



HEF990H

## Moulded Case Circuit Breaker h1600 3P 70kA 1600A LSI

### Technical properties

#### Architecture

|                 |        |
|-----------------|--------|
| Type of order   | Toggle |
| Number of poles | 3 P    |
| Type of pole    | 3P3D   |

#### Functions

|                                      |     |
|--------------------------------------|-----|
| Complete device with protection unit | Yes |
| Trip Unit                            | LSI |
| Integrated earth fault protection    | No  |

#### Configuration

|                   |    |
|-------------------|----|
| Number of modules | 12 |
|-------------------|----|

#### Main electrical features

|                              |             |
|------------------------------|-------------|
| Rated operational voltage Ue | 220 / 690 V |
| Frequency                    | 50/60 Hz    |

#### Voltage

|                                 |       |
|---------------------------------|-------|
| Rated insulation voltage        | 800 V |
| Rated impulse withstand voltage | 8 kV  |
| With under voltage release      | No    |

#### Electric current

|  |   |
|--|---|
| Rated current  | 1600 A                                  |
| Rated ultimate short-circuit breaking capacity Icu under 690V AC IEC 60947-2 | 45 kA                                   |
| Thermal protection nob setting xIN   | 0.4 / 0.5 / 0.63 / 0.8 / 0.9 / 0.95 / 1 |
| Breaking capacity on 1 pole for IT 230V NF 60947-2                           | 60 kA                                   |
| Breaking capacity on 1 pole for IT 400V NF 60947-2                           | 9 kA                                    |
| Rated service breaking capacity Ics AC according IEC 60947-2                 | 71 %                                    |
| Rated ultimate short-circuit breaking capacity Icu under 230V AC IEC 60947-2 | 100 kA                                  |
| Rated ultimate short-circuit breaking capacity Icu under 240V AC IEC 60947-2 | 100 kA                                  |
| Rated ultimate short-circuit breaking capacity Icu under 400V AC IEC 60947-2 | 70 kA                                   |
| Rated ultimate short-circuit breaking capacity Icu under 415V AC IEC 60947-2 | 70 kA                                   |
| Rated ultimate short-circuit breaking capacity Icu under 440V AC IEC 60947-2 | 70 kA                                   |

**Current correction factors**

|   |   |
|---|---|
| Correction factor of rating current for 2 devices placed side-by-side       | 1 |
| Correction factor of rating current for 3 devices placed side-by-side       | 1 |
| Correction factor of rating current for 4 and 5 devices placed side-by-side | 1 |
| Correction factor of rating current for 6 devices placed side-by-side       | 1 |

**Power**

|                           |         |
|---------------------------|---------|
| Total power loss under IN | 168.9 W |
| Power loss per pole at In | 56.3 W  |

**Tripping**

|                               |                               |
|-------------------------------|-------------------------------|
| Tripmode                      | LSI                           |
| Thermal protection trip time  | 5 / 10 / 11 / 19 / 21 / 29 ms |
| Time of response when opening | 10 ms                         |

**Electrical specifications**

|                          |               |
|--------------------------|---------------|
| Magnetic trip delay time | 100 to 200 ms |
|--------------------------|---------------|

**Endurance**

|  |      |
|--|------|
| Electric endurance in number of cycles | 1000 |
| Number of mechanical operations        | 4000 |

**Installation, mounting**

|   |    |
|---|----|
| DIN rail mounting with optional adaptor | No |
|---|----|

**Connection**

|   |                      |
|---|----------------------|
| Connection cross-sect. flexible conductor | 3x240mm <sup>2</sup> |
| Connection cross-sect. rigid cable        | 3x240mm <sup>2</sup> |
| Connection                                | Front connection     |
| Type of connection                        | Terminal             |

**Settings**

|                                     |  |
|-------------------------------------|--|
| Range of the magnetic adjustment    | 8960 / 11200 / 14000 / 17920 / 19200 / 19200 / 19200 A |
| Magnetic protection nob setting xIN | 2.5 / 5 / 10   |
| Setting type In or Ith              | IrTh   |

**Equipment**

|   |     |
|---|-----|
| Number of auxiliary contacts as normally closed contact | 0   |
| Number of auxiliary contacts as normally open contact   | 0   |
| Number of auxiliary contacts as change-over contact     | 0   |
| Motor drive optional                                    | Yes |

**Use cases**

|                 |   |
|-----------------|---|
| Category of use | A |
|-----------------|---|

**Standards**

**Use conditions**

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|                               |                  |
|-------------------------------|------------------|
| Operating temperature         | -25...70 °C      |
| Altitude                      | 2000 m           |
| Air humidity protection       | for all climates |
| Storage/transport temperature | -35...70 °C      |

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