

# GS/DURAPULSE Accessories – Braking Resistor Overview for GS2, GS3, GS4 AC Drives

## Overview

Braking resistors are used to increase the control torque of the AC drive, for frequently repeated ON-OFF cycles of the AC drive, or for decelerating a load with large inertia.



**FOR GS3 DURAPULSE DRIVE MODELS 20 HP AND ABOVE, A DYNAMIC BRAKING UNIT MUST BE USED IN CONJUNCTION WITH THE BRAKING RESISTOR, AS SHOWN IN THE DURAPULSE AC DRIVE BRAKING UNITS TABLE.**



**GS-25P0-BR**



**GS-27P5-BR**

For additional information, please refer to the dynamic braking manual, GS-DB\_UMP.



**GS-2020-BR-ENC**

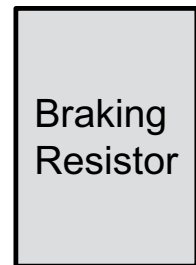


**GS-2020-BR-ENC without Cover**



**GS2 braking resistor connection;**

**Refer to user Dynamic Braking user manual GS-DB\_UMP for DURAPULSE resistor connection information.**



# GS/DURAPULSE Drives Accessories – Braking Resistor Specifications for GS2, GS3, GS4 AC Drives

Braking Resistor Specifications				
Part Number	Price	Power (W)	Resistance ( $\Omega$ )	Type
GS-20P5-BR	\$42.50	80	200	open
GS-21P0-BR	\$58.00	80	200	
GS-22P0-BR	\$65.00	300	100	
GS-23P0-BR	\$76.00	300	70	
GS-25P0-BR	\$75.00	400	40	
GS-27P5-BR	\$71.00	500	30	
GS-2010-BR-ENC	\$229.00	1000	20	enclosed
GS-2015-BR-ENC	\$397.00	2400	13.6	
GS-2020-BR-ENC	\$439.00	3000	10	
GS-2025-BR-ENC	\$538.00	4800	8	
GS-2030-BR-ENC	\$529.00	4800	6.8	
GS-2040-BR-ENC	\$439.00	3000	10	
GS-2050-BR-ENC	\$538.00	4800	8	open
GS-41P0-BR	\$42.50	80	750	
GS-42P0-BR	\$64.00	300	400	
GS-43P0-BR	\$64.00	300	250	
GS-45P0-BR	\$64.00	400	150	
GS-47P5-BR	\$95.00	500	100	
GS-4010-BR	\$139.00	1000	75	enclosed
GS-4015-BR-ENC	\$229.00	1000	50	
GS-4020-BR-ENC	\$283.00	1500	40	
GS-4025-BR-ENC	\$678.00	4800	32	
GS-4030-BR-ENC	\$678.00	4800	27.2	
GS-4040-BR-ENC	\$679.00	6000	20	
GS-4050-BR-ENC	\$797.00	9600	16	open
GS-4060-BR-ENC	\$797.00	9600	13.6	
GS-4075-BR-ENC	\$678.00	6000	20	
GS-4100-BR-ENC	\$797.00	9600	13.6	
GS-BR-080W200	\$13.00	80	200	
GS-BR-080W750	\$13.00	80	750	
GS-BR-200W091	\$25.00	200	91	
GS-BR-200W360	\$25.00	200	360	
GS-BR-300W070	\$30.00	300	70	
GS-BR-300W250	\$28.00	300	250	
GS-BR-400W040	\$35.00	400	40	
GS-BR-400W150	\$34.00	400	150	
GS-BR-1K0W4P3	\$79.00	1000	4.3	
GS-BR-1K0W5P1	\$79.00	1000	5.1	
GS-BR-1K0W016	\$79.00	1000	16	
GS-BR-1K0W020	\$79.00	1000	20	
GS-BR-1K0W075	\$79.00	1000	75	
GS-BR-1K2W3P9	\$87.00	1200	3.9	
GS-BR-1K2W015	\$87.00	1200	15	
GS-BR-1K5W3P3	\$102.00	1500	3.3	
GS-BR-1K5W012	\$102.00	1500	12	
GS-BR-1K5W013	\$102.00	1500	13	
GS-BR-1K5W043	\$102.00	1500	43	

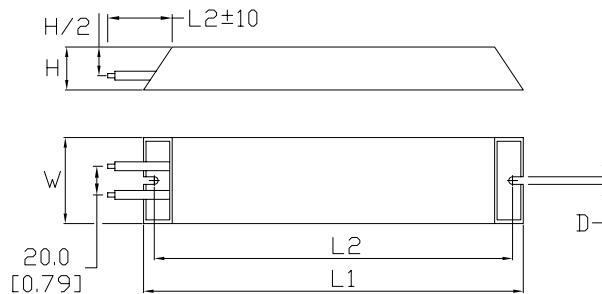
# GS/DURAPULSE Drives Accessories – Braking Resistor Dimensions for GS3 & GS4 DURAPULSE AC Drives

## Braking Resistor Dimensions ( Dimensions = mm [in] )

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

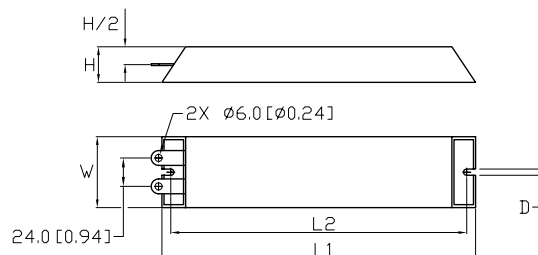
Braking Resistor Dimension Drawing Index							
Resistor	Drawing #	Resistor	Drawing #	Resistor	Drawing #	Resistor	Drawing #
GS-20P5-BR	1	GS-41P0-BR	1	GS-BR-080W200	10	GS-BR-1K0W4P3	11
GS-21P0-BR	1	GS-42P0-BR	1	GS-BR-080W750	10	GS-BR-1K0W5P1	11
GS-22P0-BR	1	GS-43P0-BR	1	GS-BR-200W091	10	GS-BR-1K0W016	11
GS-23P0-BR	1	GS-45P0-BR	1	GS-BR-200W360	10	GS-BR-1K0W020	11
GS-25P0-BR	1	GS-47P5-BR	2	GS-BR-300W070	10	GS-BR-1K0W075	11
GS-27P5-BR	2	GS-4010-BR	3	GS-BR-300W250	10	GS-BR-1K2W3P9	11
GS-2010-BR-ENC	4	GS-4015-BR-ENC	4	GS-BR-400W040	10	GS-BR-1K2W015	11
GS-2015-BR-ENC	5	GS-4020-BR-ENC	7	GS-BR-400W150	10	GS-BR-1K5W3P3	11
GS-2020-BR-ENC	5	GS-4025-BR-ENC	8			GS-BR-1K5W012	11
GS-2025-BR-ENC	6	GS-4030-BR-ENC	8			GS-BR-1K5W013	11
GS-2030-BR-ENC	6	GS-4040-BR-ENC	8			GS-BR-1K5W043	11
GS-2040-BR-ENC	5	GS-4050-BR-ENC	9				
GS-2050-BR-ENC	6	GS-4060-BR-ENC	9				
		GS-4075-BR-ENC	8				
		GS-4100-BR-ENC	9				

### #1) GS-20P5-BR, GS-21P0-BR, GS-22P0-BR, GS-23P0-BR, GS-25P0-BR, GS-41P0-BR, GS-42P0-BR, GS-43P0-BR, GS-45P0-BR



Resistor #	L1	L2	H	D	W
<b>GS-20P5-BR</b>	140 [5.51]	125 [4.92]	20 [0.79]	5.3 [0.21]	40 [1.57]
<b>GS-21P0-BR</b>			30 [1.18]		60 [2.36]
<b>GS-22P0-BR</b>	215 [8.46]	200 [7.87]	20 [0.79]	5.3 [0.21]	40 [1.57]
<b>GS-23P0-BR</b>					30 [1.18]
<b>GS-25P0-BR</b>	265 [10.43]	250 [9.84]	20 [0.79]	5.3 [0.21]	40 [1.57]
<b>GS-41P0-BR</b>			30 [1.18]		60 [2.36]
<b>GS-42P0-BR</b>	215 [8.46]	200 [7.87]	20 [0.79]	5.3 [0.21]	40 [1.57]
<b>GS-43P0-BR</b>					30 [1.18]
<b>GS-45P0-BR</b>	265 [10.43]	250 [9.84]	20 [0.79]	5.3 [0.21]	40 [1.57]

### #2) GS-27P5-BR, GS-47P5-BR



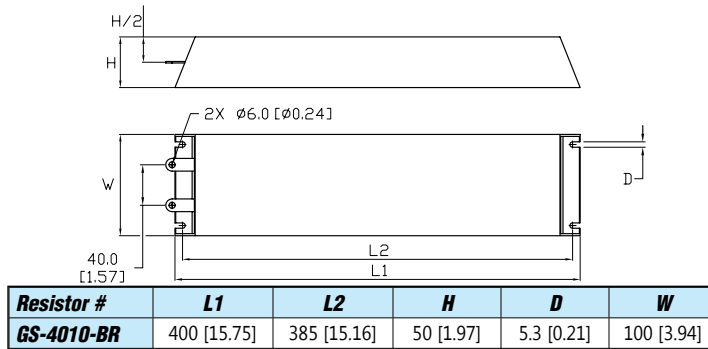
Resistor #	L1	L2	H	D	W
<b>GS-27P5-BR</b>	335 [13.19]	320 [12.60]	30 [1.18]	5.3 [0.21]	60 [2.36]
<b>GS-47P5-BR</b>					

# GS/DURAPULSE Drives Accessories – Braking Resistor Dimensions for GS3 & GS4 DURAPULSE AC Drives

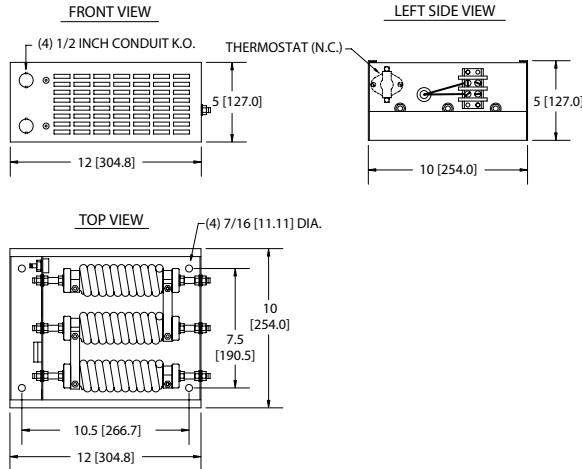
## Braking Resistor Dimensions ( Dimensions = mm [in] )

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

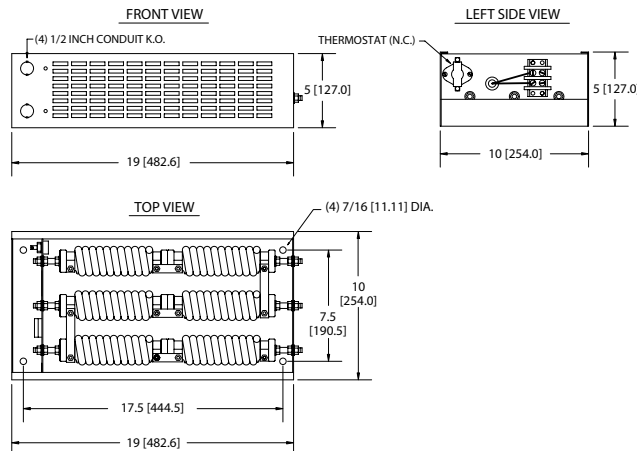
### #3) GS-4010-BR



### #4) GS-2010-BR-ENC, GS-4015-BR-ENC



### #5) GS-2015-BR-ENC, GS-2020-BR-ENC, GS-2040-BR-ENC

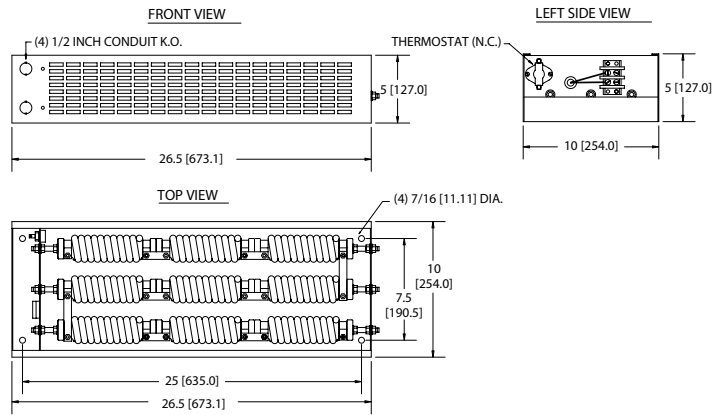


# GS/DURAPULSE Drives Accessories – Braking Resistor Dimensions for GS3 & GS4 DURAPULSE AC Drives

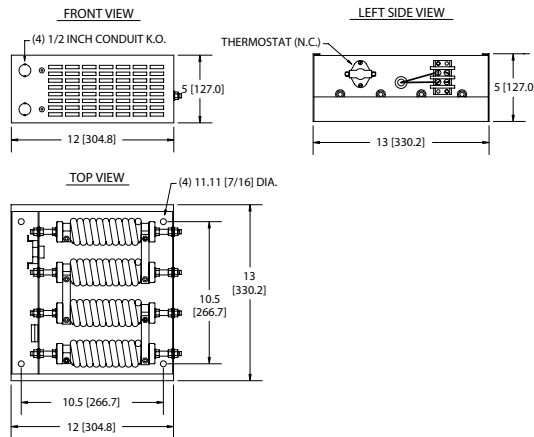
## Braking Resistor Dimensions ( Dimensions = mm [in] )

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

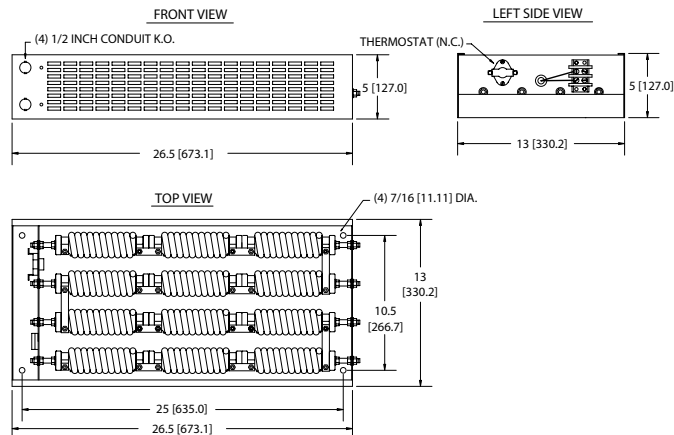
### #6) GS-2025-BR-ENC, GS-2030-BR-ENC, GS-2050-BR-ENC



### #7) GS-4020-BR-ENC



### #8) GS-4025-BR-ENC, GS-4030-BR-ENC, GS-4040-BR-ENC, GS-4075-BR-ENC

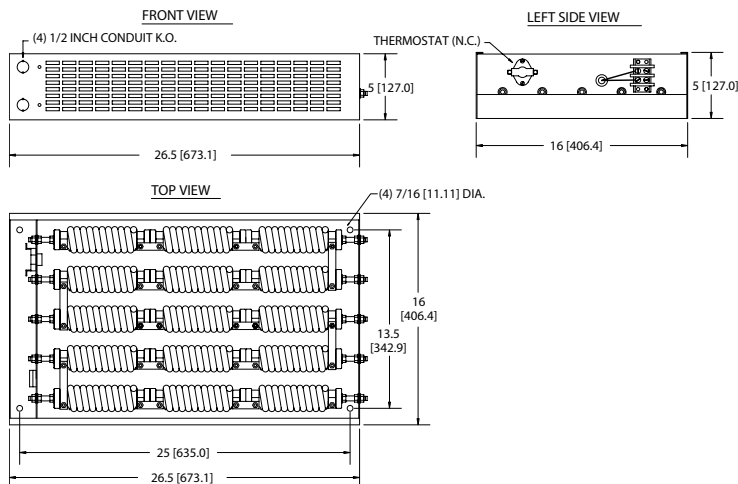


# GS/DURAPULSE Drives Accessories – Braking Resistor Dimensions for GS3 & GS4 DURAPULSE AC Drives

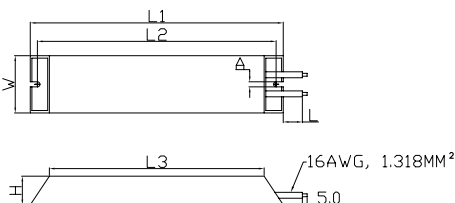
## Braking Resistor Dimensions ( Dimensions = mm [in] )

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### #9) GS-4050-BR-ENC, GS-4060-BR-ENC, GS-4100-BR-ENC

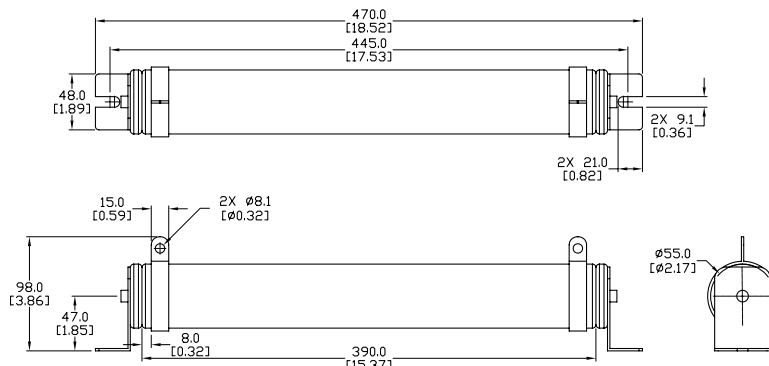


### #10) GS-BR-080W200, GS-BR-080W750, GS-BR-200W091, GS-BR-200W360, GS-BR-300W070, GS-BR-300W250, GS-BR-400W040, GS-BR-400W150



Resistor #	L1	L2	L3	W	H	A	L
GS-BR-080W200	140 [5.46]	125 [4.92]	100 [3.94]	40.0 [1.57]	20.0 [0.79]	5.3 [0.21]	200 [7.87]
GS-BR-080W750	165 [6.50]	150 [5.91]	125 [4.92]				
GS-BR-200W091	215 [8.46]	200 [7.87]	175 [6.89]	60.0 [2.36]	30.0 [1.18]	5.3 [0.21]	200 [7.87]
GS-BR-200W360							
GS-BR-300W070	265.34 [10.43]	250 [9.84]	225 [8.86]	60.0 [2.36]	30.0 [1.18]	5.3 [0.21]	200 [7.87]
GS-BR-300W250							
GS-BR-400W040	265.34 [10.43]	250 [9.84]	225 [8.86]	60.0 [2.36]	30.0 [1.18]	5.3 [0.21]	200 [7.87]
GS-BR-400W150							

### #11) GS-BR-1K0W4P3, GS-BR-1K0W5P1, GS-BR-1K0W016, GS-BR-1K0W020, GS-BR-1K0W075, GS-BR-1K2W3P9, GS-BR-1K2W015, GS-BR-1K5W3P3, GS-BR-1K5W012, GS-BR-1K5W013, GS-BR-1K5W043



# GS/DURAPULSE Drives Accessories – Braking Unit Basic Wiring for GS3 & GS4 DURAPULSE AC Drives

## Basic Dynamic Braking Wiring Diagram for GS3 & GS4 DURAPULSE AC Drives



**NOTE:** GS2 SERIES AC DRIVES CAN CONNECT DIRECTLY TO BRAKING RESISTORS, AND DO NOT REQUIRE DYNAMIC BRAKING UNITS FOR BRAKING.



**NOTE:** SMALLER-CAPACITY DURAPULSE AC DRIVES CAN CONNECT DIRECTLY TO BRAKING RESISTORS, AND DO NOT REQUIRE DYNAMIC BRAKING UNITS FOR BRAKING. OTHER APPLICATIONS REQUIRE MULTIPLE RESISTORS AND/OR MULTIPLE DYNAMIC BRAKING UNITS. REFER TO “DYNAMIC BRAKING COMPONENT SELECTION” TO DETERMINE WHICH BRAKING COMPONENTS ARE REQUIRED FOR YOUR APPLICATION(S), AND TO THE DURAPULSE DRIVES DYNAMIC BRAKING USER MANUAL FOR COMPLETE WIRING DIAGRAMS.

