



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, Autoswitch-7**

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

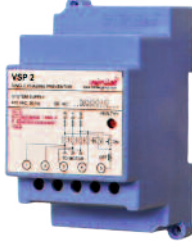


PROTECTIONS / FUNCTIONS

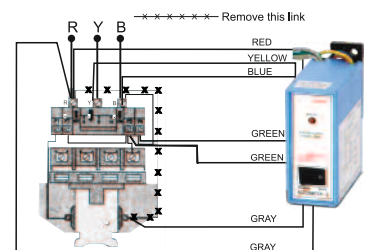
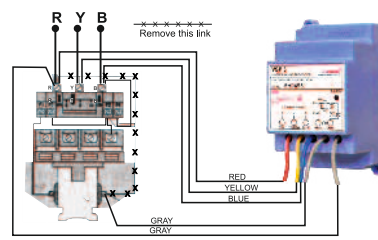
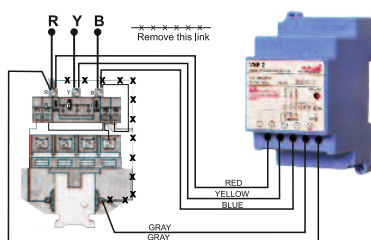
- Single Phasing
- Reverse Phasing
- Unbalanced supply
- Dry running
- On Delay to avoid immediate re-starting of pumps during auto mode

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	VSP3	Auto switch - 2
	 <p>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</p>	 <p>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</p>	 <p>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</p>
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
Dry Run Reset Delay	N. A.	N. A.	N. A.
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
Mounting	Panel Mounting	Panel Mounting	Panel Mounting
Weight	260gms	250gms	300gms
Current Sensor	N. A.	N. A.	N. A.
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 Auto switch - 5 Auto switch - 6 Auto switch - 7



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



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



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



This is voltage operated single phasing preventor used for 3 Button Semi-Automatic Star Delta Starter with ON Delay Timer having fixed time setting with auto / Manual switch.

200 - 450, 50 Hz ± 3%	200 - 450, 50 Hz ± 3%	200 - 450, 50 Hz ± 3%	380/415VAC, +20 %
1 NO	1 NO	1 NO + 1 NO	1 NO + 1NO
5 Amp, 240 VAC (RESISTIVE)	5 Amp, 240 VAC (RESISTIVE)	5 Amp, 240 VAC (RESISTIVE)	5 Amp, 240 VAC (RESISTIVE)
50 V ± 10 VAC	50 V ± 10 VAC	50V ± 10V	50V + 10VAC
4 sec ± 2 sec	4 Sec ± 2 Sec	3.5 Sec ± 1.5 Sec	4 SEC, + 2 SEC
N.A.	N.A.	N.A.	N.A.
1 to 5 min	1 to 10 min	2 to 3 minutes [In auto mode]	1 MINUTE, ± 15 Sec.
N.A.	N.A.	5 to 7 Sec.	7 SEC, ± 2 Sec.
Auto Reset	Auto Reset	Auto Reset	Auto Reset
N. A.	N. A.	N. A.	N. A.
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	Housing: HIP / Mounting Clamp: Nylon 6
102 X 35 X 81 mm	102 X 35 X 81 mm	102 x 35 x 81	102 x 35 x 81
90 mm Centre to Centre	90 mm Centre to Centre	90 mm Centre to Centre	90 mm CENTER TO CENTER
Panel Mounting	Panel Mounting	Panel Mounting	Panel Mounting
300gms	300gms	300gms (Approx.)	300gms (Approx.)
N. A.	N. A.	N. A.	N. A.
-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

