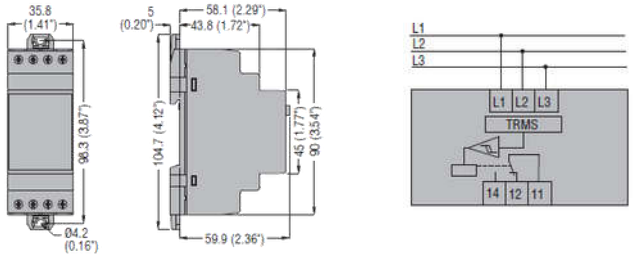
Lovato electric

ENERGY AND AUTOMATION

Order code	Rated voltage to control Ue (phase to phase)	Qty per pkg	Wt
	[V] 50/60Hz	n°	[kg]
Three-phase system, without neutral. Minimum AC voltage. Delayed trip. Phase loss and incorrect phase sequence. Instantaneous trip.			
PMV30 A240	208-240VAC	1	0.130
PMV30 A575	380-575VAC	1	0.130
PMV30 A600	600VAC	1	0.130



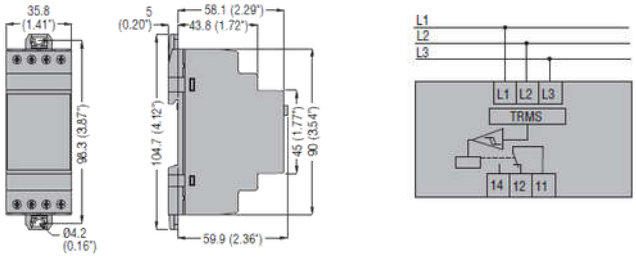
General characteristics

- Voltage monitoring relay, self powered, for minimum voltage, phase loss and incorrect phase sequence
- Configurable rated voltage (Ue):
  - PMV30 A240: 208-220-230-240VAC
  - PMV30 A575: 380-400-415-440-460-480-525-575VAC
- Excellent tripping accuracy
- TRMS measurements (True Root Mean Square)
- Control of phase-to-phase voltages
- Phase loss detection if one of the voltages is <70% rated value
- Phase loss tripping time: 60ms
- 1 relay output with 1 changeover contact (SPDT)
- Modular DIN 43880 housing, 2 module
- IEC protection degree: IP40 on front (only when placed in IP40 enclosure or control board); IP20 at terminals.

ADJUSTMENTS

"V min"	Minimum voltage tripping threshold 80-95% Ue
"Delay"	Tripping time 0.1-20s
"Reset delay"	Resetting time 0.1-20s.

Order code	Rated voltage to control Ue (phase-to-phase)	Qty per pkg	Wt
	[V] 50/60Hz	n°	[kg]
Three-phase system, without neutral. Asymmetry. Delayed trip. Phase loss and incorrect phase sequence. Instantaneous trip.			
PMV40 A240	208-240VAC	1	0.130
PMV40 A575	380-575VAC	1	0.130
PMV40 A600	600VAC	1	0.130



General characteristics

- Voltage monitoring relay, self powered, for asymmetry, phase loss and incorrect phase sequence
- Excellent tripping accuracy
- TRMS measurements (True Root Mean Square)
- Control of phase-to-phase voltages
- Phase loss detection if one of the voltages is <70% rated value
- Phase loss tripping time: 60ms
- 1 relay output with 1 changeover contact (SPDT)
- Modular DIN 43880 housing, 2 module
- IEC protection degree: IP40 on front (only when placed in IP40 enclosure or control board); IP20 at terminals.

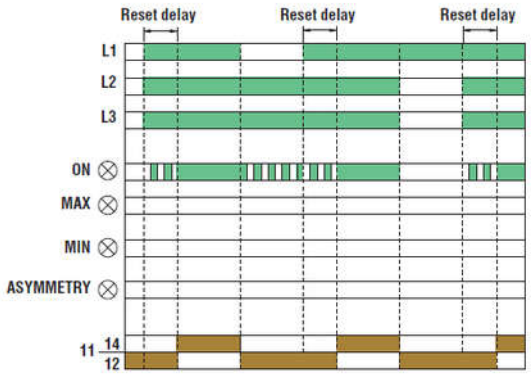
ADJUSTMENTS

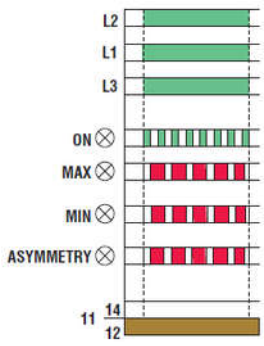
"Asymmetry"	High voltage asymmetry tripping threshold 5-15% Ue
"Delay"	Tripping time 0.1-20s
"Reset delay"	Resetting time 0.1-20s

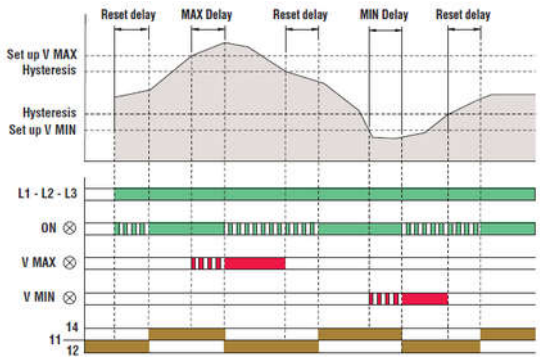
Certifications and compliance

Certifications obtained: EAC; UL Listed, for USA and Canada (cULus - File E93601), as Auxiliary Devices. Compliant with standards: IEC/EN 60255-5, IEC/EN 61000-6-2, IEC/EN 61000-6-3, UL 508, CSA C22.2 n° 14.

Phase loss and incorrect phase sequence (PMV10-PMV20-PMV30-PMV40-PMV50-PMV60- MV70)







Lovato electric

ENERGY AND AUTOMATION

TYPE						
	Single phase	**PMV55**	—	—	—	—
	Three phase	—	**PMV10**	**PMV20**	**PMV30**	**PMV40**
	Three phase with/without neutral	—	—	—	—	—

DESCRIPTION					
	Mimum and maximum AC voltage	Phase loss and incorrect phase sequence		Minimum AC voltage, phase loss and incorrect phase sequence	Asymmetry, phase loss and incorrect phase sequence
CONTROL CIRCUIT					
Rated voltage to control (Ue)	208-240VAC 380-440VAC	208-480VAC	100-240VAC 208-575VAC 380-600VAC	208-240VAC 380-575VAC 600VAC	
Maximum voltage set-point	105-115% Ue	—	—	—	—
Minimum voltage set-point	80-95% Ue	—	—	80-95% Ue	—
Asymmetry set-point	—	—	—	—	5-15%Ue
Minimum and maximum frequency set-point	—	—	—	—	—
Tripping time	0.1-20s	60ms		0.1-20s	
Resetting time	0.1-20s (0.5s at power up)	0.5s		0.1-20s (0.5s at power up)	
Resetting hysteresis	3%	5%		3%	
Instantaneous tripping for Ue	<70% Ue configured	Umin<70% Umax		<70% Ue configured	<70% minimum Ue
Repeat accuracy	< ±0-1%	< ±1%		< ±0.1%	< ±0.1%
POWER SUPPLY					
Auxiliary voltage (Us)	Self powered				
Operating range	0.7-1.2Ue	0.85-1.1Ue		0.7-1.2Ue	
Frequency	50/60Hz ±5%				
Power consumption (maximum)	10VA (208-240VAC)❶ 17VA (380-440VAC)❶	20VA❶	28VA❶	11VA (208-240VAC)❶ 30VA (380-575VAC)❶ 19VA (600VAC)❶	
Power dissipation (maximum)	1.5W	2.2W	2.5W		
RELAY OUTPUTS					
Number of relays	1				
Relay state	Normally enegised De-energises at tripping				
Contact arrangement	1 changeover SPDT				
Rated operational voltage	250VAC				
Maximum switching voltage	400VAC				
Conventional free-air thermal current (Ith)	8A				
UL/CSA and IEC/EN 60947-5-1 designation	B300				
Electrical life (with rated load)	10^5 cycles				
Mechanical life	$30x10^6$ cycles				
Indications	1 green LED for power on and tripping 2 red LEDs for tripping	1 green LED for power on and tripping		1 green LED for power on and tripping 1 red LED for tripping	
CONNECTIONS					
Terminal tightening torque (maximum)	0.8Nm (7lbin; 7-9lbin per UL/CSA)				
Conductor section min-max	0.2-4.0mm² (24-12AWG; 18-12 AWG per UL/CSA)				
INSULTION (input-output)					
IEC rated insulation voltage Ui	440VAC	480VAC	600VAC		
IEC rated impulse withstand voltage Uimp	6kV				
IEC power frequency withstand voltage	4kV				
AMBIENT CONDITIONS					
Operating temperature	–20...+60°C				
Storage temperature	–30...+80°C				
HOUSING					
Material	Self-extinguishing polyamide				

❶ Power consumption (maximum) at 50Hz.