



HMQ991NR

**Moulded Case Circuit Breaker h3+ PW1600 Energy LSIG 4P4D 1600A 50kA FTC**

**Technical Features**

**Electric current**

Rated current	1600 A
---------------	--------

**Architecture**

Number of poles	4
Control/operation element	Toggle
Device construction type	Fixed built-in
Neutral position	Left

**Electric current**

Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 400 V AC IEC 60947-2	50 kA
Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 240 V AC IEC 60947-2	50 kA
Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 415 V AC IEC 60947-2	50 kA
Rated ultimate short-circuit breaking capacity I <sub>cu</sub> under 690 V AC IEC 60947-2	30 kA
Rated service breaking capacity I <sub>cs</sub> under 220 V AC according to IEC 60947-2	50 kA
Rated service breaking capacity I <sub>cs</sub> under 230 V AC according to IEC 60947-2	50 kA
Rated service breaking capacity I <sub>cs</sub> under 240 V AC according to IEC 60947-2	50 kA
Rated service breaking capacity I <sub>cs</sub> under 380 V AC according to IEC 60947-2	50 kA
Rated service breaking capacity I <sub>cs</sub> under 400 V AC according to IEC 60947-2	50 kA
Rated service breaking capacity I <sub>cs</sub> under 415 V AC according to IEC 60947-2	50 kA
Rated service breaking capacity I <sub>cs</sub> under 690 V AC according to IEC 60947-2	30 kA
Rated current 10°C according to IEC 60947	1600 A
Rated current 15°C according to IEC 60947	1600 A
Rated current 20°C according to IEC 60947	1600 A
Rated current 25°C according to IEC 60947	1600 A
Rated current 30°C according to IEC 60947	1600 A
Rated current at 35°C according to IEC 60947	1600 A
Rated current at 40°C according to IEC 60947	1600 A
Rated current 45°C according to IEC 60947	1600 A
Rated current 50°C according to IEC 60947	1590 A
Rated current 55°C according to IEC 60947	1540 A
Rated current at 60°C according to IEC 60947	1490 A
Rated current 65°C according to IEC 60947	1430 A
Rated current 70°C according to IEC 60947	1430 A

**Frequency**

Frequency	50 - 60 Hz
-----------	------------

**Voltage**

Rated impulse withstand voltage U <sub>imp</sub>	8 kV
Rated insulation voltage U <sub>i</sub>	1000 V
Rated operational voltage U <sub>e</sub>	220 - 690 V

**Power**

Total power loss under I <sub>N</sub>	129.6 W
---------------------------------------	---------

**Functions**

Trip unit	Sentinel Energy LSIG
-----------	----------------------

**Endurance**

Electric endurance in number of cycles	4000
Number of mechanical operations	20000

**Safety**

Ingress Protection (IP) class	IP20
-------------------------------	------

**Installation, mounting**

Nominal tightening torque	50-50 Nm
Mounting-/Connection Position	Front

**Cover, door**

Interlockable	Yes
---------------	-----

**Cable**

Cable material	Copper Aluminium
----------------	---------------------

**Compatibility**

Compatible with RDC AOB	No
Suitable for DIN Rail	No
Suitable for distribution board	Yes

**Dimensions**

Height	330 mm
Width	280 mm
Depth	198 mm

**Connectivity**

Type of connection	Bolt connection
--------------------	-----------------

**Electrical protection**

Long-time overload protection (ltd): delay (tr)	0.5 s
	1 s
	1.5 s
	2 s
	2.5 s
	3 s
	3.5 s
	4 s
	4.5 s
	5 s
	5.5 s
	6 s
	6.5 s
	7 s
	7.5 s
	8 s
	8.5 s
	9 s
	9.5 s
	10 s
	10.5 s
	11 s
	11.5 s
	12 s
	12.5 s
	13 s
	13.5 s
	14 s
	14.5 s
	15 s
	15.5 s
	16 s
	16.5 s
	17 s
	17.5 s
	18 s
	18.5 s
	19 s
	19.5 s
	20 s
	20.5 s
	21 s
	21.5 s
	22 s
	22.5 s
	23 s
	23.5 s
	24 s
	24.5 s
	25 s

---

**Electrical protection**

Short-time protection (std): delay (tsd)	50 ms
	100 ms
	150 ms
	200 ms
	250 ms
	300 ms
	350 ms
	400 ms
	450 ms
	500 ms
	550 ms
	600 ms
	Instantaneous protection (li): dial setting coefficient
	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
	10.5
	11
	11.5
	12
	12.5
	13
	13.5
	14
	14.5
	15

---

**Sustainability**

RoHS conform	Yes
--------------	-----