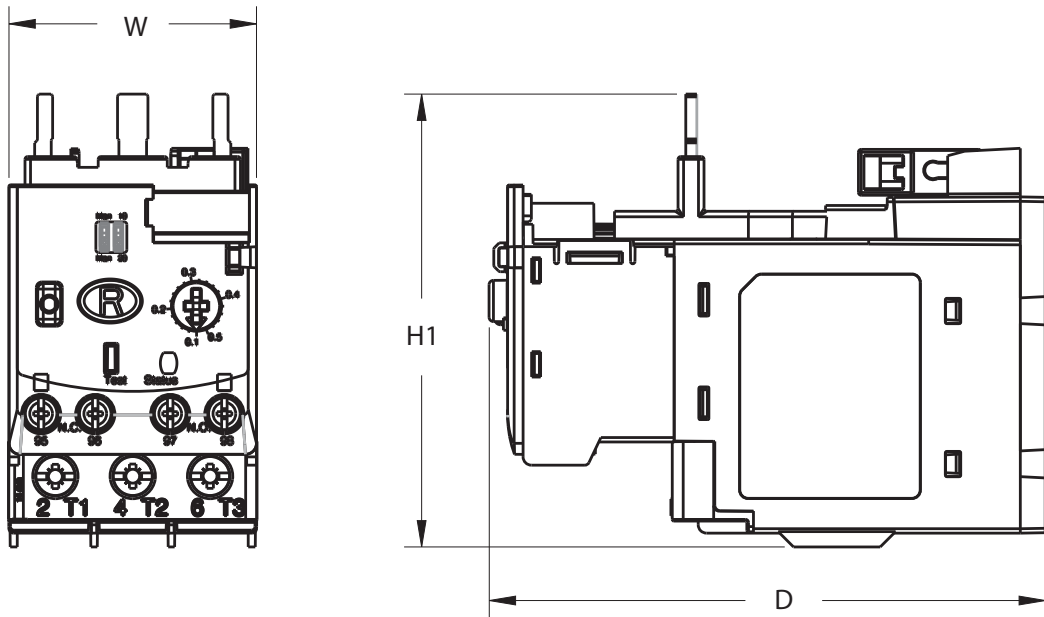
**CEP7-1EGJ**

**Universal Protection Expansion Module**

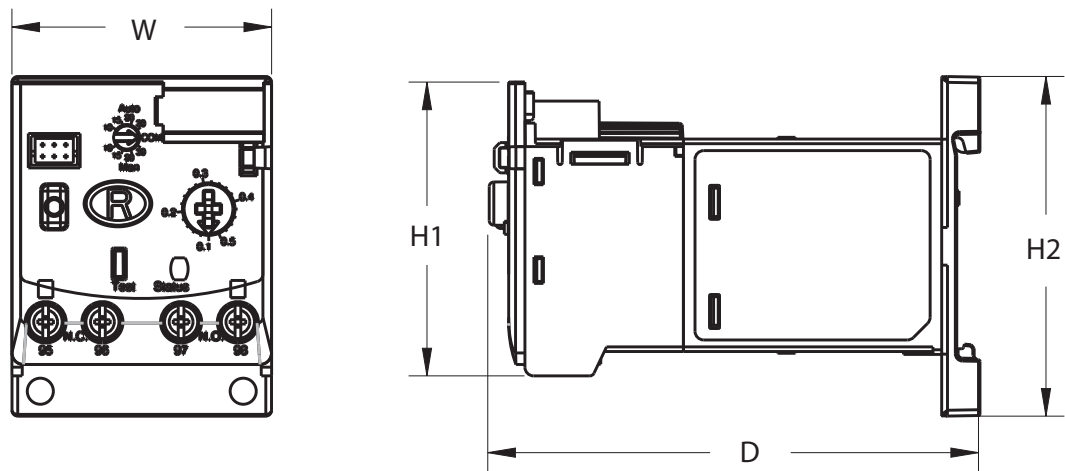
Front-accessible DIP switches offer flexibility to configure the operation to match application requirements. In addition, this module offers selectable jam & ground fault protection. Side or Contactor mount options.

# Dimensions

## Overload Relays / Direct-Mounted



## Overload Relays / Pass-Thru



Overload Relay	Mounting Style		W	D	H1	H2
CEP7-1EE/EF_B	Direct-mount CA7-9...23	mm	44.80	84.66	86.63	~
CEP7-1EE/EF_D	Direct-mount CA7-30...55	mm	44.80	100.66	81.96	~
CEP7-1EE/EF_E	Direct-mount CA7-60...97	mm	71.60	121.16	95.17	~
CEP7-1EF_P	Pass-thru 0.1...27A	mm	44.80	84.66	50.68	58.60
CEP7-1EF_P	Pass-thru 11...55A	mm	44.80	103.41	50.68	58.60
CEP7-1EF_P	Pass-thru 20...100A	mm	71.60	127.83	50.71	78.35

\* Approximate dimensional information.

The logo consists of the letters 'NHP' in a bold, white, sans-serif font, centered within a dark blue square background.

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