



Minilec offers a range of products for protection of water pumps used by farmers. These are primarily to monitor incoming 3-phase supply for Single Phasing, Reverse Phasing and unbalanced supply and stop the pump in case of any fault. Additional features in some models include auto restarting. The products are specifically produced for marketing and use in India only.

MODELS

**VSP2, VSP3,
Autoswitch-2, Autoswitch-4, Autoswitch-5,
Autoswitch-6, F3 PGA1**



FEATURES

- Monitor incoming 3-phase supply
- Models with pre-wired connections
- Easy to fit inside most motor starters
- Switch for Auto-Manual operations
- Switch provision either built-in or external
- Adjustable on time delay
- All protections in auto & manual modes
- Built-in timer for star-delta operation

PROTECTIONS / FUNCTIONS

- Single Phasing
- Reverse Phasing
- Unbalanced supply
- Dry running
- On Delay to avoid immediate re-starting of pumps during auto mode

Ordering Instructions

- ✓ Product Family Name
- ✓ Model Name
- ✓ System Supply Voltage
- ✓ Aux. Supply / Control supply voltage
- ✓ Motor rating (HP / KW)
- ✓ Motor applications

PRODUCTS FOR AGRISector

VSP2



Smallest size of single phasing preventor
Single phasing, reverse phasing, unbalanced supply
Auto reset, 1 NO output contact
Suitable for any HP/kW rating monoblock pumps

VSP3



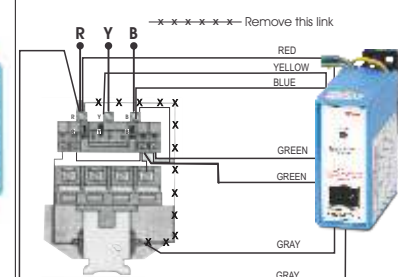
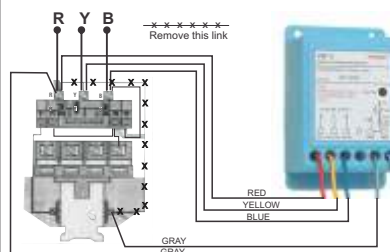
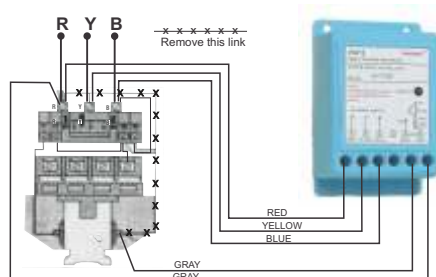
Single phasing, reverse phasing, unbalanced supply
Auto reset, 1 NO output contact
Suitable for any HP/kW rating monoblock pumps
Pre-wired terminals for easy connections

Auto switch - 2



Single phasing, reverse phasing, unbalanced supply
Auto reset, 1 NO output contact
On time delay 1/3/5 Minutes (Fixed) Auto-Manual switch built-in on front. Suitable for any HP/kW rating pumps. Pre-wired terminals for easy connections

Supply Voltage	415 VAC \pm 20%, 50 Hz \pm 3%	415V AC \pm 20%, 50 Hz \pm 3%	200 - 450, 50 Hz \pm 3%
Output Relay Contact	1 NO	1 NO	1 NO
Output Contact Rating	5 Amp, 240 VAC (RESISTIVE)	5 Amp, 240 VAC (RESISTIVE)	5 Amp, 240 VAC (RESISTIVE)
Unbalance Trip Setting	40 V \pm 6 V	50 V \pm 10 VAC	50 V \pm 10 VAC
Trip Time Delay			
For unbalance	3.5 sec. \pm 1.5 sec.	3.5 sec. \pm 1.5 sec.	4 sec \pm 2 sec
Dry Run Setting	N.A.	N.A.	N.A.
On Time Delay	N.A.	N.A.	1 / 3 / 5 min
Star-Delta Changeover Time Delay	N.A.	N.A.	N.A.
Resetting	Auto Reset	Auto Reset	Auto Reset
Auto Switch	N. A.	N. A.	Present
Enclosure	HIP moulded, with Nylon connector strip	HIP moulded	Housing: HIP / Mounting Clamp: Nylon 6
Dimensions (mm)			
Overall (H x W x D)	103 x 66 x 43	103 x 66 x 43	102 X 35 X 81 mm
Mounting	91 x 48	91 x 48	90 mm Centre to Centre
Weight	Panel Mounting	Panel Mounting	Panel Mounting
	260gms	250gms	300gms
Level sensor			
Quantity	—	—	—
Dimensions	—	—	—
Operating Conditions			
Temperature	-5 °C TO + 60 °C	-5 °C TO + 60 °C	-5 °C TO + 60 °C
Humidity	Upto 95% Rh	Upto 95% Rh	Upto 95% Rh



Auto switch - 4



Single phasing, reverse phasing, unbalanced supply
Auto reset, 1 NO output contact
On time delay 1 to 10 Minutes (Adjustable) Auto-Manual switch built-in on front.
Suitable for any HP/kW rating pumps. Pre-wired terminals for easy connections

Auto switch - 5



Single phasing, reverse phasing, unbalanced supply
Auto reset, 1 NO output contact, On time delay 1 to 10 Minutes (Adjustable), Provision for connecting Auto-Manual switch externally, Suitable for any HP/kW rating pumps, Pre-wired terminals for easy connections

Auto switch - 6



Single phasing, reverse phasing, unbalanced supply, Auto reset, 1 NO + 1 NO output contact, On time delay 2 to 3 Minutes (fixed), Star Delta Changeover Timer, Auto-Manual switch built-in on front, Suitable for any HP/kW rating pumps, Pre-wired terminals for easy connections

F3 PGA1



Autoswitch with dry run protection. Auto reset for phase failure faults & manual reset for dry run. Auto/Manual switch. 1 CO output contact. 20 Amps. inbuilt CT, Indications Relay ON Green, Dry run Red, Pre-wired terminals for easy connections

200 - 450, 50 Hz \pm 3%	200 - 450, 50 Hz \pm 3%	200 - 450, 50 Hz \pm 3%	200 - 450, 50 Hz \pm 3%
1 NO	1 NO	1 NO + 1 NO	1 CO
5 Amp, 240 VAC (RESISTIVE)	5 Amp, 240 VAC (RESISTIVE)	5 Amp, 240 VAC (RESISTIVE)	5 Amp, 240 VAC (RESISTIVE)
50 V \pm 10 VAC	50 V \pm 10 VAC	50V \pm 10V	50 V \pm 10 V
4 sec \pm 2 sec	4 Sec \pm 2 Sec	3.5 Sec \pm 1.5 Sec	4 Sec \pm 2 Sec
N.A.	N.A.	N.A.	50% (\pm 10%) of set current
1 to 10 min	1 to 10 min	2 to 3 minutes [In auto mode]	1 Min (In Auto mode)
N.A.	N.A.	5 to 7 Sec.	N.A.
Auto Reset	Auto Reset	Auto Reset	Auto for SP/UB/RP & Manual Reset for Dry run
Present	To be connected externally	Present	Present
Housing: HIP / Mounting Clamp: Nylon 6	Housing: HIP / Mounting Clamp: Nylon 6	Housing: HIP / Mounting Clamp: Nylon 6	(D2-03) ABS
102 X 35 X 81 mm	102 X 35 X 81 mm	102 x 35 x 81	76 x 56.5 x 117.5
90 mm Centre to Centre	90 mm Centre to Centre	90 mm Centre to Centre	67 x 46
Panel Mounting	Panel Mounting	Panel Mounting	Flush Mounting
300gms	300gms	300gms (Approx.)	350gms
—	—	—	—
—	—	—	—
-5 °C TO + 60 °C	-5 °C TO + 60 °C	-5 °C TO + 60 °C	-5 °C TO + 60 °C
Upto 95% Rh	Upto 95% Rh	Upto 95% Rh	Upto 95% Rh

