Application - Three-Phase Motors

SubMonitor Three-Phase Protection

Applications

SubMonitor is designed to protect 3-phase pumps/motors with service factor amp ratings (SFA) from 5 to 350 A (approx. 2.2-150kW). Current, voltage, and motor temperature are monitored using all three legs and allows the user to set up the SubMonitor quickly and easily.

Protects Against

- Under/Overload
- Under/Overvoltage
- Current Unbalance
- Overheated Motor
  (if equipped with Subtrol Heat Sensor)
- False Start (Chattering)
- Phase Reversal

Power Factor Correction

In some installations, power supply limitations make it necessary or desirable to increase the power factor of a submersible motor. The table lists the capacitive KVAR required to increase the power factor of large Franklin three-phase submersible motors to the approximate values shown at maximum input loading.

Capacitors must be connected on the line side of the overload relay, or overload protection will be lost.

TABLE 19 KVAR Required 50 Hz

Motor		KVAR Required for P.F. of:		
KW	HP	0.90	0.95	1.00
3.7	5	.8	1.5	3.1
5.5	7 1/2	1.0	2.1	4.5
7.5	10	.8	2.2	5.3
11	15	1.1	3.3	7.8
15	20	1.8	4.3	9.6
18.5	25	3	6.5	14
22	30	3	7.5	17
30	40	5	10	22
37	50	5	12	27
45	60	5	13	30
55	75	5	15	37
75	100	4	18	46
90	125	18	35	72
110	150	18	38	82
130	175	13	37	88
150	200	10	37	95

Values listed are total required (not per phase).