

NEW!

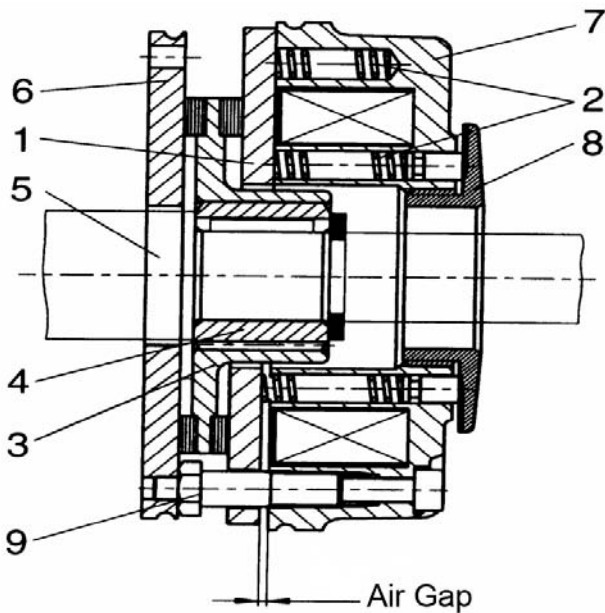
Armature Actuated Brakes

Direct-Acting, DC brakes in torque ratings from 4 Nm to 400 Nm (3 lb-ft to 300 lb-ft) of torque. Dings Armature Actuated Brakes are spring-applied (fail-safe), single-disc brakes.

Operation

During the braking procedure, the rotor (3), which can be shifted axially on the hub (4), is pressed against the counter friction face (6) via the armature plate (1), by means of the compression springs (2). When the brake is applied, an air gap is present between the armature plate and the stator (7). The brake is released electromagnetically. The stator's coil is energized with DC voltage in order to release the brake. The resulting magnetic flux works against the spring force to draw the armature plate to the stator. This releases the rotor from the spring force and allows it to rotate freely.

Available with a torque adjustment ring (8) to reduce the braking torque (Model D58).



- 1 = Armature plate
- 2 = Springs
- 3 = Rotor
- 4 = Hub
- 5 = Shaft
- 6 = Flange
- 7 = Stator
- 8 = Torque Adjust nut (D58 only)
- 9 = Adjustment tube

Sizes

Model D58 Shown

Model Number		Torque rating Lb-ft. (Nm)	Mounting bolt circle (mm)
Torque Adjust	Without Torque Adjust		
D58-072	D57-072	3 (4)	72
D58-090	D57-090	6 (8)	90
D58-112	D57-112	12 (16)	112
D58-132	D57-132	25 (32)	132
D58-145	D57-145	45 (60)	145
D58-170	D57-170	60 (80)	170
D58-196		110 (150)	196
D58-230		190 (260)	230
D58-278		300 (400)	278

Armature Actuated Brakes

Features & Options

RoHS Compliant- meets the requirements of the Restriction of Hazardous Substances Directive

MODEL D57

Simple, low-cost design

- Spring-set, electrically released (fail-safe)
- Fixed air gap for easy installation
- Compact size- high torque in a small package
- Standard DC voltages 24 volt and 205 volt
- Six sizes ranging from 3 lb-ft to 60 lb-ft (4 Nm to 80 Nm)
- Class F Coil Insulation
- Universal Mounting



Options

Manual Release
Noise-reduced Design
Metric or English Bore Sizes
AC Rectifiers

Contact factory for C face mounting options

www.dingsbrakes.com

MODEL D58

Torque adjustable

- Spring-set, electrically released (fail-safe)
- Fixed air gap for easy installation
- Compact size- high torque in a small package
- Standard DC voltages 24, 96, 103, 170, 180 190, and 205 volt
- Nine sizes ranging from 3lb-ft to 300 lb-ft (4 Nm to 400 Nm)
- Class F Coil Insulation
- Universal Mounting



Options

Torque Adjust
Manual Release
Noise-reduced Design
Metric or English Bore Sizes
Proving Switch (Electrical Release Indicator)
Wear Indicator
Manual Release Monitoring
Terminal Box
Band Seal, Shaft Seal, Sealing Cap
Cover
Air Gap Shim for improved brake set time
AC Rectifiers
C Face Mounting

Specifications

Model Number	Torque lb.ft. (Nm)	Inertia kg cm ²	Approximate weight lbs. (kg)	Max. speed RPM	Power in watts*	Max. Allowable Thermal Energy per Stop HP-Sec/stop	Max. # of stops per hour (at max. thermal energy)	Reaction Time in milliseconds**	
								Set	Release
D57-072	3 (4)	.13	2.4 (1.1)	12400	20	4.0	79	48	37
D57-090	6 (8)	.45	4.2 (1.9)	10100	25	10.0	50	95	42
D57-112	12 (16)	2.00	8.4 (3.8)	8300	30	16.0	40	95	100
D57-132	25 (32)	4.50	12.4 (5.7)	6700	40	32.1	30	98	135
D57-145	45 (60)	6.30	19 (8.6)	6000	50	40.2	28	107	240
D57-170	60 (80)	15.00	26.5 (12.0)	5300	55	48.2	27	121	275
D58-072	3 (4)	.15	2.4 (1.1)	12400	20	4.0	79	28	45
D58-090	6 (8)	.61	4.2 (1.9)	10100	25	10.0	50	31	57
D58-112	12 (16)	2.00	8.4 (3.8)	8300	30	16.0	40	47	76
D58-132	25 (32)	4.50	11.7 (5.3)	6700	40	32.1	30	53	115
D58-145	45 (60)	6.30	16.5 (7.5)	6000	50	40.2	28	42	210
D58-170	60 (80)	15.00	24.0 (10.9)	5300	55	48.2	27	57	220
D58-196	110 (150)	29.00	35.7 (16.2)	4400	85	80.4	20	78	270
D58-230	190 (260)	73.00	55.8 (25.3)	3700	100	107.2	19	165	340
D58-278	300 (400)	200.00	84.2 (38.2)	3000	110	160.8	15	230	390

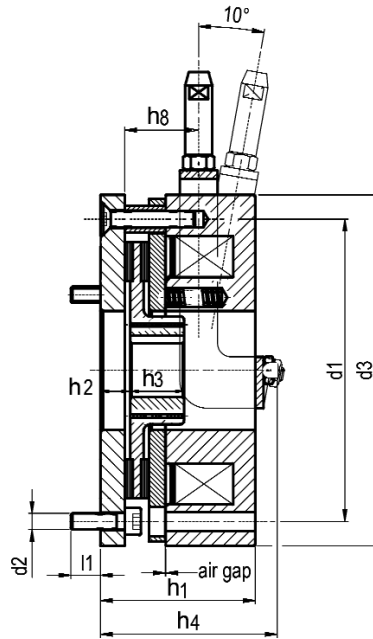
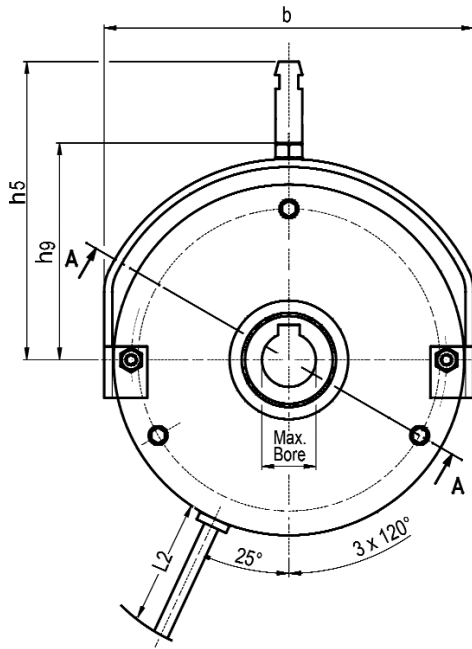
*Coil power at 20° C in Watts, up to +10%, depending on supply voltage

**Reaction times apply to DC switching at rated air gap (see dimensions page). Refer to page 36 for explanation of Reaction Times.

Armature Actuated Brakes

Model D57

RoHS Compliant- meets the requirements of the Restriction of Hazardous Substances Directive



Dimensions in inches- Dimensions in millimeters

Basic Model Number	Torque lb.ft. (Nm)	b	Maximum bore size	d1	d2	d3	H1	H2	H3	H4	H5	H8	H9	l1*	L2 Lead length	Air Gap ± .004 ± 0.1	Weight lbs. (kg)
D57-072	3 (4)	3.54 90	9/16"; 15 mm	2.84 72	3xM4	3.31 84	1.63 41.3	.30 7.5	.71 18	1.78 45.3	4.21 107	.62 15.8	2.09 53	.24 6	15.75 400	.008 0.2	2.4 (1.1)
D57-090	6 (8)	4.25 108	3/4"; 20 mm	3.54 90	3xM5	4.02 102	1.96 49.8	.34 8.5	.79 20	2.16 54.8	4.65 118	.64 16.3	2.52 64	.35 9	15.75 400	.008 0.2	4.2 (1.9)
D57-112	12 (16)	5.39 137	3/4"; 20 mm	4.41 112	3xM6	5.12 130	2.22 56.4	.39 10	.79 20	2.42 61.4	5.59 142	1.08 27.4	3.11 79	.47 12	15.75 400	.008 0.2	8.4 (3.8)
D57-132	25 (32)	6.18 157	1-1/8"; 25 mm	5.20 132	3xM6	5.91 150	2.46 62.4	.39 10	.98 25	2.65 67.4	6.38 162	1.16 29.4	3.50 89	.47 12	15.75 400	.012 0.3	12.4 (5.7)
D57-145	45 (60)	6.85 174	1-1/8"; 30 mm	5.71 145	3xM8	6.50 165	3.04 77.3	.51 13	1.18 30	3.28 83.3	7.91 201	1.30 33	3.94 100	.55 14	15.75 400	.012 0.3	19 (8.6)
D57-170	60 (80)	7.99 203	1-3/8"; 38 mm	6.69 170	3xM8	7.48 190	3.29 83.5	.52 13.3	1.18 30	3.52 89.5	9.84 250	1.48 37.5	4.57 116	.55 14	23.62 600	.012 0.3	26.5 (12.0)

*Please contact the factory if a different mounting surface made of steel is used.

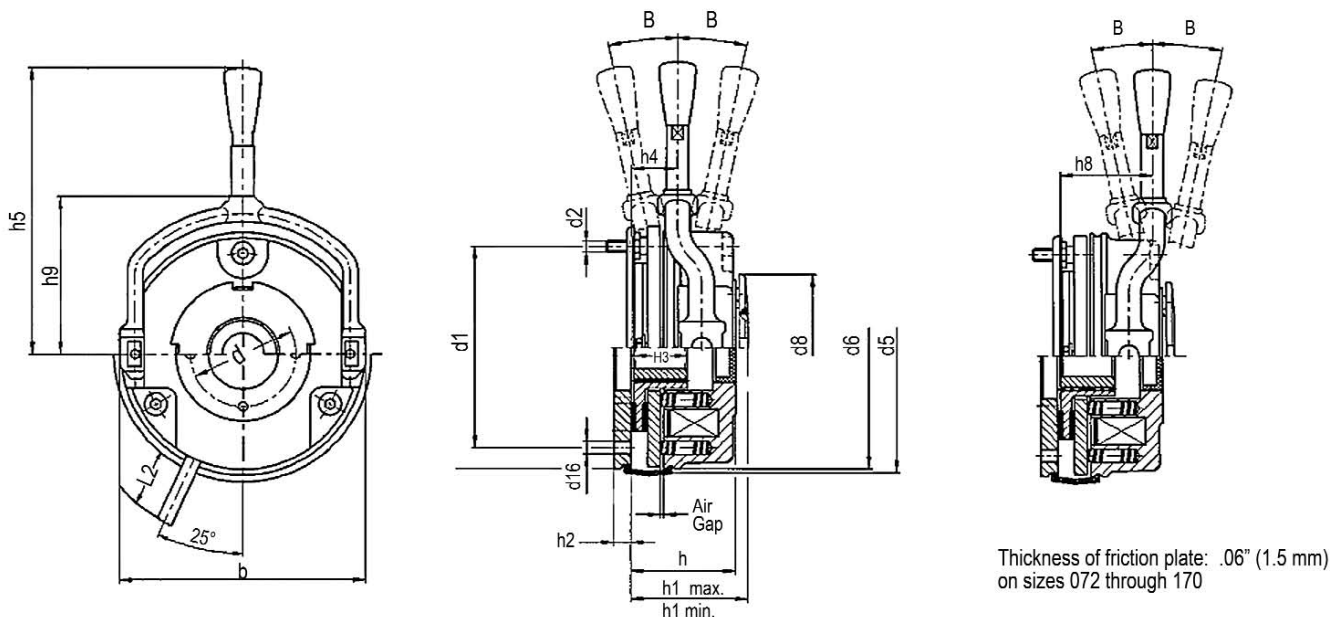
List Prices

Basic Model Number	Torque lb.ft. (Nm)	List Price	
		Basic Brake	Brake with Manual Release
D57-072	3 (4)	\$270	\$315
D57-090	6 (8)	\$310	\$365
D57-112	12 (16)	\$425	\$500
D57-132	25 (32)	\$500	\$580
D57-145	45 (60)	\$760	\$855
D57-170	60 (80)	\$950	\$1,060

Armature Actuated Brakes

Model D58

RoHS Compliant- meets the requirements of the Restriction of Hazardous Substances Directive



Dimensions in inches- Dimensions in millimeters

Basic Model Number	Torque lb.ft. (Nm)	b	Max. bore size	d	B	d1	d2	d8	d5	d6	d16	h	h1 Min.	h1 Max.	h2	h4	h5 std	h5 max	h8	h9
D58-072	3 (4)	3.47 88	9/16"; 15 mm	1.48 37.7	12°	2.84 72	3xM4	2.05 52	3.58 91	3.43 87	3x4.5	1.43 36.3	1.55 39.3	1.71 43.3	.24 6	.62 15.8	4.21 107	-	1.29 32.8	2.22 56.3
D58-090	6 (8)	4.19 106.5	3/4"; 20 mm	1.93 49	10°	3.54 90	3xM5	2.36 60	4.29 109	4.13 105	3x5.5	1.69 42.8	1.84 46.8	2.00 50.8	.28 7	.64 16.3	4.57 116	-	1.63 41.3	2.56 65
D58-112	12 (16)	5.20 132	3/4"; 20 mm	2.13 54	9°	4.41 112	3xM6	2.68 68	5.28 134	5.12 130	3x6.6	1.91 48.4	2.06 52.4	2.20 55.9	.35 9	1.08 27.4	5.20 132	-	1.67 42.4	3.06 77.8
D58-132	25 (32)	5.98 152	1-1/8"; 25 mm	2.52 64	10°	5.20 132	3xM6	3.23 82	6.10 155	5.91 150	3x6.6	2.16 54.9	2.32 58.9	2.66 67.5	.35 9	1.16 29.4	6.34 161	-	1.87 47.4	3.48 88.5
D58-145	45 (60)	6.65 169	1-1/8"; 30 mm	2.95 75	9°	5.71 145	3xM8	3.62 92	6.65 169	6.50 165	3x9	2.61 66.3	2.81 71.3	3.04 77.3	.43 11	1.30 33	7.68 195	-	1.97 50	4.00 101.5
D58-170	60 (80)	7.66 194.5	1-3/8"; 38 mm*	3.35 85	10°	6.69 170	3xM8	4.02 102	7.68 195	7.48 190	3x9	2.85 72.5	3.05 77.5	3.37 85.5	.43 11	1.48 37.5	9.45 240	-	2.11 53.5	4.57 116
D58-196	110 (150)	8.75 222	1 5/8"; 45 mm	3.74 95	9°	7.72 196	6xM8	4.57 116	8.74 222	8.54 217	4x9**	3.27 83.1	3.51 89.1	3.82 97.1	.43 11	1.62 41.1	10.98 279	15.51 394	2.33 59.1	5.06 128.5
D58-230	190 (260)	10.16 258	1-7/8"; 50 mm	4.33 110	10°	9.06 230	6xM10	5.32 135	10.20 259	10.00 254	4x11**	3.84 97.6	4.12 104.6	4.51 114.6	.43 11	1.87 47.6	12.56 319	16.38 416	2.70 68.6	5.89 149.5
D58-278	300 (400)	11.89 302	2-3/8"; 70 mm	5.51 140	10°	10.95 278	6xM10	6.50 165	12.09 307	11.89 302	6x11	4.20 106.7	4.56 115.7	5.03 127.7	.49 12.5	2.27 57.7	17.52 445	19.72 501	3.49 88.7	7.07 179.5

*Bore diameter 38, DIN 6885/3 9 keyway

**Thread in the mounting surface is offset 30° in relation to the center axle of the manual release lever

Basic Model Number	Torque lb.ft. (Nm)	L2 Lead Length	Air Gap ± .004 ± 0.1	Approx. Weight lbs. (kg)
D58-072	3 (4)	15.75 400	.008 0.2	2.4 (1.1)
D58-090	6 (8)	15.75 400	.008 0.2	4.2 (1.9)
D58-112	12 (16)	15.75 400	.008 0.2	8.4 (3.8)
D58-132	25 (32)	15.75 400	.012 0.3	11.7 (5.3)
D58-145	45 (60)	15.75 400	.012 0.3	16.5 (7.5)
D58-170	60 (80)	23.62 600	.012 0.3	24.0 (10.9)
D58-196	110 (150)	23.62 600	.016 0.4	35.7 (16.2)
D58-230	190 (260)	23.62 600	.016 0.4	55.8 (25.3)
D58-278	300 (400)	23.62 600	.020 0.5	84.2 (38.2)

List Prices (includes torque adjust)

Basic Model Number	Torque lb.ft. (Nm)	List Price	
		Basic Brake	Brake with Manual Release
D58-072	3 (4)	\$310	\$355
D58-090	6 (8)	\$340	\$395
D58-112	12 (16)	\$475	\$550
D58-132	25 (32)	\$565	\$645
D58-145	45 (60)	\$840	\$935
D58-170	60 (80)	\$1,080	\$1,190
D58-196	110 (150)	\$2,000	\$2,175
D58-230	190 (260)	\$2,600	\$2,845
D58-278	300 (400)	\$5,700	\$6,000

Armature Actuated Brakes

Ordering Information

Model Number Example

D57 - **112** - **M 20** - **MR** ← Options
 ↑ ↑ ↑ ↑
 Brake Brake Coil Hub
 Model Size Voltage Bore Size

Coil Voltages

Standard DC Voltages Model D57:	
Suffix	Voltage
B	24
D	42 (sizes 145 & 170)
M	205
Standard DC Voltages Model D58:	
B	24
E	96
G	103
J	170
K	180
L	190
M	205

See pages 37 and 38 for AC rectifiers

Bore Sizes

Suffix	Size	Availability by Model/ Size															
		D57						D58									
Metric bores		72	90	112	132	145	170	72	90	112	132	145	170	196	230	278	
10	10							X									
11	11	X	X					X	X	X							
12	12	X	X					X	X	X							
14	14	X	X					X	X	X							
15	15	X	X	X				X	X	X							
20	20		X	X	X	X			X	X	X	X					
25	25				X	X	X				X	X	X				
30	30					X	X					X	X	X			
35	35						X						X	X	X		
38*	38*						X						X				
40	40													X	X	X	
45	45													X	X	X	
50	50														X	X	
55	55															X	
60	60															X	
65	65															X	
70	70															X	
English Bores																	
0C	1/2	X	X					X	X	X							
0X	9/16	X	X					X	X	X							
0D	5/8		X	X					X	X							
0E	3/4		X	X					X	X							
0F	7/8				X	X					X	X					
0G	1				X	X					X	X					
0H	1 1/8				X	X	X				X	X	X				
0J	1 1/4						X						X	X			
0K	1 3/8						X						X	X			
0M	1 5/8													X	X	X	
0N	1 7/8														X	X	
0O	2 1/8															X	
0P	2 3/8															X	

Available Options:	Suffix
Model D57	
Manual Release	MR
Noise Reduced Brake	Contact Factory
Model D58	
Boot Seal	B
Terminal Box	C
Sealing Plug	E
Long Life (ceramic rotor)	L
Manual Release	MR
Manual Release Indicator <i>(direction of release away from motor)</i>	MA
Manual Release Indicator <i>(direction of release towards motor)</i>	MT
Noise Reduced Armature	NA
Noise Reduced Rotor	NR
Shaft Seal	T
Air Gap Shim	W
Wear Indicator (sizes 132 & up)	WI
Electrical Release Indicator (sizes 132 & up)	XS
Thin Plate (Friction Plate)	Y
Thick Plate (Mounting Flange)	Z
Brake cover	Contact Factory
C Face Mounting	Contact Factory
Without Torque Adjust	Contact Factory

For non-standard bore sizes, add:
 \$75 for sizes 072 - 112
 \$125 for sizes 132 - 170
 \$190 for sizes 196 - 278

Refer to following page for option descriptions and pricing.

Armature Actuated Brakes

Options

Suffix	Option	Description	Availability by Model	Availability by Size	List Price Adder			
					Size	Adder	Size	Adder
B	Boot Seal	The seal is inserted into the groove on the stator. If no suitable groove is available on the counter friction face, we recommend the use of a flange or a friction plate.	D58	All	072-090	\$14	170	\$60
					112	\$20	196	\$75
					132	\$25	230	\$95
					145	\$40	278	\$110
C	Terminal Box	The terminal box is mounted onto the spring-applied brake using a fixing bracket and screws.	D58	132, 145, 170, 196, 230, 278	\$300			
E	Sealing Plug	A cover in the torque adjust	D58	All	072 - 112	\$14	196	\$48
					132 - 170	\$34	230	\$62
							278	\$75
L	Long life rotor	Service life at least twice as long (wear-resistant coating)	D58	All	072 - 112	\$20	196	\$68
					132 - 170	\$34	230	\$135
							278	\$270
MR	Manual Release	The manual release is used to release the brake by hand and can be factory installed or retrofitted.	D57, D58	All	072	\$45	170	\$110
					090	\$55	196	\$175
					112	\$75	230	\$245
					132	\$80	278	\$300
					145	\$95		
MA	Manual Release Indicator, direction of release away from motor	The manual release operation is detected via a microswitch, whose switching signal must be combined with the motor control, so that the motor can be prevented from starting (thus also preventing any possible injury to the operator).	D58	All	072 - 132 = \$180 145 & 170 = \$400 196 - 278 = \$450			
MT	Manual Release Indicator, direction of release towards motor		D58	072, 090, 112	072 through 112 = \$180			
NA	Noise-Reduced Armature	O-rings are installed between the magnet housing and the armature plate as shock absorbers.	D58 (contact factory for noise-reduced D57)	All	072	\$55	170	\$200
					090	\$65	196	\$235
					112	\$75	230	\$285
					132	\$92	278	\$345
					145	\$135		
NR	Noise-Reduced Rotor	Rattling noises, which can occur in the rotor/hub connection with changing loads, for example, are reduced by using a rotor with a plastic sleeve.	D58 (contact factory for noise-reduced D57)	All	072	\$45	132	\$100
					090	\$60	145-278	\$135
					112	\$80		
T	Shaft Seal	A shaft seal in the torque adjust for through-shaft applications	D58	All	072 - 132	\$40		
					145 - 230	\$68		
					278	\$80		
W	Air Gap Shim	A shim is placed between the stator and the armature plate to reduce brake set time	D58	All	072 - 132	\$25		
					145 - 196	\$60		
					230 - 278	\$155		
WI	Wear Indicator	The microswitch can be set such that a signal is output before the wear reserve is reached.	D58	132, 145, 170, 196, 230, 278	132 - 170	\$400		
					196 - 278	\$450		
XS	Electric Release Indicator	The microswitch is used to monitor the air gap. When the armature plate makes contact with the stator, the motor contactor is controlled via the microswitch. The motor can only start if the brake is released.	D58	132, 145, 170, 196, 230, 278	132 - 170	\$400		
					196 - 278	\$450		
Y	Thin Plate (Friction Plate)	If a plain machined counter face is available, but cannot be used as a friction surface (e.g., in the case of aluminum), we recommend the use of a friction plate, which can also be combined with a seal.	D58	Standard on sizes 072 through 170 ; N/A on other sizes	Standard on size 072 through 170			
Z	Thick Plate (Mounting Flange)	If no suitable counter friction face is available, a flange on which the seal can be installed can be used.	D58	Standard on sizes 196, 230, and 278 Optional on sizes 072 through 170	072	\$68	132	\$100
					090	\$70	145	\$150
					112	\$95	170	\$170

NOTE: For Brake Covers, C Face Adaptors, or Brake without Torque Adjust, contact factory

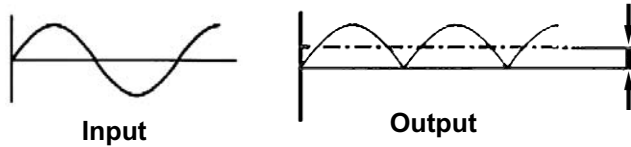
Armature Actuated Brakes

AC Rectifiers

Full- and half-wave rectifiers for use with D57 and D58 brakes. Rectifiers are UL listed, file number E301010.

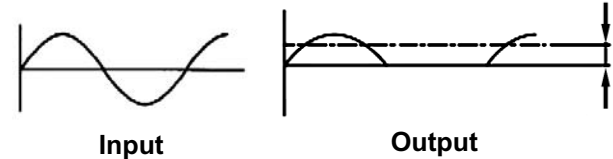
Full-Wave Bridge Rectifiers

Both positive and negative half-cycles of the AC signal are rectified to produce a DC current output. $V_{DC} = .90 V_{AC}$.



Half-Wave Rectifiers

Only alternate half-cycles of the AC signal are rectified to produce a DC current output. $V_{DC} = .45 V_{AC}$.



AC input voltage	Rectifier part number	Type	DC Coil voltage	Mounting	Max. Supply Voltage	List Price
42	D-630-H-V	Half Wave	20	Vertical	555 V	\$125.00
	D-630-H-H			Horizontal		
48	D-630-H-V	Half Wave	20	Vertical	555 V	\$125.00
	D-630-H-H			Horizontal		
110	D-630-B-V	Bridge	103	Vertical	270 V	\$88.00
	D-630-B-H			Horizontal		
230	D-630-H-V	Half Wave	103	Vertical	555 V	\$125.00
	D-630-H-H			Horizontal		
240	D-630-B-V	Bridge	205	Vertical	270 V	\$88.00
	D-630-B-H			Horizontal		
380	D-630-H-V	Half Wave	180	Vertical	555 V	\$125.00
	D-630-H-H			Horizontal		
400	D-630-H-V	Half Wave	180	Vertical	555 V	\$125.00
	D-630-H-H			Horizontal		
440	D-630-H-V	Half Wave	205	Vertical	555 V	\$125.00
	D-630-H-H			Horizontal		
460	D-630-H-V	Half Wave	205	Vertical	555 V	\$125.00
	D-630-H-H			Horizontal		
480	D-634-H-V*	Half Wave	215	Vertical	555 V	\$125.00
	D-634-H-H*			Horizontal		
500	D-634-H-V*	Half Wave	225	Vertical	555 V	\$125.00
	D-634-H-H*			Horizontal		
555	D-634-H-V*	Half Wave	250	Vertical	555 V	\$125.00
	D-634-H-H*			Horizontal		

Max. DC current at 60°C 0.75 A ; Max. ambient temperature 80°C

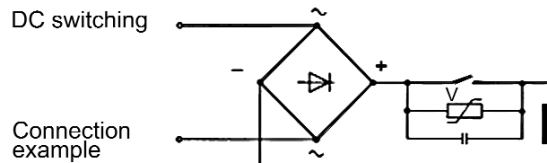
The rectifiers are protected against overvoltage by varistors in the input and output.

* Spark suppressor without capacitor. For optimum interference suppression, we recommend the use of spark suppressor D-198-004.

Universal spark suppressor

The universal spark suppressor limits the inductive voltages which appear when switching off clutches and brakes on the DC side. These inductive voltages can otherwise damage coils and switches. Four types of universal spark suppressors are available for the following voltage ranges:

Part Number	Coil Voltage V	Max. Coil Power	List Price
D-198-001	24V - 50V	110 W	\$57.00
D-198-002	50V - 120V	110 W	\$76.00
D-198-003	120V - 200V	110 W	\$76.00
D-198-004	200V - 250V	110 W	\$76.00

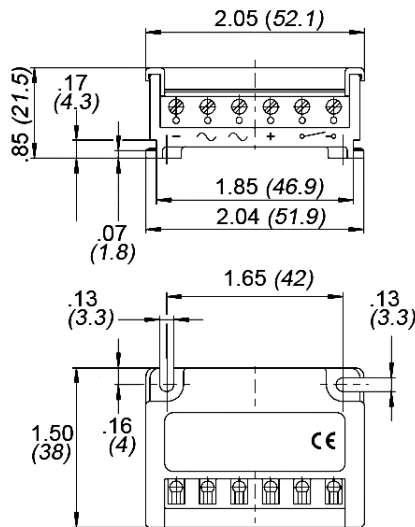


Armature Actuated Brakes

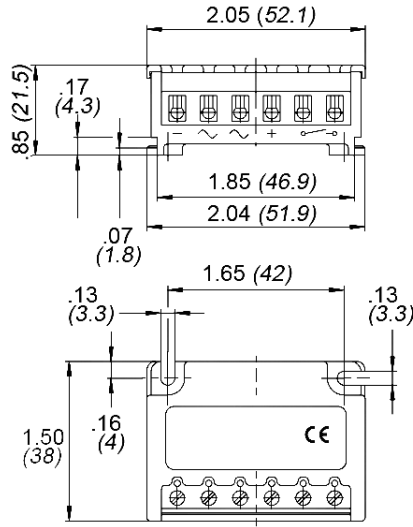
AC Rectifiers

Dimensions in inches (*Dimensions in Millimeters*)

Models D-630-H-V and D-630-B-V
D-634-H-V

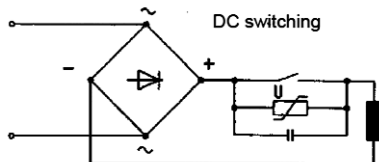
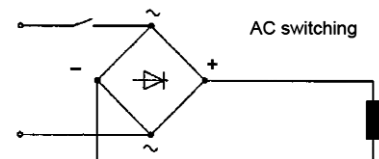
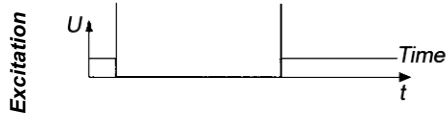
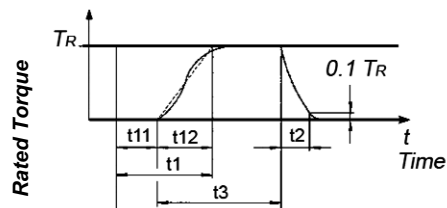


Models D-630-H-H and D-630-B-H
D634-H-H



Operating Times

The listed operating times apply to DC switching with rated air gap and a warm coil. The times are mean values which may vary depending on the method of rectification and the air gap. The engagement time t_1 is approximately 10 times higher for AC switching than for DC switching.



- t_{11} = Delay time
- t_{12} = Rise time of braking torque
- t_1 = Engagement time
- t_2 = Disengagement time
- t_3 = Slipping time

Model Number	Torque lb.ft. (Nm)	Reaction Time in milliseconds**			
		t_{11}	t_{12}	t_1	t_2
D57-072	3 (4)	29	19	48	37
D57-090	6 (8)	60	35	95	42
D57-112	12 (16)	35	60	95	100
D57-132	25 (32)	45	53	98	135
D57-145	45 (60)	50	57	107	240
D57-170	60 (80)	71	50	121	275
D58-072	3 (4)	15	13	28	45
D58-090	6 (8)	15	16	31	57
D58-112	12 (16)	28	19	47	76
D58-132	25 (32)	28	25	53	115
D58-145	45 (60)	17	25	42	210
D58-170	60 (80)	27	30	57	220
D58-196	110 (150)	33	45	78	270
D58-230	190 (260)	65	100	165	340
D58-278	300 (400)	110	120	230	390

**Reaction times apply to DC switching at rated air gap (see dimensions page)