

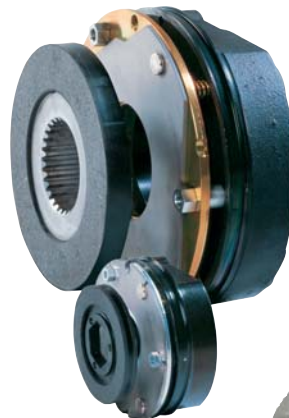
# MOTOR BRAKES

## POWER OFF DC BRAKES



### PERFORMANCE RANGE

- Dynamic cycling stopping action : standard
- Static holding capability : standard
- Torque capacity [lb-in] : 3.7 to 590
- Torque capacity [Nm] : 5 to 800
- Speed range : 0 - 3600 rpm
- Fits on NORD motor frame sizes : 63S to 250M
- Wired by factory to engage when power is off : standard
- Brake voltage : Direct Current [DC]
- Standard brake with 230/460 volt power : full wave rectifier with 205 VDC coil
- Standard brake with 575 volt power : half wave rectifier with 250 VDC coil
- Standard brake with 400 volt power : full wave rectifier with 180 VDC coil
- AC to DC power conversion : full wave rectifier mounted in terminal box



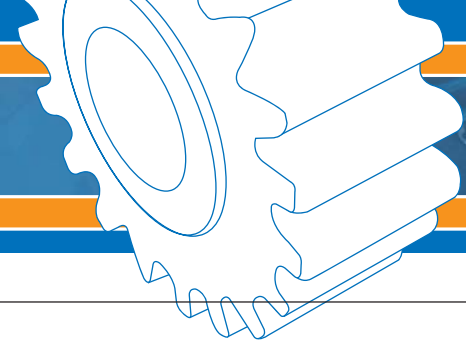
Rectifier Type	Rectifier Part Number	Power Conversion Style	Designed to Accept [VAC]	Input Voltage Range		Exterior Color	Current Rating at 45C [A]
				Min. [VAC]	Max. [VAC]		
<b>Standard Rectifiers</b>							
GVE20L	19141000	full-wave	230	115 - 10%	254 + 10%	black	2.0
GHE40L	19141010	half-wave	460	230 - 10%	460 + 10%	yellow	2.0
GHE50L	19141020	half-wave	575	500 - 10%	575 + 10%	grey	2.0
<b>Optional Hybrid Rectifiers (GPE/GPU)</b>							
GPU20L	19140090	full wave/half wave*	230	210 - 5%	260 + 5%	black	0.7
GPU40L	19140170	full wave/half wave*	500	380 - 5%	500 + 5%	black	0.7

\* Full wave at first, then switches to half wave

Rectifier Performance		
Input Voltage +/- 10% [AC]	Voltage to Brake Coil Rectifier Type	
	Full Wave [DC]	Half Wave [DC]
115	105	-
200	180	-
230	205	105
400	-	180
460	-	205
500	-	225
575	-	250

Note: 24 VDC Brake Coil does not use rectifier

Brake Size	Torque Capacity		Weight [lb]	Inertia [lb-ft <sup>2</sup> ]	Work Until Re-Adjust [J x 10 <sup>1</sup> ']	Reaction Times			
	[Nm]	[lb-ft]				AC Switching By Turning Motor Power On/Off		Switching By Opening/Closing Rectifier DC Circuit	
						Release [ms]	Engage [ms]	Release [ms]	Engage [ms]
BRE 5	5	3.7	4.4	0.36	5	35	70	35	30
BRE 10	10	7.4	6.6	1.07	12	45	95	45	45
BRE 20	20	15	9.9	4.08	20	60	140	60	30
BRE 40	40	30	15.4	10.7	35	80	175	80	75
BRE 60	60	44	22.1	20.4	60	120	210	120	90
BRE 100	100	74	35.3	28.9	125	160	280	160	120
BRE 150	150	111	49	67.6	200	200	350	200	150
BRE 250	250	184	71	173	340	220	500	220	180
BRE 400	400	295	110	134	420	300	550	300	200
BRE 800	800	59	176	575	420	400	650	400	250



### DESIGN FEATURES

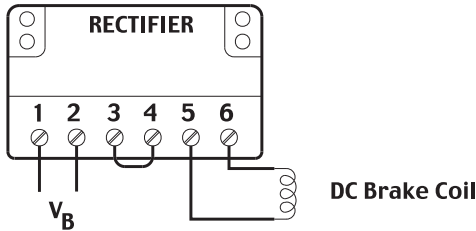
- Standard low wear non-asbestos friction plate
- Spring forced torque engagement from 7 or 8 springs
- Reduction of torque by ring nut adjustment sizes 5 to 40 Nm adjust down to 73%
- Reduction of torque down to 50% by removing springs
- Standard full wave AC to DC voltage rectifier
- Standard IP55 brake enclosure protection
- Hand release lever available in 4 positions
- Standard splined drive hub
- Standard adjustable air gap
- Automatically adjusting air gap : 20 Nm only
- Standard Installation available in various mounting positions



### OPTIONS

- Manual hand release lever (HL)
- Stainless steel wear disc plus end bell corrosion (RG) protection (NSD+) : up to 400 Nm
- Dust protection with rubber boot : up to 400 Nm (SR)
- Lockable hand release lever : up to 100 Nm (FHL)
- Oversize brake : all sizes
- Undersize brake : from 10 Nm and larger
- Faster brake release enhancement
- Faster brake engagement (stopping) enhancement
- Current sensing relay for brake control (IR) : Eliminates extra switches and wiring
- Maximum input current 25 amps black/white wires
- Maximum DC brake current 1 amp - red/blue wires
- Ambient temperature range: -40° to 75°C (-40° to 167°F)
- Enclosure rating IP65
- Brake heating circuit (BSH)
- Micro switch wear indicator (MIK)
- IP 66 enclosure : on sizes 5, 10 and 20 brakes only
- Drip cover (RD) : up to 250M motor frame
- Wind protected double drip cover (RDD): up to 250M motor frame

## Normal Brake Reaction Time (AC-Switching)



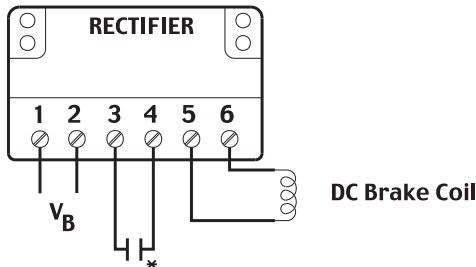
$V_B$  - Brake Voltage

Terminals 1 & 2 - AC brake power input  
 Terminals 3 & 4 - Jumper connected  
 Terminals 5 & 6 - Brake coil, DC voltage output

### COMBINATIONS

- 24 VDC brake coil without rectifier
- 105 VDC brake coil with full wave rectifier for 115 VAC input
- 105 VDC brake coil with half wave rectifier for 230 VAC input
- 180 VDC brake coil with full wave rectifier for 200 VAC input
- 180 VDC brake coil with half wave rectifier for 400 VAC input
- 205 VDC brake coil with half wave rectifier for 460 VAC input
- 225 VDC brake coil with half wave rectifier for 500 VAC input
- 250 VDC brake coil with half wave rectifier for 575 VAC input

## Rapid Brake Reaction Time (DC-Switching)



\*The normally-open contact (NO) is not supplied by NORD. It must close at the same time power is supplied to the brake.



DRIVESYSTEMS

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