

ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker



1368127  
<https://www.phoenixcontact.com/in/products/1368127>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



DC circuit breaker for protecting, monitoring, and switching high DC loads, intermediate circuit precharging; can be parameterized, 0 V DC ... 800 V DC, up to 55 A, shutdown in the event of short circuit in <10 µs thanks to hybrid technology, integrated bus communication

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1368127       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Product key                          | DK7811        |
| GTIN                                 | 4063151723149 |
| Weight per piece (including packing) | 1.392 kg      |
| Weight per piece (excluding packing) | 1.149 kg      |
| Country of origin                    | DE            |

# ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker



1368127

<https://www.phoenixcontact.com/in/products/1368127>

## Technical data

### Product properties

|                |                  |
|----------------|------------------|
| Product type   | Circuit breakers |
| Product family | CONTACTRON       |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree     | 2   |

### Electrical properties

|                                                         |                            |
|---------------------------------------------------------|----------------------------|
| Selectivity category                                    | A (IEC/EN 60947-2)         |
| Rated insulation voltage                                | 440 V DC                   |
| Rated impulse withstand voltage                         | 6 kV                       |
| Rated service short-circuit breaking capacity $I_{cs}$  | 100 kA (650 V DC)          |
| Rated ultimate short-circuit breaking capacity $I_{cu}$ | 100 kA (650 V DC)          |
| Precharging                                             | 1 s (1 mF)<br>$\leq 15$ A  |
| Maximum power dissipation for nominal condition         | 55 W                       |
| Measuring range                                         | 0 V ... 900 V $\pm 2$ %    |
| Measuring range                                         | -90 A ... 90 A $\pm 2$ %   |
| Messbereich_Leistung                                    | -75 kW ... 75 kW $\pm 4$ % |

### Supply

|                                                    |                                                 |
|----------------------------------------------------|-------------------------------------------------|
| Rated control supply voltage $U_s$                 | 24 V DC                                         |
| Control supply voltage range $U_v$                 | 19.2 V DC ... 26 V DC                           |
| Rated control supply current $I_s$ (Standby)       | 40 mA                                           |
| Rated control supply current $I_s$ (Not activated) | 120 mA                                          |
| Rated control supply current $I_s$ (Activated)     | $\leq 210$ mA                                   |
| Protective circuit                                 | Surge protection<br>Reverse polarity protection |

### Input data

#### Control input (ON)

|                                      |                     |
|--------------------------------------|---------------------|
| Rated actuating voltage $U_c$        | 24 V DC             |
| Triggering voltage range             | -3 V DC ... 30 V DC |
| Switching threshold (0 signal)       | 9.6 V               |
| Switching threshold (1 signal)       | 19.2 V              |
| Actuating current $I_e$              | 5 mA                |
| Switch-off time                      | < 5 ms              |
| Switch-on time (without precharging) | 400 ms              |

### Output data

# ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker



1368127

<https://www.phoenixcontact.com/in/products/1368127>

## Control outputs (STAT, ERR)

|                           |                       |
|---------------------------|-----------------------|
| Output voltage (0 signal) | $\leq 1 \text{ V}$    |
| Output voltage (1 signal) | $U_v - 1 \text{ V}$   |
| Output current            | $\leq 300 \text{ mA}$ |
| Protective circuit        | Short-circuit-proof   |

## Power output

|                                                                                      |                                |
|--------------------------------------------------------------------------------------|--------------------------------|
| Number of positions                                                                  | 2                              |
| Operating voltage range                                                              | 0 V DC ... 810 V DC            |
| Rated voltage $U_n$ (Conductor/conductor)                                            | 650 V DC                       |
| Rated operating voltage $U_e$ (Systems with line conductor grounding and IT systems) | 440 V DC                       |
| Rated operating voltage $U_e$ (Center-grounded systems)                              | 325 V DC (Conductor-PE)        |
|                                                                                      | 650 V DC (Conductor-Conductor) |
| Rated current $I_n$                                                                  | 55 A (40 °C)                   |
| Current setting $I_r$ (dependent overload tripping)                                  | 5 A ... 55 A                   |
| Current setting $I_{oc}$ (independent overcurrent shutdown)                          | 10 A ... 90 A                  |
| Tripping time $t_r$ (dependent overload tripping)                                    | can be parameterized           |
| Tripping time $t_{oc}$ (independent overcurrent shutdown)                            | 0.2 s                          |
| Tripping current $I_{sc}$ (Short-circuit shutdown (without delay))                   | 200 A                          |
| Switch-on delay                                                                      | can be parameterized           |

## Connection data

### Control circuits

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Push-in connection                          |
| Stripping length                 | 8 mm                                        |
| Conductor cross section rigid    | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 24 ... 16                                   |

### Load circuit

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Push-in connection                          |
| Stripping length                 | 18 mm                                       |
| Conductor cross section rigid    | 0.75 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Conductor cross section flexible | 0.75 mm <sup>2</sup> ... 16 mm <sup>2</sup> |
| Conductor cross section AWG      | 20 ... 6                                    |

## Interfaces

### Communication: IO-Link

|                        |                      |
|------------------------|----------------------|
| Communication protocol | IO-Link              |
| Specification          | 1.1.3                |
| Transmission speed     | 230400 baud          |
| Cycle time             | 2 ms                 |
| Amount of process data | 12 Byte (Input data) |

# ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker



1368127

<https://www.phoenixcontact.com/in/products/1368127>

|                     |                      |
|---------------------|----------------------|
|                     | 1 Byte (Output data) |
| Current consumption | 10 mA                |

## Dimensions

### Item dimensions

|        |        |
|--------|--------|
| Width  | 84 mm  |
| Height | 203 mm |
| Depth  | 117 mm |

### Drill hole

|          |        |
|----------|--------|
| Diameter | 5.6 mm |
|----------|--------|

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                   |
|-----------------------------------------|-----------------------------------|
| Degree of protection                    | IP20                              |
| Ambient temperature (operation)         | -20 °C ... 60 °C (non-condensing) |
| Ambient temperature (storage/transport) | -40 °C ... 70 °C                  |
| Altitude                                | ≤ 2000 m                          |

## EMC data

|                                         |        |
|-----------------------------------------|--------|
| Impulse withstand voltage (StKr/Bus)    | 1.5 kV |
| Impulse withstand voltage (HStrKr/StKr) | 8 kV   |
| Impulse withstand voltage (HStrKr/Bus)  | 8 kV   |

## Standards and regulations

|                       |             |
|-----------------------|-------------|
| Standards/regulations | IEC 60947-2 |
|-----------------------|-------------|

## Mounting

|               |                   |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|               | Direct mounting   |

# ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker

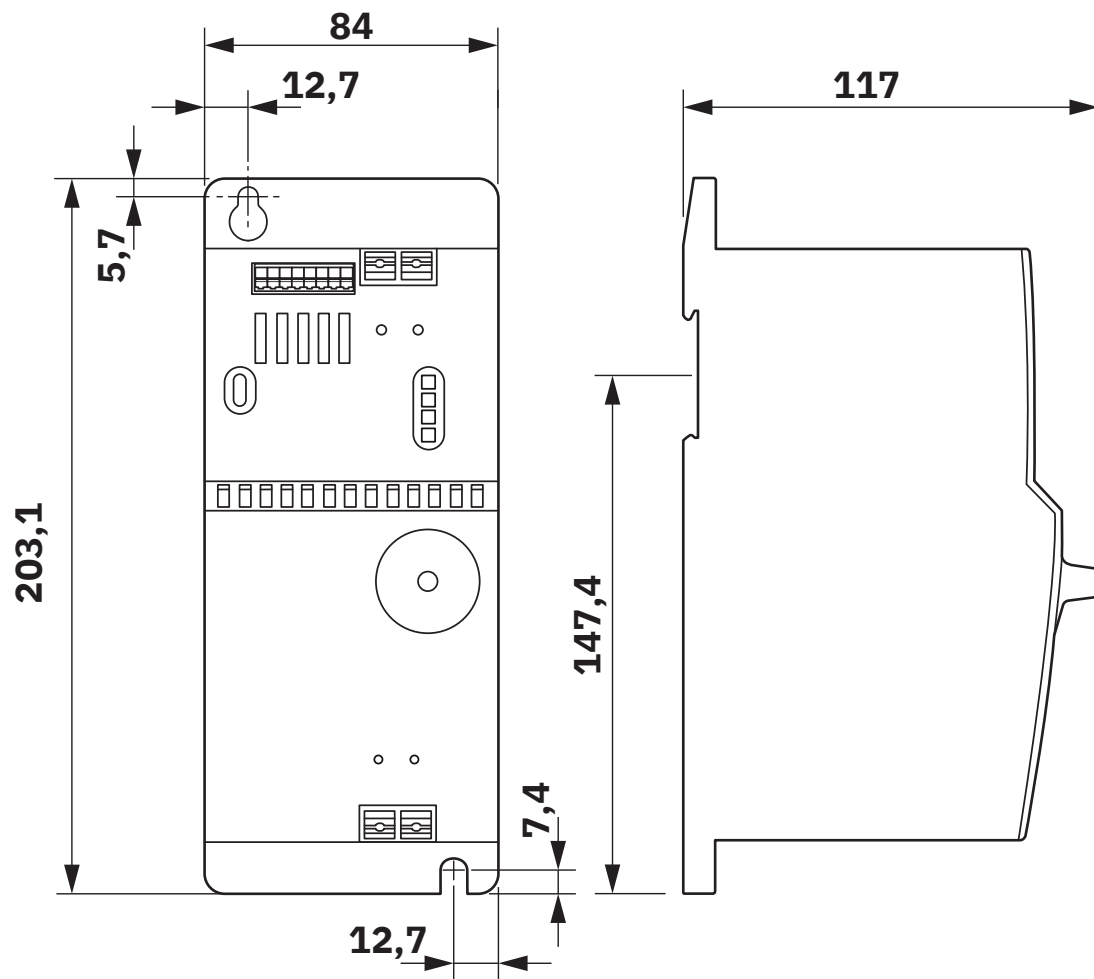


1368127

<https://www.phoenixcontact.com/in/products/1368127>

## Drawings

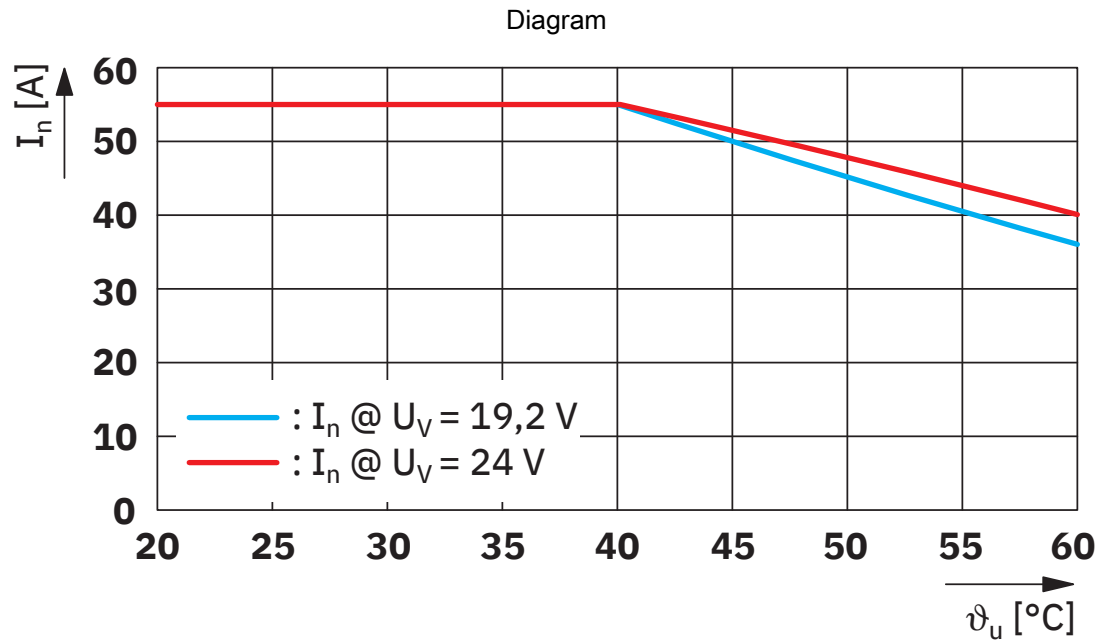
Dimensional drawing



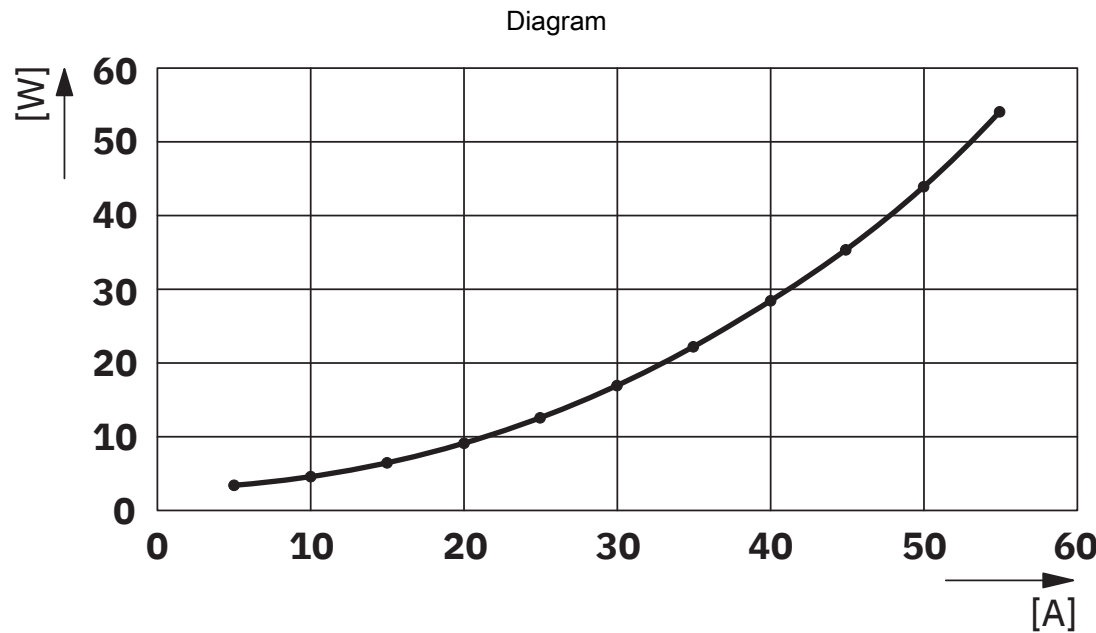
ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker



1368127  
<https://www.phoenixcontact.com/in/products/1368127>



Derating curve



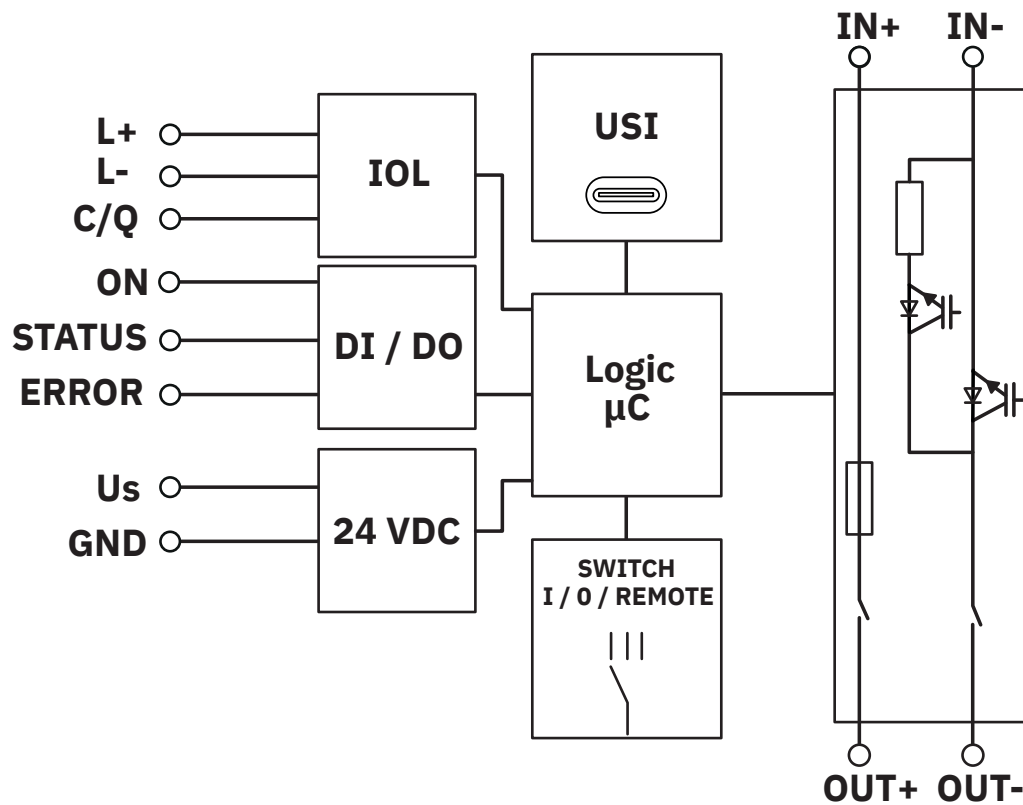
Power dissipation depending on the operating current

# ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker

1368127

<https://www.phoenixcontact.com/in/products/1368127>

Block diagram



# ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker



1368127  
<https://www.phoenixcontact.com/in/products/1368127>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27370409 |
| ECLASS-12.0 | 27370409 |
| ECLASS-13.0 | 27370409 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000228 |
|----------|----------|



# ELR HDC-PT-24/650/55-IOL - Miniature Circuit Breaker



1368127

<https://www.phoenixcontact.com/in/products/1368127>

## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes                |
| Exemption                               | 6(c), 7(a), 7(c)-I |

### China RoHS

|                                        |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-50                                                                                                                                                                                                                           |
|                                        | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

### EU REACH SVHC

|                                     |                      |
|-------------------------------------|----------------------|
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
|-------------------------------------|----------------------|

Phoenix Contact 2025 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT (I) Pvt. Ltd.

A-58/2, Okhla Industrial Area, Phase - II, New Delhi-110 020

+91.1275.71420

[info@phoenixcontact.co.in](mailto:info@phoenixcontact.co.in)