

Magnetic Hydraulic Circuit Breaker W6 / W9



F0216-A

Features

- UL, CSA and VDE approved
- Ratings to 50 A
- Heavy duty stud connections
- Several delay curve options
- Trip free operation
- tested to EN 60934



Technical data of approved types on request

Electrical data

Calibration	will hold 100% of rated current may trip at 101...124% of rated load (134% for AC/DC units). must trip at 125% of rated load and above (135% for AC/DC units)
Endurance	10x10 ³ on/off cycles - 6000 at rated load, 4000 without load tested at 6 cycles/min, 1 s on and 9 s off at 25°C
Dielectric strength	50/60 Hz: 1500 Vrms DC: 1100 Vdc
Insulation resistance	100x10 ⁶ Ohm

Typical resistance and impedance

Current rating A	DC resistance Ω	50/60 Hz Impedance Ω
0.2	90	90
1.0	1.2	1.2
2.0	0.28	0.28
5.0	0.04	0.04
10.0	0.013	0.013
20.0	0.004	0.005
30.0	0.0027	0.004
40.0	0.002	0.002
50.0	0.0015	0.0015

Data for ambient temperature +25°C

Approval and ratings W6 series

Max Voltage V	Frequency Hz	Phase	Current Rating A	Interruption Capacity A
65	DC	-	0.2...50	2000
250	50/60	1	0.2...30	5000
250	50/60	1	31...50	2000
415/240	50/60	3	0.2...30	5000

Approval and ratings W9 series

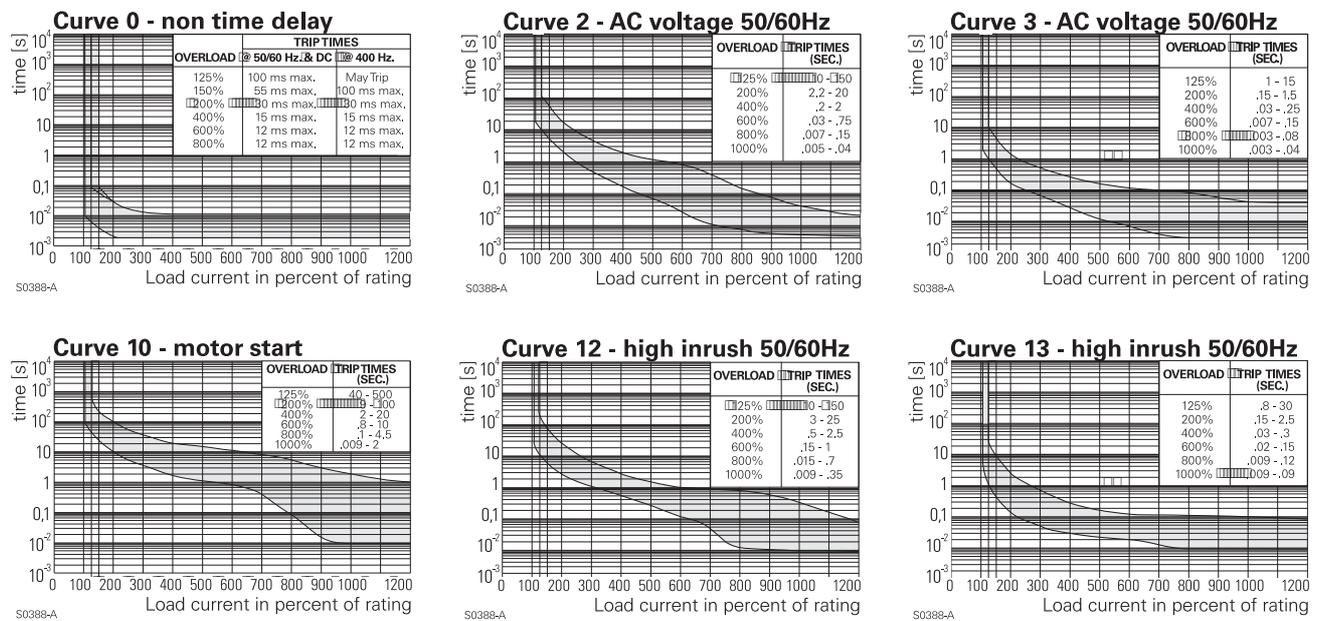
Max Voltage V	Frequency Hz	Phase	Current Rating A	Interruption Capacity A
65	DC	-	0.2...50	2000
250	50/60	1	0.2...30	5000
250	50/60	1	31...50	2000
415/240	50/60	3	0.2...30	5000

Magnetic Hydraulic Circuit Breaker W6 / W9

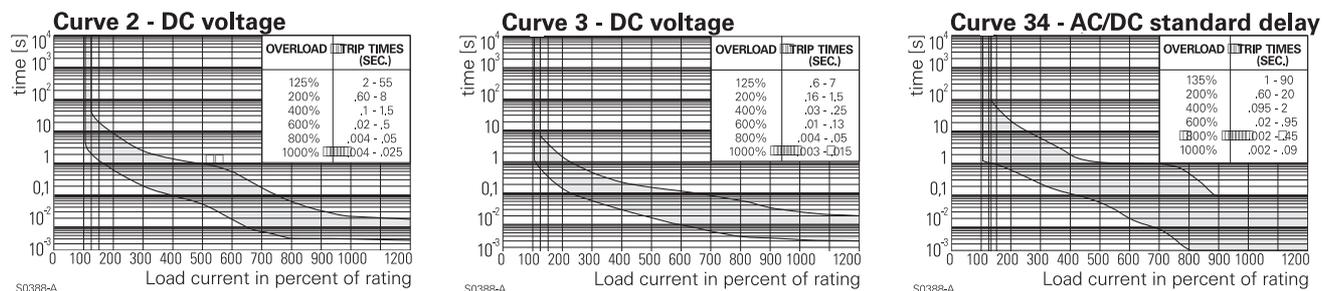
Other data	
Ambient temperature	-40...+85 °C
Humidity	meets requirements of Mil-STD-202 method 103
Fungus and moisture resistance	special moisture resistant finish applied to all ferrous parts, plastic parts are made of inherently fungus resistant material
Vibration resistance	1.52 mm, 10...55 Hz, tested to Mil-STD-202, method 201
Shock resistance	100 g, 6 ms, tested to Mil-STD-202, method 213, C
Marking	W6 units have ON and OFF molded on the rocker ('0','1' for VDE)
Mounting	screw mount in panels (#6-32 or M3x0.5) to maintain published performance, units should not be mounted more than 45° from their upright position
Weight	W6: appr. 60 g per pole W9: appr. 90 g per pole
Packaging unit	W67: 72 pcs. W91: 55 pcs. W68: 36 pcs. W92: 30 pcs. W69: 24 pcs. W93: 20 pcs. W70: 9 pcs. W94: 9 pcs.

Time vs. current trip curves for W6 and W9 series

AC



DC; AC/DC



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Pulse tolerance specifications

Voltage	Time delay curve	Pulse tolerance value	
		Standard	Inertia delay
AC 50/60Hz	2	7.5	18
AC 50/60Hz	3	6	18
AC 50/60Hz	10	18	30
AC 50/60Hz	12	18	30
AC 50/60Hz	13	18	30

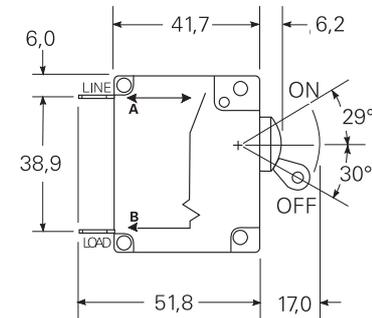
Pulse tolerance is defined as a single pulse of a half sine wave (1/2 cycle or 8ms) that will not trip the breaker. An inertia wheel for increased pulse tolerance is available by specifying 'P' after the time delay curve number in the ordering key. The table at left lists pulse tolerance values of standard and inertia delay models.

To determine pulse tolerance multiply breaker rating by value in table. For example, a 2 A breaker with time delay curve 3 has a standard pulse tolerance of 12 A (2x6 A). The same breaker with an inertia delay has a pulse tolerance of 36 A (2 Ax18).

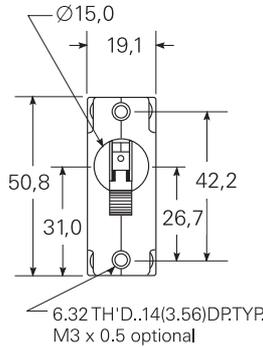
Dimensions

Dimensions in mm

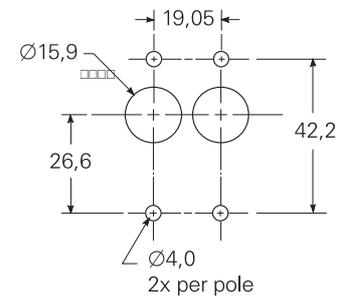
W6 series



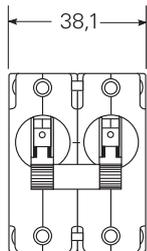
S0389-A



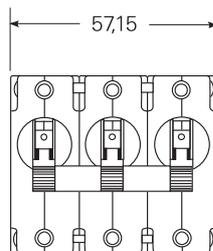
S0390-A



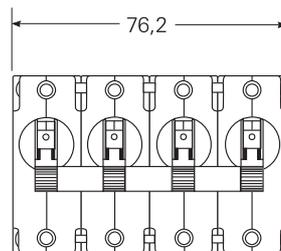
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S0391-A



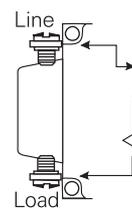
S0392-A



S0393-A

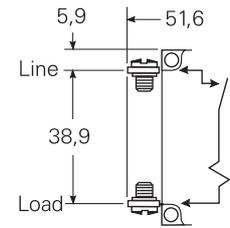
VDE models

with screw terminals



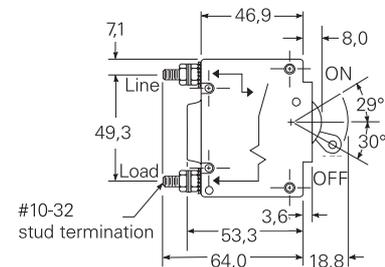
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UL/CSA models

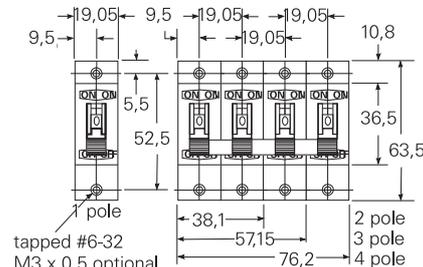


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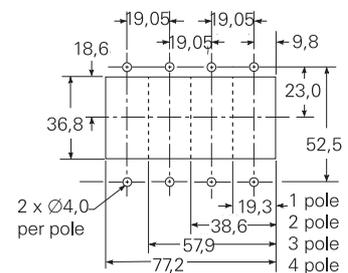
W9 series



S0397-A



S0398-A



S0399-A

Magnetic Hydraulic Circuit Breaker W6 / W9

Product key W6 series

Type	<input type="checkbox"/> W #6-32 mounting threads	<input type="checkbox"/> M M3 x 0.5 mounting thread
Number of poles	<input type="checkbox"/> 67 1 pole	<input type="checkbox"/> 68 2 pole
	<input type="checkbox"/> 69 3 pole	<input type="checkbox"/> 70 4 pole
Circuit function	<input checked="" type="checkbox"/> Series trip	
Actuator (per pole)	<input type="checkbox"/> 1 black toggle	<input type="checkbox"/> 2 white toggle
Terminals	<input type="checkbox"/> Q 6.35mm Quick Connect (DIN 46244) max. 25A for VDE	
	<input type="checkbox"/> S #8-32 screw	
Max voltage	<input type="checkbox"/> 1 250Vac, 415/240Vac	<input type="checkbox"/> 5 65 Vdc
	<input type="checkbox"/> 7 250Vac or 65Vdc (only with delay curve 34)	
Time delay curve	<input type="checkbox"/> 0 instantaneous	<input type="checkbox"/> 10 AC high inrush (motor start)
	<input type="checkbox"/> 2 standard delay	<input type="checkbox"/> 12 AC high inrush version #2
	<input type="checkbox"/> 3 short delay	<input type="checkbox"/> 13 AC high inrush version #3
	<input type="checkbox"/> 34 combination AC/DC standard delay	
Amp Rating	<input type="checkbox"/> 0.2, 0.5, 1, 2, 3, 5, 7, 10, 15, 20, 30, 40, 50	
Approvals	<input type="checkbox"/> V VDE	<input type="checkbox"/> blank UL and CSA without VDE

Preferred types on bold print. Other types on request

Product key	Function	max. Voltage	Time delay	Current rating	Part number
W67-X2Q12-2	1 pole	250Vac	standard	2 A	5-1393252-7
W67-X2Q12-3	series trip	415/240Vac		3 A	6-1393252-0
W67-X2Q12-25				25 A	5-1393252-9
W67-X2Q13-1			short delay	1 A	6-1393252-5
W67-X2Q13-2				2 A	6-1393252-8
W67-X2Q13-25				25 A	7-1393252-0
W67-X2Q50-5		65Vdc	instantaneous	5 A	7-1393252-9
W67-X2Q52-15				15 A	8-1393252-2
W68-X2Q12-10	2 pole	250Vac	standard	10 A	2-1393253-9
W68-X2Q12-15				15 A	3-1393253-2
W68-X2Q12-30	series trip			30 A	3-1393253-7
W68-X2Q12-5				5 A	3-1393253-8
W68-X2Q12-7				7 A	4-1393253-0
W68-X2Q110-20			AC high inrush	20 A	2-1393253-1
W69-X2Q12-5	3 pole		standard	5 A	9-1393253-3
W69-X2Q12-10				10 A	8-1393253-3
W69-X2Q110-20				20 A	8-1393253-1

Magnetic Hydraulic Circuit Breaker W6 / W9

Product key W9 series

Type	W #6-32 mounting threads	M M3 x 0.5 mounting thread
Number of poles	91 1 pole	92 2 pole
	93 3 pole	94 4 pole
Circuit function	X Series trip	
Actuator (per pole)	1 black toggle	
Max voltage	1 250Vac, 415/240Vac	5 65 Vdc
	7 250Vac or 65Vdc (only with delay curve 34)	
Time delay curve	0 instantaneous	10 AC high inrush (motor start)
	2 standard delay	12 AC high inrush version #2
	3 short delay	13 AC high inrush version #3
	34 combination AC/DC standard delay	
Amp Rating	0.2, 0.5, 1, 3, 5, 10, 15, 20, 25, 30, 40, 50	
Approvals	V VDE	blank UL and CSA without VDE

Preferred types in bold print. Other types on request

Product key	Function	max. Voltage	Time delay	Current rating	Part number
W91-X112-1	1 pole	250Vac	standard	1 A	2-1393254-1
W91-X112-3	series trip	415/240Vac	delay	3 A	2-1393254-7
W91-X112-10				10 A	2-1393254-2
W91-X112-15				15 A	2-1393254-3
W91-X112-20				20 A	2-1393254-5
W91-X112-50				50 A	3-1393254-2
W91-X150-5			instantaneous	5 A	4-1393254-0
W91-X152-20			standard	20 A	4-1393254-4
W91-X152-40			delay	40 A	4-1393254-8
W91-X152-50				50 A	5-1393254-0
W92-X112-10	2 pole	250Vac		10 A	6-1393254-8
W92-X112-15	series trip	415/240Vac		15 A	7-1393254-0
W92-X112-20				20 A	7-1393254-2
W92-X112-30				30 A	7-1393254-7
W92-X112-50				50 A	8-1393254-3
W92-X113-15			short delay	15 A	8-1393254-6
W93-X112-40	3 pole		standard	40 A	1-1393255-0