

Current Sensing Brake Relay (IR) Installation and Maintenance Instructions

BIM 1092

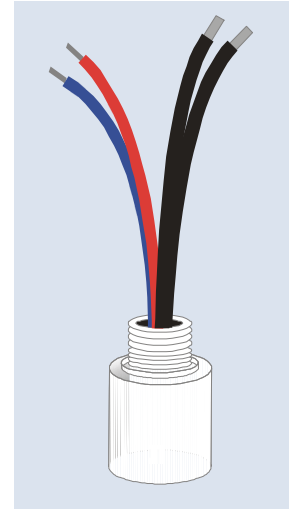
USA

CDN

Retain These Safety Instructions For Future Use

Motor Current Brake Relay (IR) – Brake Option

The current sensing relay, normally called the IR option, is used to achieve improved brake engagement or stopping time without the use of external control equipment or additional wiring. The relay is mounted directly onto the motor terminal box. The relay switch leads are connected to terminals 3 and 4 of the rectifier. When the power to the motor is shut off, the IR relay opens the brake circuit on the DC side; this allows the brake to demagnetize quickly.



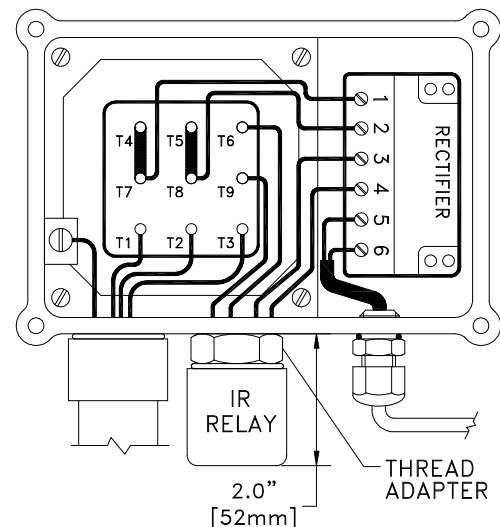
Requirements

- Motor must be powered across-the-line (not inverter powered or controlled with a soft-start)
- The brake power must be provided from the motor's terminal block (not separately powered)
- Motor must be a single-speed (not possible with two-speed motors)

Ratings

Part Number	18556010	18556020
Motor Frame Sizes	63S – 180M*	180L – 225M
AC input current – black/white wires	25 A _{AC} 75A _{ac} – 0.2 s	50 A _{AC} 75A _{AC} – 0.2s
DC brake current – red and blue wires	2.0 A _{DC}	2.0 A _{DC}
Additional brake setting delay	18 ms	18 ms
Ambient temperature	- 40 to 75 °C - 40 to 167 °F	- 40 to 75 °C - 40 to 167 °F
Enclosure with o-ring mounted to a terminal box	IP65	IP65

*For the 180MX/4, 230/460V motor use part number 18556020



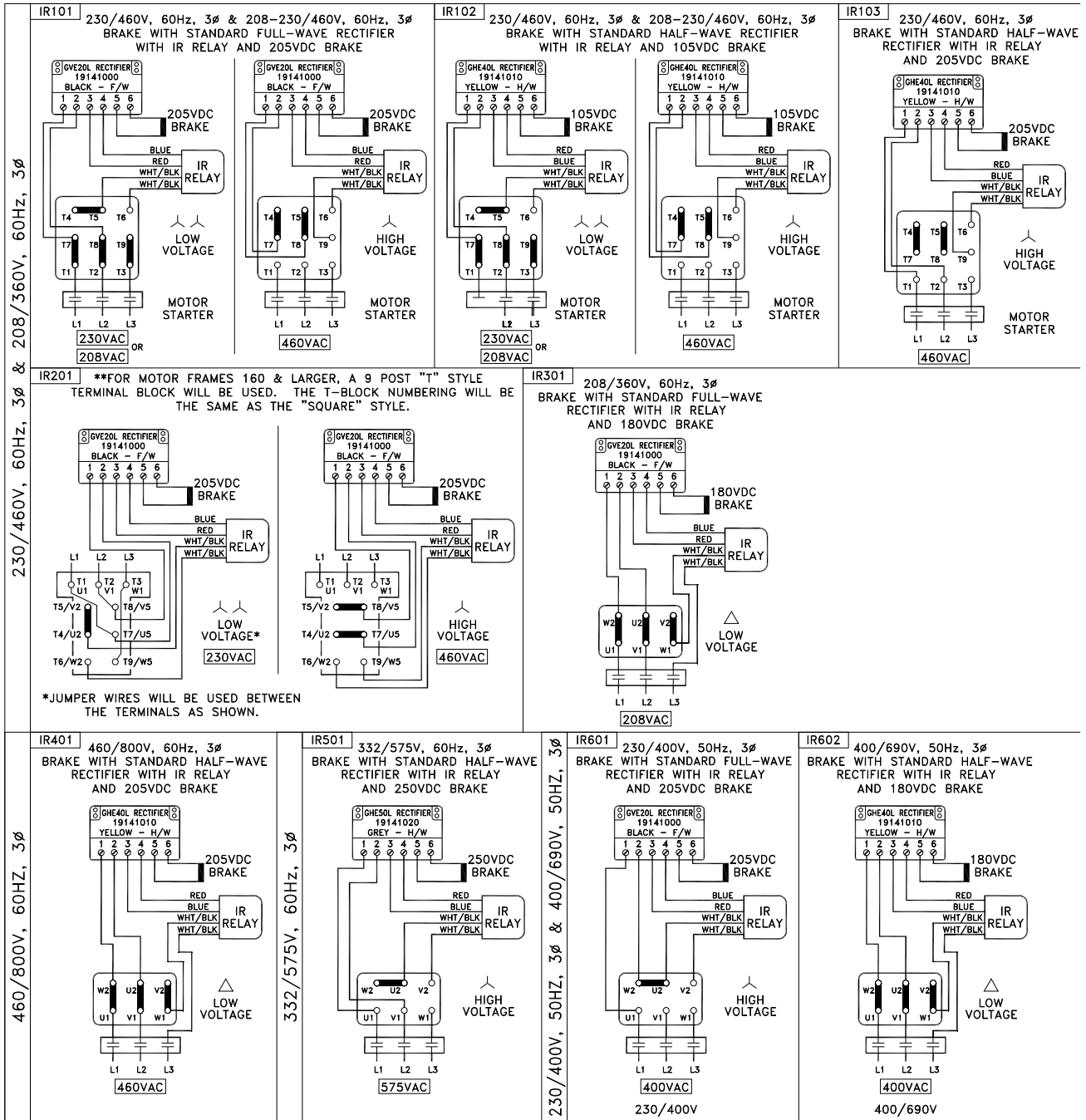
Connection Notes

Rectifier			IR-Relay Wires To Rectifier	
Type	Part Number	Design	Red	Blue
GVE20L	19141000	Full-Wave	3	4
GHE40L	19141010	Half-Wave	4	3
GHE50L	19141020	Half Wave	4	3
GPE20L	19140230	Push-Hybrid	4	3
GPE40L	19140240	Push-Hybrid	4	3

Conduit Box Thread Adapter

Thread	Motor Frame	Part number
M20	63-71	18526201
M25	80-90	18526250
M32	100-112	18522320 & 18526201
M32	132	18522320 & 18526201
M40	160-180	18526250 & 18522400

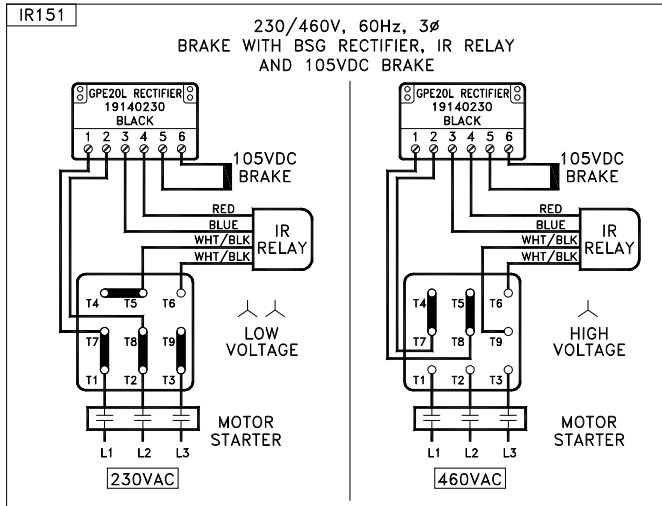
Connection Diagrams



Connection Diagrams
- GPE Rectifier with IR Relay used for External DC-Switching

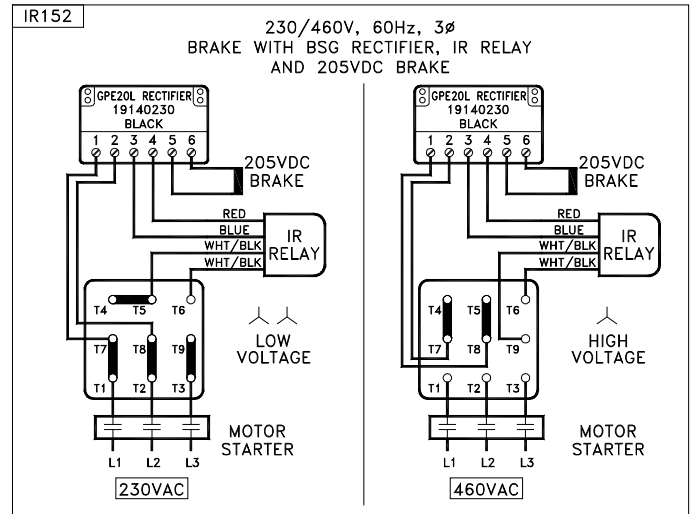
Type 2 – Operation

Start – Fast release (Overexcitation)
 Stop – Fast stop (DC-Switching)
 GPE type – External DC-Switching
 Terminal 3&4 – Contact or IR-relay



Type 3 – Operation

Start – Standard release
 Stop – Very fast stop (Reduced power hold DC-Switching)
 GPE type – External DC-Switching
 Terminal 3&4 – Contact or IR-relay



Additional Reference: BIM1095 - GP Brake Rectifier Installation and Maintenance Instructions

NOTES

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