



HES101DC

MCCB h3+ P160 TM 4x100A 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 N:0/100% |
| 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 | TM A/A |
| Integrated earth fault protection | no |
| Concurrently switching N-neutral | yes |
| Version as switch disconnecter 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 | 100 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 |
| Thermal protection nob setting xIN | 0,63 / 0,8 / 1 |
| Rating current 10°C according to IEC 60947 | 124,3 A |
| Rating current 150°C according to IEC 60947 | 121,5 A |
| Rating current 20°C according to IEC 60947 | 118,7 A |
| Rating current 25°C according to IEC 60947 | 115,8 A |
| Rating current 30°C according to IEC 60947 | 112,8 A |
| Rating current 35°C according to IEC 60947 | 109,7 A |
| Rating current 40°C according to IEC 60947 | 106,6 A |
| Rating current 45°C according to IEC 60947 | 103,3 A |
| Rating current 50°C according to IEC 60947 | 100 A |
| Rating current 55°C according to IEC 60947 | 96,5 A |
| Rating current 60°C according to IEC 60947 | 93 A |
| Rating current 65°C according to IEC 60947 | 89,2 A |
| Rating current 70°C according to IEC 60947 | 85,3 A |
| 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 |
| Range of the thermal adjustment | 63 / 80 / 100 A |
| Rated short-circuit making capacity Icm under 110-138V AC according IEC 60947-2 | 187 kA |

| | |
|---|--------|
| Rated short-circuit making capacity I_{cm} under 220V AC according IEC 60947-2 | 187 kA |
| Rated short-circuit making capacity I_{cm} under 230V AC according IEC 60947-2 | 187 kA |
| Rated short-circuit making capacity I_{cm} under 240V AC according IEC 60947-2 | 187 kA |
| Rated short-circuit making capacity I_{cm} under 380V AC according IEC 60947-2 | 154 kA |
| Rated short-circuit making capacity I_{cm} under 400V AC according IEC 60947-2 | 154 kA |
| Rated short-circuit making capacity I_{cm} under 415V AC according IEC 60947-2 | 154 kA |
| Rated short-circuit making capacity I_{cm} under 660V AC according IEC 60947-2 | 9 kA |
| Rated short-circuit making capacity I_{cm} under 690V AC according IEC 60947-2 | 9 kA |
| Rated service breaking capacity I_{cs} under 110-138V AC according IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity I_{cu} under 220V AC IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity I_{cu} under 380V AC IEC 60947-2 | 70 kA |
| Rated ultimate short-circuit breaking capacity I_{cu} under 660V AC IEC 60947-2 | 6 kA |

Frequency

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

Power

| | |
|---|---------|
| Power loss per pole at $0.63 \cdot I_n$ | 2,58 W |
| Power loss per pole at $0.8 \cdot I_n$ | 4,16 W |
| Total power loss at $0.63 \cdot I_n$ | 7,73 W |
| Total power loss at $0.8 \cdot I_n$ | 12,47 W |
| Total power loss under I_N | 20,1 W |
| Power loss per pole at I_n | 6,7 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 / 70mm ² |
| Connection cross-sect. rigid cable | 6 / 95mm ² |
| 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 | I _n x I _n |
| Instantaneous protection (Ii): dial setting coefficient | 6 / 8 / 10 / 12 |
| Long Time overload protection (Itd) | yes |
| Long time delay protection (Itd): deactivatable | no |
| Long Time protection (Itd): delay type | fixed |
| Neutral overload protection (NP) | yes |
| Neutral overload protection (NP): current (I _N) | 100 % |
| Pre-Trip Alarm (PTA) | no |
| Short time protection (std) | no |
| Short time protection by I ² t curve | no |

Cable

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

Settings

| | |
|-------------------------------------|---------------------------|
| Range of the magnetic adjustment | 600 / 800 / 1000 / 1200 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) |

temperatur

| | |
|----------------------------|-------|
| Temperature of calibration | 50 °C |
|----------------------------|-------|