



HMQ990JR

### Moulded Case Circuit Breaker h3+ PW1600 LSI 3P3D 1600A 50kA FTC

#### Technical Features

##### Electric current

|                                                                               |         |
|-------------------------------------------------------------------------------|---------|
| Rated current                                                                 | 1600 A  |
| Rated ultimate short-circuit breaking capacity Icu under 230 V AC IEC 60947-2 | 50 kA   |
| Rated ultimate short-circuit breaking capacity Icu under 240 V AC IEC 60947-2 | 50 kA   |
| Rated ultimate short-circuit breaking capacity Icu under 400 V AC IEC 60947-2 | 50 kA   |
| Rated ultimate short-circuit breaking capacity Icu under 415 V AC IEC 60947-2 | 50 kA   |
| Breaking capacity on 1-pole for AC 230 V IEC 60947-2                          | 19.2 kA |
| Breaking capacity on 1-pole for AC 400 V IEC 60947-2                          | 19.2 kA |

##### Architecture

|                           |                |
|---------------------------|----------------|
| Number of poles           | 3              |
| Control/operation element | Toggle         |
| Device construction type  | Fixed built-in |

##### Tripping

|                            |       |
|----------------------------|-------|
| Response time when opening | 12 ms |
|----------------------------|-------|

##### Electric current

|                                                                               |        |
|-------------------------------------------------------------------------------|--------|
| Rated ultimate short-circuit breaking capacity Icu under 690 V AC IEC 60947-2 | 30 kA  |
| Rated service breaking capacity Ics under 220 V AC according to IEC 60947-2   | 50 kA  |
| Rated service breaking capacity Ics under 230 V AC according to IEC 60947-2   | 50 kA  |
| Rated service breaking capacity Ics under 240 V AC according to IEC 60947-2   | 50 kA  |
| Rated service breaking capacity Ics under 380 V AC according to IEC 60947-2   | 50 kA  |
| Rated service breaking capacity Ics under 400 V AC according to IEC 60947-2   | 50 kA  |
| Rated service breaking capacity Ics under 415 V AC according to IEC 60947-2   | 50 kA  |
| Rated service breaking capacity Ics under 690 V AC according to IEC 60947-2   | 30 kA  |
| Rated current 10°C according to IEC 60947                                     | 1600 A |
| Rated current 15°C according to IEC 60947                                     | 1600 A |
| Rated current 20°C according to IEC 60947                                     | 1600 A |
| Rated current 25°C according to IEC 60947                                     | 1600 A |
| Rated current 30°C according to IEC 60947                                     | 1600 A |
| Rated current at 35°C according to IEC 60947                                  | 1600 A |
| Rated current at 40°C according to IEC 60947                                  | 1600 A |
| Rated current 45°C according to IEC 60947                                     | 1600 A |
| Rated current 50°C according to IEC 60947                                     | 1590 A |
| Rated current 55°C according to IEC 60947                                     | 1540 A |
| Rated current at 60°C according to IEC 60947                                  | 1490 A |
| Rated current 70°C according to IEC 60947                                     | 1430 A |
| Rated current 65°C according to IEC 60947                                     | 1430 A |

##### Frequency

|           |            |
|-----------|------------|
| Frequency | 50 - 60 Hz |
|-----------|------------|

##### Installation, mounting

|                               |          |
|-------------------------------|----------|
| Nominal tightening torque     | 50-50 Nm |
| Mounting-/Connection Position | Front    |

##### Voltage

|                                      |             |
|--------------------------------------|-------------|
| Rated impulse withstand voltage Uimp | 8 kV        |
| Rated insulation voltage Ui          | 1000 V      |
| Rated operational voltage Ue         | 220 - 690 V |

##### Functions

|           |              |
|-----------|--------------|
| Trip unit | Sentinel LSI |
|-----------|--------------|

##### Power

|                                       |         |
|---------------------------------------|---------|
| Total power loss under I <sub>N</sub> | 129.6 W |
| Power loss per pole at I <sub>N</sub> | 1.8 W   |

#### Endurance

|                                        |       |
|----------------------------------------|-------|
| Electric endurance in number of cycles | 4000  |
| Number of mechanical operations        | 20000 |

#### Equipment

|                                                         |   |
|---------------------------------------------------------|---|
| Number of auxiliary contacts as change-over contact     | 0 |
| Number of auxiliary contacts as normally closed contact | 0 |
| Number of auxiliary contacts as normally open contact   | 0 |

#### Safety

|                               |      |
|-------------------------------|------|
| Ingress Protection (IP) class | IP20 |
|-------------------------------|------|

#### Use conditions

|                       |           |
|-----------------------|-----------|
| Operating temperature | -25-70 °C |
|-----------------------|-----------|

#### Cover, door

|               |     |
|---------------|-----|
| Interlockable | Yes |
|---------------|-----|

#### Cable

|                |                     |
|----------------|---------------------|
| Cable material | Copper<br>Aluminium |
|----------------|---------------------|

#### Use conditions

|                                                          |   |
|----------------------------------------------------------|---|
| Degree of pollution according to IEC 60664 / IEC 60947-2 | 3 |
|----------------------------------------------------------|---|

#### Dimensions

|        |        |
|--------|--------|
| Height | 330 mm |
| Width  | 210 mm |
| Depth  | 198 mm |

#### Controls and indicators

|                        |    |
|------------------------|----|
| Motor drive integrated | No |
|------------------------|----|

#### Compatibility

|                         |    |
|-------------------------|----|
| Suitable for DIN Rail   | No |
| Compatible with RDC AOB | No |

#### Power supply

|                       |               |
|-----------------------|---------------|
| Position power supply | Bidirectional |
|-----------------------|---------------|

#### Connectivity

|                    |                 |
|--------------------|-----------------|
| Type of connection | Bolt connection |
|--------------------|-----------------|

#### Electrical protection

|                                                         |        |
|---------------------------------------------------------|--------|
| Long-time overload protection (ltd): delay (tr)         | 0.5 s  |
|                                                         | 1 s    |
|                                                         | 2 s    |
|                                                         | 4 s    |
|                                                         | 5 s    |
|                                                         | 8 s    |
|                                                         | 10 s   |
|                                                         | 15 s   |
|                                                         | 20 s   |
|                                                         | 25 s   |
| Short-time protection (std): delay (tsd)                | 50 ms  |
|                                                         | 100 ms |
|                                                         | 200 ms |
|                                                         | 400 ms |
|                                                         | 600 ms |
| Instantaneous protection (li): dial setting coefficient | 1.5    |
|                                                         | 2      |
|                                                         | 3      |
|                                                         | 4      |
|                                                         | 6      |
|                                                         | 8      |
|                                                         | 10     |
|                                                         | 12     |
|                                                         | 15     |

|                |     |
|----------------|-----|
| Sustainability |     |
| RoHS conform   | Yes |