

## Hybrid motor starter - ELR H5-I-PT- 24DC/500AC-2 - 2903910

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Hybrid motor starter for reversing 3~ AC motors up to 550 V AC, with 24 V DC input, 2.4 A output current, adjustable overload shutdown, and push-in connection.

The figure shows the ELR H5-IES-PT- 24DC/500AC-2 version

### Product Features



### Key commercial data

|                                      |           |
|--------------------------------------|-----------|
| Packing unit                         | 1 pc      |
| Weight per Piece (excluding packing) | 280.0 GRM |
| Custom tariff number                 | 85371099  |
| Country of origin                    | Germany   |

### Technical data

#### Input data

|                                       |                                         |
|---------------------------------------|-----------------------------------------|
| Input name                            | Device supply                           |
| Rated control supply voltage $U_s$    | 24 V DC (According to IEC 60947-1)      |
| Voltage range with reference to $U_s$ | 0.8 ... 1.25                            |
| Rated control supply current $I_s$    | $\leq 40$ mA                            |
| Protective circuit                    | Protection against polarity reversal    |
|                                       | Surge protection                        |
| Operating voltage display             | Green LED                               |
| Status display                        | Yellow LED                              |
| Indication                            | Red LED                                 |
| Input name                            | Control input right/left                |
| Typical input current at $U_N$        | $\leq 5$ mA                             |
| Rated control supply current $I_s$    | $\leq 40$ mA (According to IEC 60947-1) |

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## Technical data

### Input data

|                                       |                                      |
|---------------------------------------|--------------------------------------|
| Rated actuating voltage $U_C$         | 24 V DC                              |
| Voltage range with reference to $U_C$ | 0.8 ... 1.25                         |
| Rated actuating current $I_C$         | $\leq 5$ mA                          |
| Protective circuit                    | Protection against polarity reversal |
| Typical response time                 | $< 35$ ms                            |
| Typical turn-off time                 | $< 40$ ms                            |

### Output data load output

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Rated operating voltage $U_e$     | 500 V AC                        |
| Operating voltage range           | 42 V AC ... 550 V AC            |
| Load current                      | max. 2.4 A (see derating curve) |
| Min. load current                 | 180 mA                          |
| Rated operating current at AC-51  | 2.4 A                           |
| Rated operating current at AC-53a | 2.4 A                           |
| Leakage current                   | 0 mA                            |
| Residual voltage                  | $< 0.3$ V (at $I_e$ )           |
| Protective circuit                | Surge protection                |

### Output data reply output

|                                       |                                                                  |
|---------------------------------------|------------------------------------------------------------------|
| Note                                  | Confirmation 01: floating change-over contact, signal contact    |
| Contact type                          | 1 PDT                                                            |
| Contact material                      | AgSnO <sub>2</sub> , hard gold-plated                            |
| Maximum switching voltage             | 30 V AC                                                          |
|                                       | 36 V DC                                                          |
| Minimum switching voltage             | 100 mV AC/DC (at 10 mA)                                          |
| Min. switching current                | 1 mA (at 24 V)                                                   |
| Maximum inrush current                | 50 mA                                                            |
| Limiting continuous current           | 50 mA                                                            |
| Interrupting rating (ohmic load) max. | 1.2 W (at 24 V DC)                                               |
| Note                                  | the following values are applicable if a gold layer is destroyed |
| Maximum switching voltage             | 250 V AC/DC                                                      |
| Minimum switching voltage             | 5 V (at 100 mA)                                                  |
| Min. switching current                | 10 mA (at 12 V)                                                  |
| Limiting continuous current           | 6 A                                                              |
| Interrupting rating (ohmic load) max. | 140 W (at 24 V DC)                                               |
|                                       | 20 W (at 48 V DC)                                                |
|                                       | 18 W (at 60 V DC)                                                |
|                                       | 23 W (at 110 V DC)                                               |

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## Technical data

### Output data reply output

|                                               |                        |
|-----------------------------------------------|------------------------|
|                                               | 40 W (at 220 V DC)     |
|                                               | 1500 VA (for 250 V AC) |
| Switching capacity according to IEC 60947-5-1 | 2 A (at 24 V, DC13)    |
|                                               | 0.2 A (at 110 V, DC13) |
|                                               | 0.1 A (at 220 V, DC13) |
|                                               | 3 A (at 24 V, AC15)    |
|                                               | 3 A (at 120 V, AC15)   |
|                                               | 3 A (at 230 V, AC15)   |

### Measuring technology and signaling contact

|               |                                                   |
|---------------|---------------------------------------------------|
| Measuring via | Current transformer for line current on L1 and L3 |
|---------------|---------------------------------------------------|

### Connection data

|                                       |                     |
|---------------------------------------|---------------------|
| Connection method                     | Push-in connection  |
| Stripping length                      | 10 mm               |
| Conductor cross section solid min.    | 0.2 mm <sup>2</sup> |
| Conductor cross section solid max.    | 2.5 mm <sup>2</sup> |
| Conductor cross section flexible min. | 0.2 mm <sup>2</sup> |
| Conductor cross section flexible max. | 2.5 mm <sup>2</sup> |
| Conductor cross section AWG min.      | 24                  |
| Conductor cross section AWG max.      | 14                  |

### General

|                           |                                                                      |
|---------------------------|----------------------------------------------------------------------|
| Test voltage input/output | 4 kV <sub>rms</sub>                                                  |
| Mounting position         | Vertical (horizontal DIN rail)                                       |
| Assembly instructions     | can be aligned with spacing: see derating                            |
| Operating mode            | 100% operating factor                                                |
| Designation               | Air clearances and creepage distances between the power circuits     |
| Standards/regulations     | DIN EN 50178                                                         |
| Insulation                | Safe isolation (EN 50178) for mains voltage ≤ 500 V AC               |
|                           | Safe isolation (IEC 60947-1) for mains voltage ≤ 300 V AC            |
|                           | Basic insulation (IEC 60947-1) for mains voltage of 300 ... 500 V AC |
| Pollution degree          | 2                                                                    |
| Surge voltage category    | III                                                                  |
| Designation               | Standards/regulations                                                |
| Standards/regulations     | IEC 60947-1                                                          |
|                           | EN 60947-4-2                                                         |

### Dimensions

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## Technical data

### Dimensions

|        |          |
|--------|----------|
| Width  | 22.5 mm  |
| Height | 99 mm    |
| Depth  | 114.5 mm |

### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -25 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 80 °C |
| Degree of protection                    | IP20             |

### UL data

|                                     |                                                      |
|-------------------------------------|------------------------------------------------------|
| Short-circuit current rating (SCCR) | 100 kA (500 V AC (30 A CC/30 A J (high fault) fuse)) |
|                                     | 5 kA (500 V AC (20 A RK5 (standard fault) fuse))     |

## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |
| eCl@ss 5.0 | 27371601 |
| eCl@ss 5.1 | 27371601 |
| eCl@ss 6.0 | 27371601 |
| eCl@ss 7.0 | 27371601 |
| eCl@ss 8.0 | 27370905 |

### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC000066 |
| ETIM 4.0 | EC000066 |
| ETIM 5.0 | EC001037 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211915 |
| UNSPSC 7.0901 | 39121514 |
| UNSPSC 11     | 39121514 |
| UNSPSC 12.01  | 39121514 |
| UNSPSC 13.2   | 39121514 |

## Approvals

### Approvals

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### Approvals

#### Approvals

UL Listed / cUL Listed / IECEE CB Scheme / UL Listed / cUL Listed / cULus Listed

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#### Ex Approvals

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#### Approvals submitted

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### Approval details

UL Listed



cUL Listed



IECEE CB Scheme



UL Listed



cUL Listed

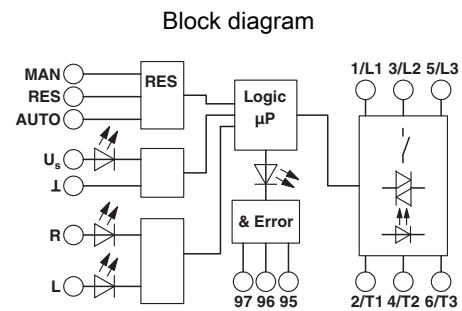
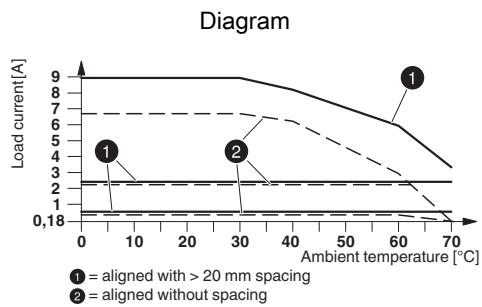


cULus Listed



### Drawings

## Hybrid motor starter - ELR H5-I-PT- 24DC/500AC-2 - 2903910



Derating diagram



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Электрон  
Связь**

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