

## Voltage Protection Relay - 1 Phase

### Extract from the Enemalta Network Code:

"DPC4.2.2 - Enemalta shall operate the distribution system so as to ensure that the voltage at the supply terminals, as defined in MSA EN 50160:2001, 'Voltage characteristics of electricity supplied by public distribution systems', complies with that standard. In line with these standards the low voltage range tolerance shall be 230V +/- 10% (phaseneutral)."

|              |  |
|--------------|--|
| Brand:       | Selec  |
| Product No.: | 600VPR-1-170/290   |
| Description: | Voltage Monitoring Relay with preset limits for Under and Over Voltage |



- **Overvoltage Setting**  
set @ 7.5%  
i.e. cut out at around 258V
- **Trip Delay Time**
- **Undervoltage Setting**  
set @ 15.0%  
i.e. cut out at around 204V

**1** - Device front face showing Overvoltage, Time Delay and undervoltage Settings

Local Settings on Device:

The device is designed to work on a system voltage of 240V ac. It has over and under voltage limit settings as follows:

| <b>Nominal Voltage of 240V AC</b> |                                |                        |                                |
|-----------------------------------|--------------------------------|------------------------|--------------------------------|
| Overvoltage % Setting             | Cut-Out if voltage goes above: | Undervoltage % Setting | Cut-Out if voltage goes below: |
| 2.5                               | 246                            | 2.5                    | 234                            |
| 5.0                               | 252                            | 5.0                    | 228                            |
| <b>7.5</b>                        | <b>258</b>                     | 7.5                    | 222                            |
| 10.0                              | 264                            | 10.0                   | 216                            |
| 12.5                              | 270                            | 12.5                   | 210                            |
| 15.0                              | 276                            | <b>15.0</b>            | <b>204</b>                     |
| 17.5                              | 282                            | 17.5                   | 198                            |
| 20.0                              | 288                            | 20.0                   | 192                            |
| 22.5                              | 294                            | 22.5                   | 186                            |
| 25.0                              | 300                            | 25.0                   | 180                            |

Clearly, in order for the device to operate as close as possible to Enemalta's low voltage range tolerance of 230V +/- 10%, the device has to be set as follows:

|                           |
|---------------------------|
| Over Voltage Knob: 7.5%   |
| Under Voltage Knob: 15.0% |
| Trip Delay Time: 0.4s     |