

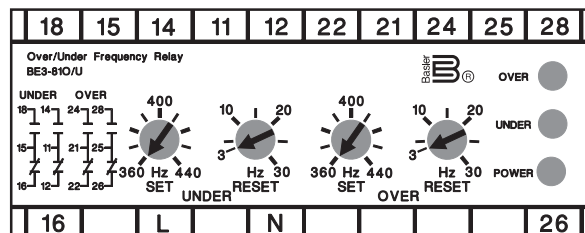
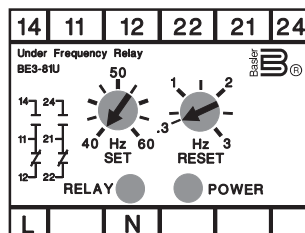
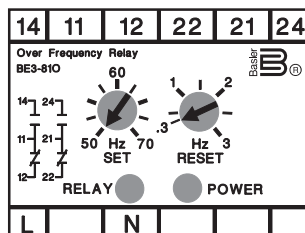


## BE3-81O, BE3-81U, BE3-81O/U FREQUENCY RELAYS

### APPLICATION:

BE3 frequency relays provide monitoring, and if the frequency deviates outside the user-adjustable preset limits, the relay will operate. Typically used in protecting generators against over or under speed, this is achieved as speed is proportional to frequency. Other uses include monitoring utility mains power supplies and computer supplies. The user is provided with adjustment of both the trip point of frequency being monitored and the differential. BE3 frequency relays energize when the input signal exceeds the trip point, i.e. relay energizes on trip, unless option of de-energize on trip is requested. A red LED indicates the state of the relay, while a green LED indicates the condition of the power supply. The frequency relay monitors its own power supply so no auxiliary power is necessary.

### CASE CONNECTIONS:



### GENERAL SPECIFICATIONS:

#### Input

Nominal voltage: 120V, 240V, 380V, 480V  
 Other nominal voltages: Contact the factory  
 Frequency: 50Hz, 60Hz, or 400Hz  
 Burden: Less than 2.5VA per phase  
 Overload: 1.5 times nominal continuous,  
 2 times nominal for 3 seconds

All units self-powered.

#### Set point

Range: 50Hz nominal Adjustable 40 to 60Hz  
 60Hz nominal Adjustable 50 to 70Hz  
 400Hz nominal Adjustable 360 to 440Hz  
 Differential: 50 & 60Hz Adjustable 0.3 to 3Hz  
 400Hz Adjustable 3 to 30Hz  
 Repeatability: Better than 0.5% of full span  
 Operating time: 200 ms, typical

#### Weight and Case Size

Single unit: 0.88 lbs. (0.4kg)  
 2.17 in. wide (55mm)  
 Combined unit: 1.32 lbs. (0.6kg)  
 3.93 in. wide (100mm)



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## PERFORMANCE SPECIFICATIONS:

### Environmental

Operating temperature: 0°C to 60°C (32°F to 140°F)  
 Functional temperature: -25°C to 70°C (-13°F to 158°F)  
 Storage temperature: -40°C to 70°C (-40°F to 158°F)  
 Temperature coefficient: 0.03% per °C (200ppm/°C)  
 Relative humidity: 95% noncondensing

### Agency Approvals

cULus listed to UL 508 and CSA C22.2 No. 14  
 CE compliant  
 Gost R certified #POCC US.ME05.B03391

### Insulation

Test voltage: 4kV RMS 50Hz 1min between  
 Input, Case, and Auxiliary  
 Impulse test: EMC 5kV transient, complies  
 with IEC 801, EN 55020  
 HF interference test: EHF 2.5kV 1MHz, complies  
 with IEC 255-4  
 Protection class: II, complies with IEC 348

### Applied Standards

General: IEC 144, BS 5420,  
 VDE/VDI 0435, IEC 947,  
 EN 60947  
 Safety: BS EN 61010, DIN 57411,  
 VDE 0411, ANSI C37  
 Surge withstand: IEC 801, EN 55020,  
 ANSI C37-90a  
 RFI: RFI degree N, complies with  
 VDE 0875

### Relay Output

Relay type: D.P.D.T.  
 AC Rating: 250V, 5A, nonresistive, 1200VA  
 DC Rating: 125V, 1A, resistive, 120 watts  
 Mechanical Life: 5 million operations

### Enclosure

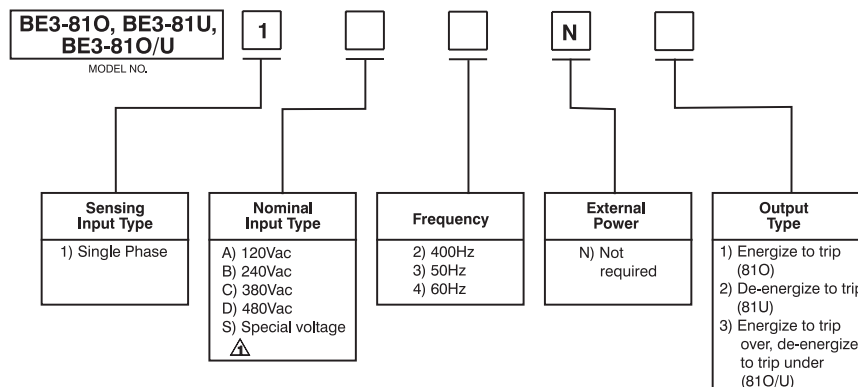
Mounting: Snap onto DIN rail 1.38in. x  
 .29in. (35mmx7.5mm),  
 complies with DIN-EN 50022,  
 BS 5584  
 Any position  
 Enclosure code: Case IP 50, terminals IP 30  
 Material: Complies with UL 94 VO

## HOW TO ORDER:

Designate the Model Number followed by the complete Style Number.

Complete the Style Number by selecting one feature from each column of the Style Identification Chart and entering its designation, letter or number, in the appropriate square. Note: The description of a complete relay must include both Model Number and Style Number.

## STYLE IDENTIFICATION CHART:



⚠ For other voltage applications, contact the factory.

