

## Hybrid motor starters

### Modular hybrid motor starters with reversing function

In addition to the functions forward running, reverse running, motor protection, and emergency stop up to SIL 3/PL e, these modular 3-phase hybrid motor starters offer additional advantages such as:

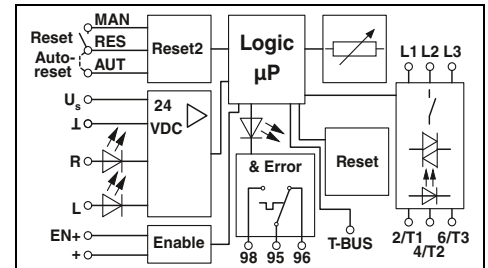
- Safe group switch-off
- Modular expansion option
- Wiring and cost savings with DIN rail connector
- Slow tripping characteristic curve  
Class 10 up to 3 A  
Safety level in accordance with:
- IEC 61508-1: SIL 3
- ISO 13849: PL e

<b>Notes:</b>
Type of insulating housing: Polyamide PA non-reinforced, color: gray.
Marking systems and mounting material See Catalog 3



new

Motor protection, emergency stop



#### Technical data

<b>Input data</b>	Rated supply voltage $U_s$	24 V DC
Control supply voltage range	Control supply current $I_c$ at $U_s$	19.2 V DC ... 30 V DC 60 mA
Rated actuating voltage $U_c$ EN+	Actuating voltage range	24 V DC 19.2 V DC ... 30 V DC
Rated actuating current $I_c$ at $U_c$	Input circuit	7 mA
Operating voltage / status / error indicator	Output data load side	Surge protection, reverse polarity protection Green LED / Yellow LED / Red LED
<b>Output data load side</b>	Operating voltage range	42 V AC ... 550 V AC
Output protection	General data	Surge protection
<b>General data</b>	Rated insulation voltage	550 V
Rated surge voltage	Rated surge voltage	6 kV
Ambient temperature (operation)	Standards/regulations	-25°C ... 70°C (observe derating) EN 60947-1 / EN 60947-4-2 / EN 50495 / EN ISO 13849 / IEC 62061 / IEC 61508
Mounting position	Mounting	Vertical (horizontal DIN rail, motor output below)
Connection data solid/stranded/AWG	Dimensions	Alignable, for spacing see derating 0.2 - 2.5 mm <sup>2</sup> / 0.2 - 2.5 mm <sup>2</sup> / 24 - 14 22.5 mm / 107.4 mm / 113.7 mm

#### Ordering data

Description	Type	Order No.	Pcs./Pkt.
<b>Load current 0.18 A ... 3 A</b>			
Screw connection			
Push-in connection			
<b>Load current 1.5 A ... 9 A</b>			
Screw connection	ELR H5-IES-PT- 24DC/500AC-3-P	2909556	1
Push-in connection	ELR H5-IES-PT- 24DC/500AC-9-P	2909554	1

#### Accessories

<b>Extension module</b>			
Screw connection	EM-2RSC/21AU-R/L-P	2908701	1
Push-in connection	EM-2RPT/21AU-R/L-P	2909573	1
<b>Safety relay with interface for DIN rail connectors</b>			
Screw connection	PSR-MC38-2NO-1DO-24DC-SC	1009831	1
Push-in connection	PSR-MC38-2NO-1DO-24DC-PI	1009832	1
<b>DIN rail connector</b>			
- For modular hybrid motor starters	ELR-TBUS-22,5-P	2203861	10
- For safety relay modules	PSR-TBUS	2890425	50



new



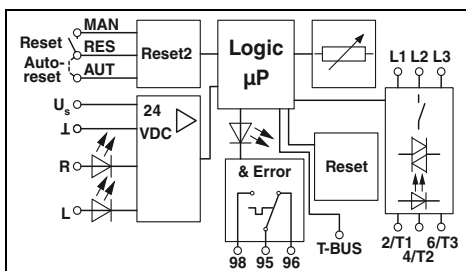
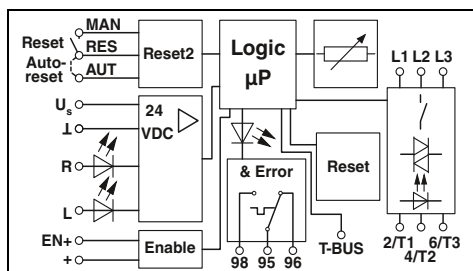
Motor protection, emergency stop



new



Motor protection



Technical data

24 V DC  
 19.2 V DC ... 30 V DC  
 60 mA  
 24 V DC  
 19.2 V DC ... 30 V DC  
 7 mA  
 Surge protection, reverse polarity protection  
 Green LED / Yellow LED / Red LED

42 V AC ... 550 V AC

550 V  
 6 kV  
 -25°C ... 70°C (observe derating)  
 EN 60947-1 / EN 60947-4-2 / EN ISO 13849 / IEC 62061 / IEC 61508  
 Vertical (horizontal DIN rail, motor output below)

Alignable, for spacing see derating  
 0.2 - 2.5 mm<sup>2</sup> / 0.2 - 2.5 mm<sup>2</sup> / 24 - 14  
 22.5 mm / 106.6 mm / 113.7 mm

Technical data

24 V DC  
 19.2 V DC ... 30 V DC  
 60 mA  
 24 V DC  
 19.2 V DC ... 30 V DC  
 7 mA  
 Surge protection, reverse polarity protection  
 Green LED / Yellow LED / Red LED

42 V AC ... 550 V AC

550 V  
 6 kV  
 -25°C ... 55°C (observe derating)  
 IEC 60947-1 / EN 60947-4-2  
 Vertical (horizontal DIN rail, motor output below)

Alignable, for spacing see derating  
 0.2 - 2.5 mm<sup>2</sup> / 0.2 - 2.5 mm<sup>2</sup> / 24 - 14  
 22.5 mm / 106.6 mm / 113.7 mm

Ordering data

Type	Order No.	Pcs./Pkt.
ELR H5-IS-SC- 24DC/500AC-3-P	2908699	1
ELR H5-IS-PT- 24DC/500AC-3-P	2909569	1
ELR H5-IS-SC- 24DC/500AC-9-P	2908697	1
ELR H5-IS-PT- 24DC/500AC-9-P	2909567	1

Ordering data

Type	Order No.	Pcs./Pkt.
ELR H5-I-SC- 24DC/500AC-3-P	2908695	1
ELR H5-I-PT- 24DC/500AC-3-P	2909562	1
ELR H5-I-SC- 24DC/500AC-9-P	2908693	1
ELR H5-I-PT- 24DC/500AC-9-P	2909560	1

Accessories

EM-2RSC/21AU-R/L-P	2908701	1
EM-2RPT/21AU-R/L-P	2909573	1

Accessories

EM-2RSC/21AU-R/L-P	2908701	1
EM-2RPT/21AU-R/L-P	2909573	1

## Hybrid motor starters

### Hybrid motor starters with reversing function

These 3-phase hybrid motor starters offer up to four functions: forward running, reverse running, motor protection, and emergency stop up to SIL 3 / PL e.

Featuring the following advantages:

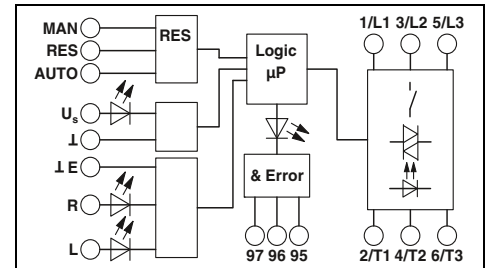
- 22.5 mm wide
  - Reduced wiring effort
  - Bi-metal function, adjustable up to 9 A
  - Long service life
  - Space-saving
  - 3-phase loop bridging
- Safety level in accordance with:
- IEC 61508-1: SIL 3
  - ISO 13849: PL e

Notes:
Type of insulating housing: Polyamide PA non-reinforced, color: gray.
Marking systems and mounting material See Catalog 3



**Motor protection and emergency stop**

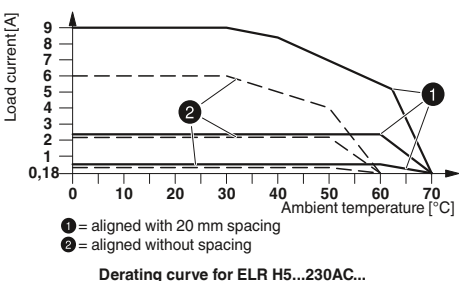
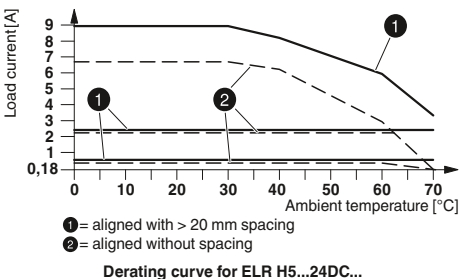
Ex:



#### Technical data

Input data
Rated control supply voltage $U_s$
Control supply voltage range
Rated control supply current $I_s$ at $U_s$
Rated actuating voltage $U_c$ R/L
Actuating voltage range
Rated actuating current $I_c$ at $U_c$
Input circuit
Operating voltage / status / error indicator
Output data load side
Operating voltage range
Output protection
General data
Rated insulation voltage
Rated surge voltage
Ambient temperature (operation)
Standards/regulations
Mounting position
Mounting
Connection data solid/stranded/AWG
Dimensions

24 V DC	230 V AC
19.2 V DC ... 30 V DC	85 V AC ... 253 V AC
40 mA	4 mA
24 V DC	230 V AC
19.2 V DC ... 30 V DC	85 V AC ... 253 V AC
5 mA (input type 1)	7 mA (input type 1)
Surge protection, reverse polarity protection	Surge protection
Green LED / Yellow LED / Red LED	
42 V AC ... 550 V AC	42 V AC ... 550 V AC
Surge protection	
500 V	
6 kV	4 kV
-25°C ... 70°C (observe derating)	
IEC 60947-1 / IEC 60947-4-2 / IEC 61508 / ISO 13849	
Vertical (horizontal DIN rail, motor output below)	
Alignable, for spacing see derating	
0.2 - 2.5 mm <sup>2</sup> / 0.2 - 2.5 mm <sup>2</sup> / 24 - 14	
22.5 mm / 106.6 mm / 113.7 mm	



Description
<b>Load current 0.075 A ... 0.6 A</b>
Screw connection
Push-in connection
<b>Load current 0.18 A ... 2.4 A</b>
Screw connection
Push-in connection
Screw connection
<b>Load current 1.5 A ... 9 A</b>
Screw connection
Push-in connection
Screw connection
<b>Load current 0 A ... 9 A</b>
Screw connection
Screw connection

#### Ordering data

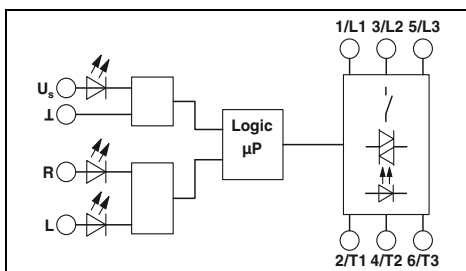
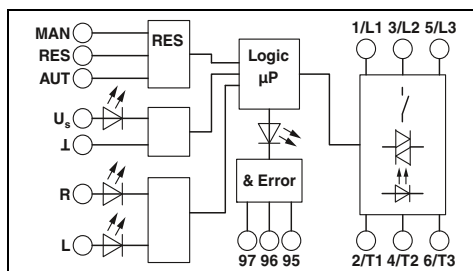
Type	Order No.	Pcs./Pkt.
ELR H5-IES-SC- 24DC/500AC-0,6	2900582	1
ELR H5-IES-PT- 24DC/500AC-0,6	2903902	1
ELR H5-IES-SC- 24DC/500AC-2	2900414	1
ELR H5-IES-PT- 24DC/500AC-2	2903904	1
ELR H5-IES-SC-230AC/500AC-2	2900420	1
ELR H5-IES-SC- 24DC/500AC-9	2900421	1
ELR H5-IES-PT- 24DC/500AC-9	2903906	1
ELR H5-IES-SC-230AC/500AC-9	2900422	1



Motor protection



Reversing function only



**Technical data**

**Technical data**

24 V DC	230 V AC
19.2 V DC ... 30 V DC	85 V AC ... 253 V AC
40 mA	4 mA
24 V DC	230 V AC
19.2 V DC ... 30 V DC	85 V AC ... 253 V AC
5 mA (input type 1)	7 mA (input type 1)
Surge protection, reverse polarity protection	Surge protection
Green LED / Yellow LED / Red LED	

24 V DC	230 V AC
19.2 V DC ... 30 V DC	85 V AC ... 253 V AC
40 mA	4 mA
24 V DC	230 V AC
19.2 V DC ... 30 V DC	85 V AC ... 253 V AC
5 mA (input type 1)	7 mA (input type 1)
Surge protection, reverse polarity protection	Surge protection
Green LED / Yellow LED / -	

42 V AC ... 550 V AC	42 V AC ... 550 V AC
Surge protection	

42 V AC ... 550 V AC	42 V AC ... 550 V AC
Surge protection	

500 V	4 kV
6 kV	
-25°C ... 70°C (observe derating)	
IEC 60947-1 / IEC 60947-4-2 / IEC 61508 / ISO 13849	
Vertical (horizontal DIN rail, motor output below)	

500 V	4 kV
6 kV	
-25°C ... 70°C (observe derating)	
IEC 60947-1 / IEC 60947-4-2 / IEC 61508 / ISO 13849	
Vertical (horizontal DIN rail, motor output below)	

Alignable, for spacing see derating  
0.2 - 2.5 mm<sup>2</sup> / 0.2 - 2.5 mm<sup>2</sup> / 24 - 14  
22.5 mm / 106.6 mm / 113.7 mm

Alignable, for spacing see derating  
0.2 - 2.5 mm<sup>2</sup> / 0.2 - 2.5 mm<sup>2</sup> / 24 - 14  
22.5 mm / 106.6 mm / 113.7 mm

**Ordering data**

**Ordering data**

Type	Order No.	Pcs./Pkt.
ELR H5-I-SC- 24DC/500AC-0,6	2900573	1
ELR H5-I-PT- 24DC/500AC-0,6	2903908	1
ELR H5-I-SC- 24DC/500AC-2	2900574	1
ELR H5-I-PT- 24DC/500AC-2	2903910	1
ELR H5-I-SC-230AC/500AC-2	2900575	1
ELR H5-I-SC- 24DC/500AC-9	2900576	1
ELR H5-I-PT- 24DC/500AC-9	2903912	1
ELR H5-I-SC-230AC/500AC-9	2900578	1

Type	Order No.	Pcs./Pkt.
ELR H5-SC- 24DC/500AC-9	2900538	1
ELR H5-SC-230AC/500AC-9	2900539	1

## Hybrid motor starters

### Network-capable hybrid motor starters with direct start function

These 3-phase hybrid motor starters offer up to three functions: forward running, motor protection, and emergency stop up to SIL 3 / PL e.

Featuring the following advantages:

- Bus connection via Interface system (IFS) or via IO-Link
- Diagnostic functions using process data
- Reduced wiring effort
- Bi-metal function, adjustable up to 9 A
- Long service life
- Space-saving
- 3-phase loop bridging

Safety level in accordance with:

- IEC 61508-1: SIL 3
- ISO 13849: PL e

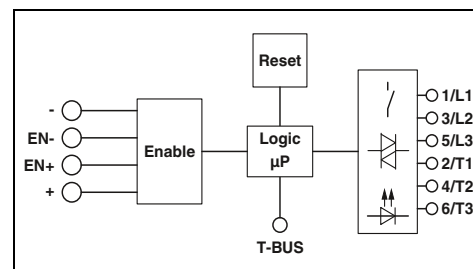
#### Notes:

Type of insulating housing:  
Polyamide PA non-reinforced, color: gray.

Marking systems and mounting material  
See Catalog 3



Motor protection, emergency stop and Interface system support



#### Technical data

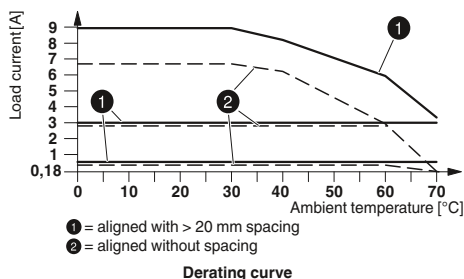
<b>Input data</b>	Rated supply voltage $U_s$	24 V DC
Control supply voltage range	19.2 V DC ... 30 V DC	
Rated control supply current $I_c$ at $U_s$	60 mA	
Rated actuating voltage $U_c$ EN+	24 V DC	
Actuating voltage range	19.2 V DC ... 30 V DC	
Rated actuating current $I_c$ at $U_c$	7 mA	
Input circuit	Surge protection, reverse polarity protection	
Operating voltage / status / error indicator	Green LED / Yellow LED / Red LED	
<b>Output data load side</b>		
Operating voltage range	42 V AC ... 550 V AC	
Output protection	Surge protection	
<b>General data</b>		
Rated insulation voltage	550 V	
Rated surge voltage	6 kV	
Ambient temperature (operation)	-5°C ... 60°C (observe derating)	
Standards/regulations	IEC 60947-1 / EN 60947-4-2 / IEC 61508 / ISO 13849	
Mounting position	Vertical (horizontal DIN rail, motor output below)	
<b>Mounting</b>		
Connection data solid/stranded/AWG	Alignable, for spacing see derating 0.2 - 2.5 mm <sup>2</sup> / 0.2 - 2.5 mm <sup>2</sup> / 24 - 14	
Dimensions	22.5 mm / 106.6 mm / 113.7 mm	

#### Ordering data

Description	Type	Order No.	Pcs./Pkt.
<b>Load current 0.075 A ... 0.6 A</b>			
Screw connection	ELR H3-IES-SC/500AC-06-IFS	2905154	1
Push-in connection	ELR H3-IES-PT/500AC-06-IFS	2905141	1
<b>Load current 0.18 A ... 3 A</b>			
Screw connection	ELR H3-IES-SC/500AC-3-IFS	2905155	1
Push-in connection	ELR H3-IES-PT/500AC-3-IFS	2905142	1
<b>Load current 1.5 A ... 9 A</b>			
Screw connection	ELR H3-IES-SC/500AC-9-IFS	2905156	1
Push-in connection	ELR H3-IES-PT/500AC-9-IFS	2905143	1

#### Accessories

<b>DIN rail connector</b>	ME 22.5 TBUS 1,5/ 5-ST-3,81 GY	2201937	50
---------------------------	--------------------------------	---------	----

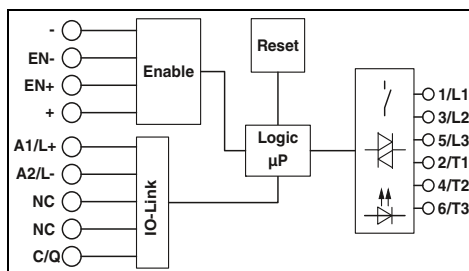
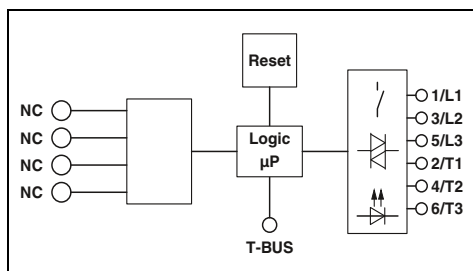




Motor protection and Interface system support



Motor protection, emergency stop and IO-Link support



**Technical data**

**Technical data**

24 V DC  
 19.2 V DC ... 30 V DC  
 60 mA  
 -  
 -  
 -  
 Surge protection, reverse polarity protection  
 Green LED / Yellow LED / Red LED

---

42 V AC ... 550 V AC  
 Surge protection

---

550 V  
 6 kV  
 -5°C ... 60°C (observe derating)  
 IEC 60947-1 / EN 60947-4-2  
 Vertical (horizontal DIN rail, motor output below)

---

Alignable, for spacing see derating  
 0.2 - 2.5 mm<sup>2</sup> / 0.2 - 2.5 mm<sup>2</sup> / 24 - 14  
 22.5 mm / 106.6 mm / 113.7 mm

24 V DC  
 19.2 V DC ... 30 V DC  
 65 mA  
 24 V DC  
 19.2 V DC ... 30 V DC  
 7 mA  
 Surge protection, reverse polarity protection  
 Green LED / Yellow LED / Red LED

---

42 V AC ... 550 V AC  
 Surge protection

---

550 V  
 6 kV  
 -5°C ... 55°C (observe derating)  
 IEC 60947-1 / EN 60947-4-2 / IEC 61508 / ISO 13849  
 Vertical (horizontal DIN rail, motor output below)

---

Alignable, for spacing see derating  
 0.2 - 2.5 mm<sup>2</sup> / 0.2 - 2.5 mm<sup>2</sup> / 24 - 14  
 22.5 mm / 126.8 mm / 113.7 mm

**Ordering data**

**Ordering data**

Type	Order No.	Pcs./Pkt.
ELR H3-I-SC/500AC-06-IFS	2905162	1
ELR H3-I-PT/500AC-06-IFS	2905148	1
ELR H3-I-SC/500AC-3-IFS	2905163	1
ELR H3-I-PT/500AC-3-IFS	2905149	1
ELR H3-I-SC/500AC-9-IFS	2905164	1
ELR H3-I-PT/500AC-9-IFS	2905150	1

Type	Order No.	Pcs./Pkt.
ELR H3-IES-PT/500AC-3-IOL	2908671	1
ELR H3-IES-PT/500AC-9-IOL	2908672	1

**Accessories**

**Accessories**

ME 22,5 TBUS 1,5/ 5-ST-3,81 GY	2201937	50
--------------------------------	---------	----

--	--	--

## Hybrid motor starters

### Modular hybrid motor starters with direct start function

In addition to the functions forward running, motor protection, and emergency stop up to SIL 3/PL e, these modular 3-phase hybrid motor starters offer additional advantages such as:

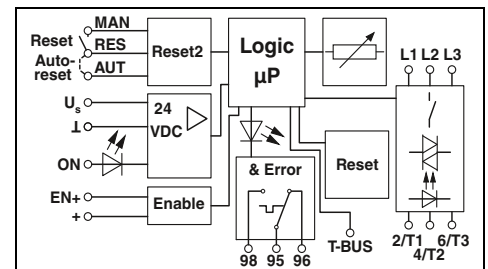
- Safe group switch-off
- Modular expansion option
- Wiring and cost savings with DIN rail connector
- Slow tripping characteristic curve  
Class 10 up to 3 A  
Safety level in accordance with:
- IEC 61508-1: SIL 3
- ISO 13849: PL e

Notes:
Type of insulating housing: Polyamide PA non-reinforced, color: gray.
Marking systems and mounting material See Catalog 3



new

Motor protection, emergency stop



<b>Input data</b>	
Rated supply voltage $U_s$	24 V DC
Control supply voltage range	19.2 V DC ... 30 V DC
Rated control supply current $I_c$ at $U_s$	60 mA
Rated actuating voltage $U_c$ EN+	24 V DC
Actuating voltage range	19.2 V DC ... 30 V DC
Rated actuating current $I_c$ at $U_c$	7 mA
Input circuit	Surge protection, reverse polarity protection
Operating voltage / status / error indicator	Green LED / Yellow LED / Red LED
<b>Output data load side</b>	
Operating voltage range	42 V AC ... 550 V AC
Output protection	Surge protection
<b>General data</b>	
Rated insulation voltage	550 V
Rated surge voltage	6 kV
Ambient temperature (operation)	-25°C ... 70°C (observe derating)
Standards/regulations	EN 60947-1 / EN 60947-4-2 / EN 50495 / EN ISO 13849 / IEC 62061 / IEC 61508
Mounting position	Vertical (horizontal DIN rail, motor output below)
Mounting	Alignable, for spacing see derating
Connection data solid/stranded/AWG	0.2 - 2.5 mm <sup>2</sup> / 0.2 - 2.5 mm <sup>2</sup> / 24 - 14
Dimensions	22.5 mm / 107.4 mm / 113.7 mm

#### Technical data

<b>Technical data</b>		
24 V DC		
19.2 V DC ... 30 V DC		
60 mA		
24 V DC		
19.2 V DC ... 30 V DC		
7 mA		
Surge protection, reverse polarity protection		
Green LED / Yellow LED / Red LED		
42 V AC ... 550 V AC		
Surge protection		
550 V		
6 kV		
-25°C ... 70°C (observe derating)		
EN 60947-1 / EN 60947-4-2 / EN 50495 / EN ISO 13849 / IEC 62061 / IEC 61508		
Vertical (horizontal DIN rail, motor output below)		
Alignable, for spacing see derating		
0.2 - 2.5 mm <sup>2</sup> / 0.2 - 2.5 mm <sup>2</sup> / 24 - 14		
22.5 mm / 107.4 mm / 113.7 mm		

<b>Description</b>	
<b>Load current 0.18 A ... 3 A</b>	
Screw connection	
Push-in connection	
<b>Load current 1.5 A ... 9 A</b>	
Screw connection	
Push-in connection	

Ordering data		
Type	Order No.	Pcs./Pkt.
ELR H3-IES-PT- 24DC/500AC-3-P	2909557	1
ELR H3-IES-PT- 24DC/500AC-9-P	2909555	1

<b>Extension module</b>	
Screw connection	
Push-in connection	
<b>Safety relay</b> with interface for DIN rail connectors	
Screw connection	
Push-in connection	
<b>DIN rail connector</b>	
- For modular hybrid motor starters	
- For safety relay modules	

Accessories		
Type	Order No.	Pcs./Pkt.
EM-2RSC/21AU-R/L-P	2908701	1
EM-2RPT/21AU-R/L-P	2909573	1
PSR-MC38-2NO-1DO-24DC-SC	1009831	1
PSR-MC38-2NO-1DO-24DC-PI	1009832	1
ELR-TBUS-22,5-P	2203861	10
PSR-TBUS	2890425	50



new



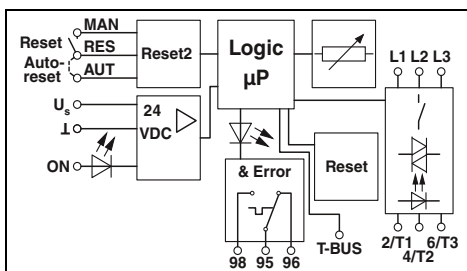
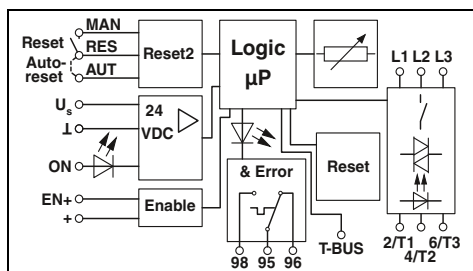
Motor protection, emergency stop



new



Motor protection



Technical data

24 V DC  
 19.2 V DC ... 30 V DC  
 60 mA  
 24 V DC  
 19.2 V DC ... 30 V DC  
 7 mA  
 Surge protection, reverse polarity protection  
 Green LED / Yellow LED / Red LED

---

42 V AC ... 550 V AC  
 -

---

550 V  
 6 kV  
 -25°C ... 70°C (observe derating)  
 EN 60947-1 / EN 60947-4-2 / EN ISO 13849 / IEC 62061 / IEC 61508  
 Vertical (horizontal DIN rail, motor output below)

---

Alignable, for spacing see derating  
 0.2 - 2.5 mm<sup>2</sup> / 0.2 - 2.5 mm<sup>2</sup> / 24 - 14  
 22.5 mm / 106.6 mm / 113.7 mm

Technical data

24 V DC  
 19.2 V DC ... 30 V DC  
 60 mA  
 24 V DC  
 19.2 V DC ... 30 V DC  
 7 mA  
 Surge protection, reverse polarity protection  
 Green LED / Yellow LED / Red LED

---

42 V AC ... 550 V AC  
 -

---

550 V  
 6 kV  
 -25°C ... 70°C (observe derating)  
 EN 60947-1 / EN 60947-4-2  
 Vertical (horizontal DIN rail, motor output below)

---

Alignable, for spacing see derating  
 0.2 - 2.5 mm<sup>2</sup> / 0.2 - 2.5 mm<sup>2</sup> / 24 - 14  
 22.5 mm / 106.6 mm / 113.7 mm

Ordering data

Type	Order No.	Pcs./Pkt.
ELR H3-IS-SC- 24DC/500AC-3-P	2908700	1
ELR H3-IS-PT- 24DC/500AC-3-P	2909570	1
ELR H3-IS-SC- 24DC/500AC-9-P	2908698	1
ELR H3-IS-PT- 24DC/500AC-9-P	2909568	1

Ordering data

Type	Order No.	Pcs./Pkt.
ELR H3-I-SC- 24DC/500AC-3-P	2908696	1
ELR H3-I-PT- 24DC/500AC-3-P	2909563	1
ELR H3-I-SC- 24DC/500AC-9-P	2908694	1
ELR H3-I-PT- 24DC/500AC-9-P	2909561	1

Accessories

Accessories	Order No.	Pcs./Pkt.
EM-2RSC/21AU-R/L-P	2908701	1
EM-2RPT/21AU-R/L-P	2909573	1

Accessories

Accessories	Order No.	Pcs./Pkt.
EM-2RSC/21AU-R/L-P	2908701	1
EM-2RPT/21AU-R/L-P	2909573	1