HES081BC

**MCCB h3+ P160 MAG 4x80A 70kA**

Product Datasheet

### Architecture

| | |
|---|---|
| Type of order | Toggle |
| Neutral position | left |
| Number of protected poles | 4 |
| Number of poles | 4 P |
| Type of pole | 4P4D |
| Fixing mode | fixing plate |
| Type of case | Fixed built-in |

### Functions

| | |
|---|---|
| Complete device with protection unit | yes |
| Reversing switch | no |
| Version as main switch | yes |
| Version as emergency stop installation | no |
| Version as safety switch | no |
| Version as maintenance-/service switch | yes |
| Trip Unit | MAG (ICB) |
| Integrated earth fault protection | no |
| Concurrently switching N-neutral | yes |
| Version as switch disconnector compact | yes |
| Isolation suitability | yes |
| Sealable | yes |

### Compatibility

| | |
|---|---|
| Compatible with DIN rail mounting | no |
| Compatible with RCD AOB | no |

### Controls and indicators

| | |
|---|---|
| Motor drive integrated | no |
| With Contact position indicator | yes |
| With fault indicator | yes |

### Connectivity

| | |
|---|---|
| ACP connection (communication) | no |
| CIP connection (communication) | no |
| MIP connection (communication) | no |
| OAC connection (communication) | no |
| PTA connection (communication) | no |
| ZSI connection (communication) | no |

### Main electrical features

| | |
|---|---|
| Rated operational voltage Ue | 220 / 690 V |
| Type of supply voltage | AC |
| 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 | 80 A |
| Rated ultimate short-circuit breaking capacity Icu under 110-138V AC IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity Icu under 690V AC IEC 60947-2 | 6 kA |
| Rated service breaking capacity Ics under 220V AC according IEC 60947-2 | 85 kA |
| Rated service breaking capacity Ics under 230V AC according IEC 60947-2 | 85 kA |
| Rated service breaking capacity Ics under 240V AC according IEC 60947-2 | 85 kA |
| Rated service breaking capacity Ics under 380V AC according IEC 60947-2 | 50 kA |
| Rated service breaking capacity Ics under 400V AC according IEC 60947-2 | 50 kA |
| Rated service breaking capacity Ics under 415V AC according IEC 60947-2 | 50 kA |
| Rated service breaking capacity Ics under 660V AC according IEC 60947-2 | 6 kA |
| Rated service breaking capacity Ics under 690V AC according IEC 60947-2 | 6 kA |
| Breaking capacity on 1 pole for IT 230V NF 60947-2 | 6 kA |
| Breaking capacity on 1 pole for IT 400V NF 60947-2 | 6 kA |
| Breaking capacity on 1 pole for IT 415V NF 60947-2 | 6 kA |
| Breaking capacity on 1 pole for IT 690V NF 60947-2 | 2,5 kA |
| Rated ultimate short-circuit breaking capacity Icu under 230V AC IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity Icu under 240V AC IEC 60947-2 | 85 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 short-circuit making capacity Icm under 110-138V AC according IEC 60947-2 | 187 kA |
| Rated short-circuit making capacity Icm under 220V AC according IEC 60947-2 | 187 kA |
| Rated short-circuit making capacity Icm under 230V AC according IEC 60947-2 | 187 kA |
| Rated short-circuit making capacity Icm under 240V AC according IEC 60947-2 | 187 kA |
| Rated short-circuit making capacity Icm under 380V AC according IEC 60947-2 | 154 kA |
| Rated short-circuit making capacity Icm under 400V AC according IEC 60947-2 | 154 kA |
| Rated short-circuit making capacity Icm under 415V AC according IEC 60947-2 | 154 kA |
| Rated short-circuit making capacity Icm under 660V AC according IEC 60947-2 | 9 kA |
| Rated short-circuit making capacity Icm under 690V AC according IEC 60947-2 | 9 kA |
| Rated service breaking capacity Ics under 110-138V AC according IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity Icu under 220V AC IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity Icu under 380V AC IEC 60947-2 | 70 kA |
| Rated ultimate short-circuit breaking capacity Icu under 660V AC IEC 60947-2 | 6 kA |

**Frequency**

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

**Power**

| | |
|---|---|
| Total power loss under IN | 17,7 W |
| Power loss per pole at In | 5,9 W |

**Tripping**

| | |
|---|---|
| Short-time delayed tripping | no |

**Endurance**

| | |
|---|---|
| Electric endurance in number of cycles | 10000 |
| Number of mechanical operations | 40000 |

**Cover, door**

| | |
|---|---|
| Interlockable | yes |

**Dimensions**

| | |
|---|---|
| Depth of installed product | 97 mm |
| Height of installed product | 130 mm |
| Width of installed product | 120 mm |
| Critical distance switching emission/earthed part bottom | 50 mm |
| Critical distance switching emission/earthed part left | 50 mm |
| Critical distance switching emission/earthed part right | 50 mm |
| Critical distance switching emission/earthed part top | 50 mm |
| Critical distance switching emission/live part | 75 mm |

**Installation, mounting**

| | |
|---|---|
| Tightening torque | 6Nm |
| DIN rail mounting with optional adaptator | yes |
| Suitable for front mounting center | no |
| Suitable for distribution board installation | yes |
| Suitable for front mounting | no |
| Suitable for ground mounting | yes |
| Suitable for intermediate mounting | no |

**Connection**

| | |
|---|---|
| Connection cross-sect. flexible conductor | 6 / 70mm² |
| Connection cross-sect. rigid cable | 6 / 95mm² |
| Connection | Front connection |
| Type of connection | with screw |

### Protection

| | |
|---|---|
| Earth fault protection (GF) | no |
| Instantaneous protection (Ii) | yes |
| Instantaneous protection (Ii): deactivatable | no |
| Instantaneous protection (Ii): type | fixed |
| Instantaneous protection (Ii): reference for current setting | Ii… x In |
| Instantaneous protection (Ii): dial setting coefficient | 6 / 8 / 10 / 12 |
| Long Time overload protection (Itd) | no |
| Long Time protection (Itd): delay type | fixed |
| Neutral overload protection (NP) | yes |
| Neutral overload protection (NP): current (IN) | 100 % |
| Pre-Trip Alarm (PTA) | no |
| Short time protection (std) | no |
| Short time protection by I²t curve | no |

### Cable

| | |
|---|---|
| Cable Material | Cu |

### Settings

| | |
|---|---|
| Range of the magnetic adjustment | 480 / 640 / 800 / 960 A |
| Magnetic protection nob setting xIN | 6 / 8 / 10 / 12 |
| Time adjustable | no |

### Equipment

| | |
|---|---|
| Motor drive optional | no |
| Can be accessorized | yes |
| Accept terminal cover | yes |
| With optional voltage release | yes |

### Use cases

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

### Use

| | |
|---|---|
| Vibrations and shocks withstand | IEC 68068-2-52 Test FC |

### Standards

| | |
|---|---|
| Standard text | IEC 60947-2 |
| European directive WEEE | concerned |
| Product categories described in the W3E directive 2012/19/EU | Category 5 |

### Safety

| | |
|---|---|
| Protection index IP | IP4X |

**Use conditions**

| | |
|---|---|
| Degree of pollution according to IEC 60664 / IEC 60947-2 | 3 |
| Altitude | 2000 m |
| Air humidity protection | 95%HR 55°C sev Kn (IEC 68-2-30/52) |