

# 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 <sup>3</sup> 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 <sup>6</sup> 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

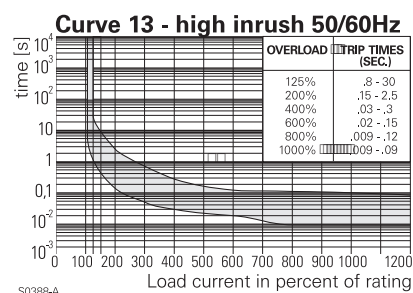
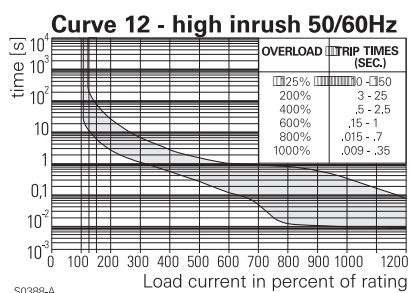
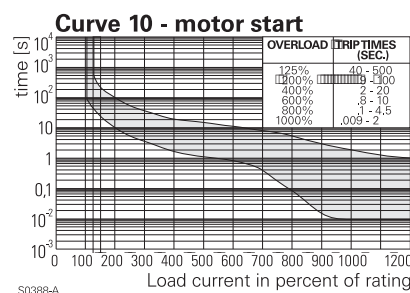
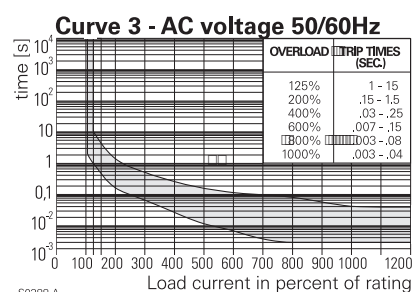
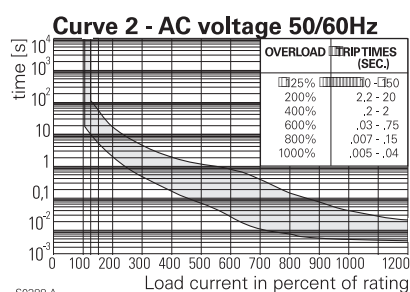
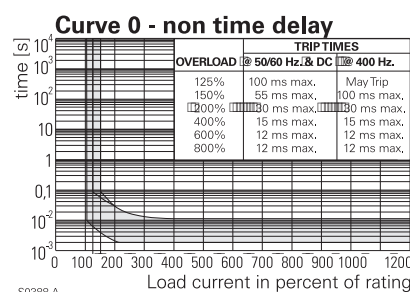
# Magnetic Hydraulic Circuit Breaker W6 / W9

## Other data

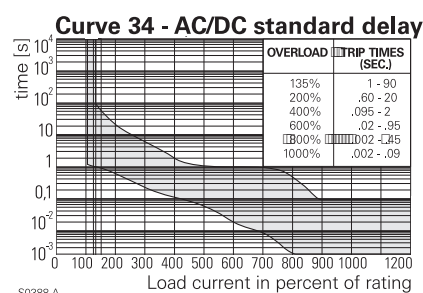
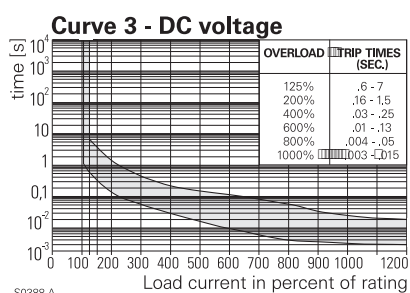
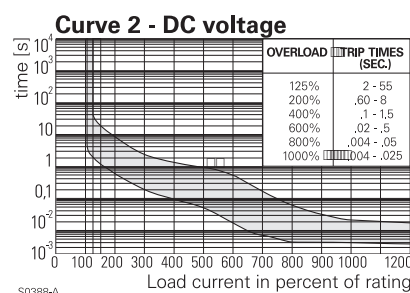
Ambient temperature	-40...+85 °C			
Humidity	meets requirements of Mil-STD-202 method 103			
Fungus and moisture resistance	special moisture resistant finish applied to all ferrous parts,			
plastic parts are made of inherently fungus resistant material				
Vibration resistance	1.52 mm, 10...55 Hz, tested 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

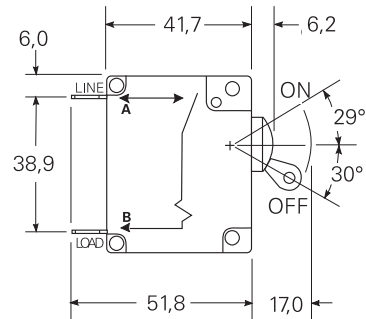
Pulse tolerance is defined as a single pulse of a half sine wave (1/2 cycle or 8ms) that will not trip the breaker. An inertia wheel for increased pulse tolerance is available by specifying 'P' after the time relay curve number in the ordering key. The table at left lists pulse tolerance values of standard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

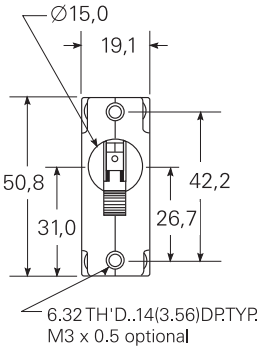
## Dimensions

Dimensions in mm

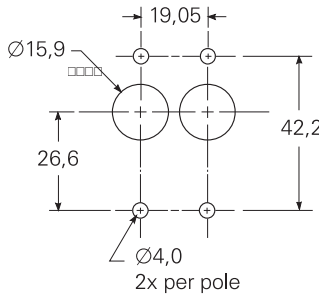
### W6 series



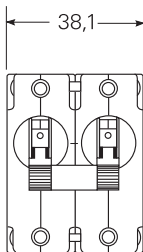
S0389-A



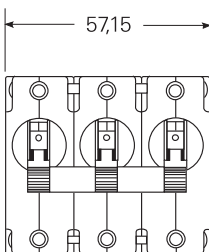
S0390-A



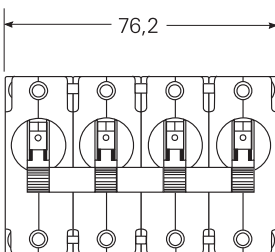
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S0391-A

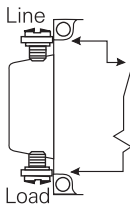


S0392-A

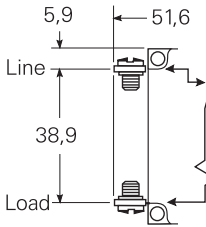


S0393-A

VDE models  
with screw terminals

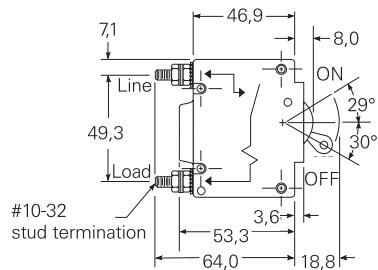


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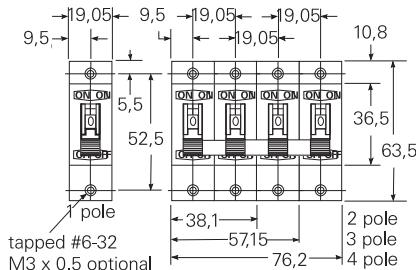


S0396-A

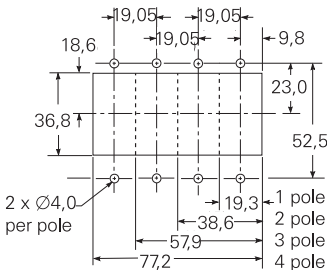
### W9 series



S0397-A



S0398-A



S0399-A

## Magnetic Hydraulic Circuit Breaker W6 / W9

### Product key W6 series

Product key W6 series

-

X

2

-

Type

W #6-32 mounting threads

M M3 x 0.5 mounting thread

Number of poles

67 1 pole

68 2 pole

69 3 pole

70 4 pole

Circuit function

X Series trip

Actuator (per pole)

1 black toggle

2 white toggle

Terminals

Q 6.35mm Quick Connect (DIN 46244) max. 25A for VDE

S #8-32 screw

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, 2, 3, 5, 7, 10, 15, 20, 30, 40, 50

Approvals

V VDE

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 series trip	250Vac	standard	2 A	5-1393252-7
W67-X2Q12-3		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			standard	15 A	8-1393252-2
W68-X2Q12-10	2 pole series trip	250Vac	standard	10 A	2-1393253-9
W68-X2Q12-15		415/240Vac		15 A	3-1393253-2
W68-X2Q12-30			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 series trip		standard	5 A	9-1393253-3
W69-X2Q12-10				10 A	8-1393253-3
W69-X2Q110-20			AC high inrush	20 A	8-1393253-1

# Magnetic Hydraulic Circuit Breaker W6 / W9

## Product key W9 series

Type	<b>W #6-32 mounting threads</b>	<b>M M3 x 0.5 mounting thread</b>
Number of poles	<b>91</b> 1 pole	<b>92</b> 2 pole
	<b>93</b> 3 pole	<b>94</b> 4 pole
Circuit function	<b>X</b> Series trip	
Actuator (per pole)	<b>1</b> black toggle	
Max voltage	<b>1</b> 250Vac, 415/240Vac	<b>5</b> 65 Vdc
	<b>7</b> 250Vac or 65Vdc (only with delay curve 34)	
Time delay curve	<b>0</b> instantaneous <b>2</b> standard delay <b>3</b> short delay <b>34</b> combination AC/DC standard delay	
	<b>10</b> AC high inrush (motor start) <b>12</b> AC high inrush version #2 <b>13</b> AC high inrush version #3	
Amp Rating	<b>0.2, 0.5, 1, 3, 5, 10, 15, 20, 25, 30, 40, 50</b>	
Approvals	<b>V</b> 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