HES160DC

Moulded Case Circuit Breaker h3+ P160 TM ADJ 3P3D 160A 70kA CTC

Technical characteristics

Architecture

Type of order	Toggle
Neutral position	without neutral
Number of protected poles	3
Number of poles	3 P
Type of pole	3P3D
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

Controls and indicators

Motor drive integrated	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 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 15°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 660V 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 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

Dimensions

Depth of installed product	97 mm
Height of installed product	130 mm
Width of installed product	90 mm

Frequency

Frequency	50 to 60 Hz

Power

Power loss per pole at 0.63*In	5.78 W
Power loss per pole at 0.8*In	9.02 W
Total power loss at 0.63*In	17.33 W
Total power loss at 0.8*In	27.07 W
Total power loss under IN	42.3 W
Power loss per pole at In	14.1 W

Tripping

Short-time delayed tripping	No

Endurance

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

Cover, door

Interlockable	Yes

Installation, mounting

Tightening torque	6Nm
DIN rail mounting with optional adaptator	Yes
Suitable for front mounting center	No
Suitable for front mounting	No
Suitable for ground mounting	Yes

Connection

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

Protection

Instantaneous protection (Ii): type	fixed

Cable

Cable Material	Cu

Settings

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

Equipment

Number of auxiliary contacts as normally closed contact	0
Number of auxiliary contacts as normally open contact	0
Number of auxiliary contacts as change-over contact	0
Motor drive optional	No
Can be accessorized	Yes

Use cases

Category of use	A

Use

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

Standards

Standard text	IEC 60947-2

Safety

REACH conform	Yes
RoHS conform	Yes
Halogen free	No

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)

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Temperature of calibration	50 °C