



HET160NR

MCCB h3+ P250 Energy 3x160A 70kA

Product Datasheet

Architecture

| | |
|---------------------------|-----------------|
| Type of order | Toggle |
| Neutral position | without neutral |
| Number of protected poles | 3 |
| Number of poles | 3 P |
| Type of pole | 3P3D |
| Fixing mode | Screwed |
| 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 | ENERGY |
| Integrated earth fault protection | 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) | yes |
| CIP connection (communication) | yes |
| MIP connection (communication) | yes |
| OAC connection (communication) | yes |
| PTA connection (communication) | yes |
| ZSI connection (communication) | yes |

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 | 160 A |
| Rated ultimate short-circuit breaking capacity I _{cu} under 110-138V AC IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity I _{cu} under 690V AC IEC 60947-2 | 6 kA |
| Rated short-time withstand current I _{cw} t=0.4S 220-240 V AC according IEC 60947-2 | 2,5 kA |
| Rated short-time withstand current I _{cw} t=0.4S 380-415 V AC according IEC 60947-2 | 2,5 kA |
| Rated short-time withstand current I _{cw} t=0.4S 660-690 V AC according IEC 60947-2 | 2,5 kA |
| Rating current 10°C according to IEC 60947 | 160 A |
| Rating current 150°C according to IEC 60947 | 160 A |
| Rating current 20°C according to IEC 60947 | 160 A |
| Rating current 25°C according to IEC 60947 | 160 A |
| Rating current 30°C according to IEC 60947 | 160 A |
| Rating current 35°C according to IEC 60947 | 160 A |
| Rating current 40°C according to IEC 60947 | 160 A |
| Rating current 45°C according to IEC 60947 | 160 A |
| Rating current 50°C according to IEC 60947 | 160 A |
| Rating current 55°C according to IEC 60947 | 160 A |
| Rating current 60°C according to IEC 60947 | 160 A |
| Rating current 65°C according to IEC 60947 | 160 A |
| Rating current 70°C according to IEC 60947 | 150 A |
| Rated service breaking capacity I _{cs} under 220V AC according IEC 60947-2 | 85 kA |
| Rated service breaking capacity I _{cs} under 230V AC according IEC 60947-2 | 85 kA |
| Rated service breaking capacity I _{cs} under 240V AC according IEC 60947-2 | 85 kA |
| Rated service breaking capacity I _{cs} under 380V AC according IEC 60947-2 | 50 kA |
| Rated service breaking capacity I _{cs} under 400V AC according IEC 60947-2 | 50 kA |
| Rated service breaking capacity I _{cs} under 415V AC according IEC 60947-2 | 50 kA |
| Rated service breaking capacity I _{cs} under 660V AC according IEC 60947-2 | 6 kA |
| Rated service breaking capacity I _{cs} under 690V AC according IEC 60947-2 | 6 kA |
| Breaking capacity on 1 pole for IT 230V NF 60947-2 | 2,5 kA |
| Breaking capacity on 1 pole for IT 400V NF 60947-2 | 2,5 kA |
| Breaking capacity on 1 pole for IT 415V NF 60947-2 | 2,5 kA |
| Rated ultimate short-circuit breaking capacity I _{cu} under 230V AC IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity I _{cu} under 240V AC IEC 60947-2 | 85 kA |
| Rated ultimate short-circuit breaking capacity I _{cu} under 400V AC IEC 60947-2 | 70 kA |
| Rated ultimate short-circuit breaking capacity I _{cu} under 415V AC IEC 60947-2 | 70 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

| | |
|---------------------------------------|---------|
| Total power loss under I _N | 18,42 W |
| Power loss per pole at I _N | 6,14 W |

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 | 165 mm |
| Width of installed product | 105 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 | 150 mm |

Installation, mounting

| | |
|--|------|
| Tightening torque | 12Nm |
| DIN rail mounting with optional adaptator | no |
| 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 | 35 / 150mm ² |
| Connection cross-sect. rigid cable | 35 / 185mm ² |
| Connection | Front connection |
| Type of connection | Terminal |

Protection

| | |
|--|--|
| Long Time protection (ltd): adjustable delay | yes |
| Long Time overload protection (ltd): delay (tr) | 0,5 / 1,5 / 2,5 / 5 / 7,5 / 9 / 10 / 12 / 14 / 16 s |
| Earth fault protection (GF) | yes |
| Earth fault protection (GF): low speed (LSP) desactivatable | yes |
| Earth fault protection (GF): delay (tg) | 50 / 100 / 200 / 300 / 400 / 500 ms |
| Instantaneous protection (li) | yes |
| Instantaneous protection (li): deactivatable | no |
| Instantaneous protection (li): type | adjustable |
| Instantaneous protection (li): reference for current setting | li... x In 3 to 11 with steps of 0,5 |
| Instantaneous protection (li): dial setting coefficient | 3 / 3,5 / 4 / 4,5 / 5 / 5,5 / 6 / 6,5 / 7 / 7,5 / 8 / 8,5 / 9 / 9,5 / 10 / 10,5 / 11 |
| Thermal protection: current (lr) | 63 / 100 / 125 / 160 A |
| Long Time overload protection (ltd) | yes |
| Long time delay protection (ltd): deactivatable | no |
| Long Time protection (ltd): delay type | adjustable |
| Neutral overload protection (NP) | no |
| Pre-Trip Alarm (PTA) | yes |
| Short time protection (std) | yes |
| Short time protection by I ² t curve | yes |
| Ground-fault protection (I ² t): desactivatable | yes |
| Short time protection (std): deactivatable | yes |
| Short time protection (std): delay type | adjustable |
| Short time protection (std): Isd tolerance | -10-10 % |
| Short time protection (std): reference for current setting | Isd = OFF / Isd...x Ir 1.5 to 10 with steps of 0,5 |
| Short time protection (std): current (Isd) | 1,5 / 2 / 2,5 / 3 / 3,5 / 4 / 4,5 / 5 / 5,5 / 6 / 6,5 / 7 / 7,5 / 8 / 8,5 / 9 / 9,5 / 10 |
| Short time protection (std): delay (tsd) | 50 / 100 / 200 / 300 / 400 ms |
| Short time protection (std): low speed (LSP) desactivatable | yes |

Cable

| | |
|----------------|---------|
| Cable Material | Cu / Al |
|----------------|---------|

Settings

| | |
|-----------------|-----|
| Time adjustable | yes |
|-----------------|-----|

Equipment

| | |
|-------------------------------|-----|
| Motor drive optional | yes |
| 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) |