



HES160DC

## MCCB h3+ P160 TM 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	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
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	160 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	192,1 A
Rating current 150°C according to IEC 60947	188,4 A
Rating current 20°C according to IEC 60947	184,6 A
Rating current 25°C according to IEC 60947	180,7 A
Rating current 30°C according to IEC 60947	176,8 A
Rating current 35°C according to IEC 60947	172,7 A
Rating current 40°C according to IEC 60947	168,6 A
Rating current 45°C according to IEC 60947	164,4 A
Rating current 50°C according to IEC 60947	160 A
Rating current 55°C according to IEC 60947	155,5 A
Rating current 60°C according to IEC 60947	150,9 A
Rating current 65°C according to IEC 60947	146,2 A
Rating current 70°C according to IEC 60947	141,2 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	100 / 125 / 160 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
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#### Power

Power loss per pole at $0.63 \cdot I_n$	5,78 W
Power loss per pole at $0.8 \cdot I_n$	9,02 W
Total power loss at $0.63 \cdot I_n$	17,33 W
Total power loss at $0.8 \cdot I_n$	27,07 W
Total power loss under $I_n$	42,3 W
Power loss per pole at $I_n$	14,1 W

#### Tripping

Short-time delayed tripping	no
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#### Endurance

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

#### Cover, door

Interlockable	yes
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### Dimensions

Depth of installed product	97 mm
Height of installed product	130 mm
Width of installed product	90 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 <sup>2</sup>
Connection cross-sect. rigid cable	6 / 95mm <sup>2</sup>
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 / 7 / 8 / 9 / 10
Long Time overload protection (Itd)	yes
Long time delay protection (Itd): deactivatable	no
Long Time protection (Itd): delay type	fixed
Neutral overload protection (NP)	no
Pre-Trip Alarm (PTA)	no
Short time protection (std)	no
Short time protection by I <sup>2</sup> t curve	no

### Cable

Cable Material	Cu
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### Settings

Range of the magnetic adjustment	960 / 1120 / 1280 / 1440 / 1600 A
Magnetic protection nob setting xIN	6 / 7 / 8 / 9 / 10
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
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### Use

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