E-T-A Class I Division 2 Hydraulic-Magnetic MCB 4231-T

Description

Single pole, DIN rail mount, hydraulic-magnetic miniature circuit breaker (MCB) in accordance with UL1077, CSA22.2, and UL Class I Division 2, Groups A, B, C, D.

Typical Applications

Hazardous locations where flammable liquids, gases, vapors, or combustible dust exists in sufficient quantities to produce an explosion or fire. Typical applications include; Oil & Gas drilling and production, Agricultural processing and storage, and Saw Mill / Pulp & Paper production.

Ordering Information

Type No.
4231 Hydraulic-magnetic high performance circuit breaker
Mounting
T1 Rail mounting
Number of poles
1 Single pole protected
Accessories
0 Without
Terminals
K0 Screw terminals
Characteristic curve
F1 DC short time delay*
F2 AC short time delay
Approvals
H UL1077, CSA22.2, UL Class I Division 2
Current ratings
1, 2, 3, 5, 7, 8, 10, 12, 15, (20A)**

4231 - T1 1 0 - K0 F2 H - 10A ordering example

* Visit www.e-t-a.com/us_esx10-t/ to see ESX10 Electronic Breakers for 24VDC Class I Division II applications
** for 50VDC only

Available product configurations

Part number	Current rating	Description
4231-T110-K0F1H- 4231-T110-K0F2H-	1A	UL1077, CID2, 1P, 120VAC, 50VDC
	2A	
	3A	
	5A	
	7A	
	8A	
	10A	
	12A	
	15A	
	20A	UL1077, CID2, 1P, 50VDC

Approvals

Authority	Standard	Rated voltage	Current ratings
UL	Class I Div 2 GP A, B, C, D ISA 12.12.01-2015 CSA C22.2 No. 213	120VAC 50/60 Hz 50VDC	1, 2, 3, 5, 7, 8, 10, 12, 15, 20A*
UL	UL 1077 CSA C22.2 No. 235-04		

* for 50VDC only

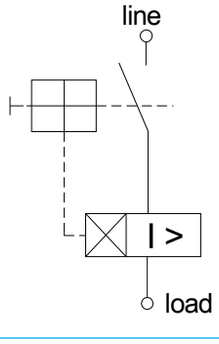


4231-T...

Technical Data

Voltage rating	120VAC, 50VDC
Current rating range	1... 15A (AC) 1... 20A (DC)
Interrupting capacity	1000 A (AC and DC)
Temperature	-40° - 65°C
Ambient typical life	1... 20A 6000 operations @ 1 x I_N
Insulation Resistance	>100 mega ohms (100VDC)
Dielectric Strength	1250 V RMS, 60 Hz (between terminals)
Degree of Protection	IP20
Vibration Directions 1, 2, 3, 4: Directors 5, 6:	 5 g at 1.0 x I_N 10 g at 1.0 x I_N (57-2000 Hz) +/- 0.76 mm (10-57 Hz) to IEC 60068-2-6, test Fc 10 frequency cycles/axis
Shock Directions 2, 3, 4, 5, 6: Direction 1:	 40 g/11 ms/half sine at 1.0 x I_N 30 g/11 ms/half sine at 1.0 x I_N to IEC 60068-2-27, test Ea
Humidity	240 hrs in 95% RH, temperature 40 Deg C test to IEC60068-2-78, test Cab
Corrosion	96 hrs in 5% salt mist test to IEC60068-2-11, test Ka

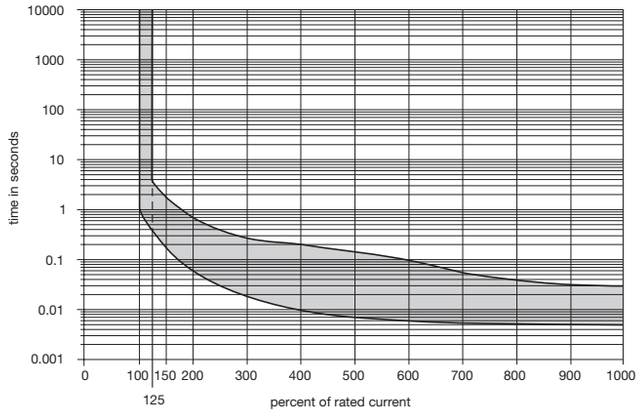
Schematic Diagram



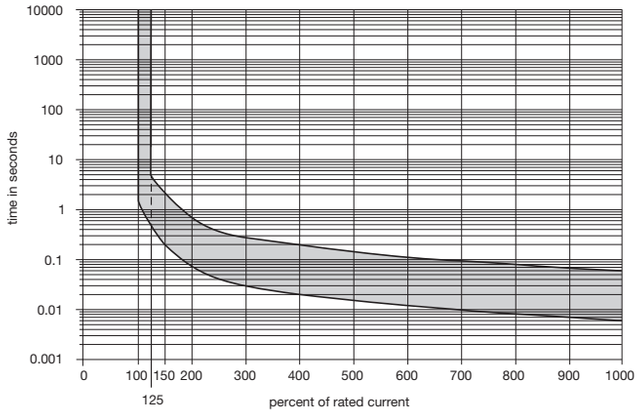
Class I Division 2 Hydraulic-Magnetic MCB 4231-T

Time/current characteristic

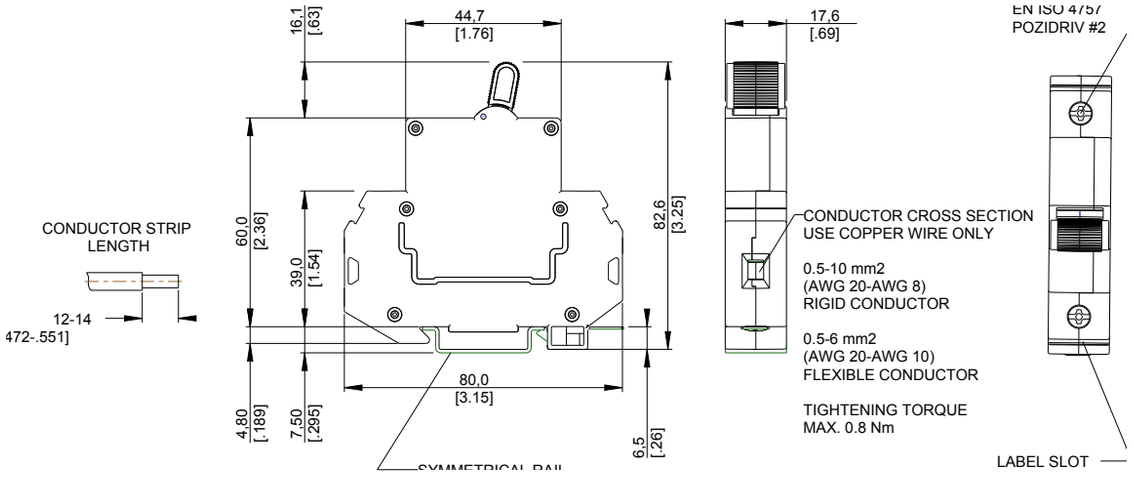
F1 Curve (DC)



F2 Curve (AC)



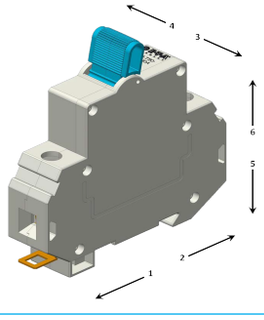
Dimensions



Temperature Derating Factor

Ambient Temperature	Temperature rating of conductor	
	75ºC	90ºC
40ºC	1.00	1.00
50ºC	1.00	1.00
60ºC	0.80	1.00
65ºC	0.70	0.80

Shock directions



Approval Details

Model	File Number	Type	UG	FW	U(V)	I(A)	TC	OL	SC
4231	E67320, E498433	OC	A	0	120 VAC	1... 15A	1	1	C1, 1KA*
					50 VDC	1... 20A			U1, 1KA

*Evaluated with series fuse RK5 rated no more than 4X the rating of the protector