



Product designation

Product type designation

General characteristics

Voltage  
monitoring relays  
PMV70N

Description

Minimum and  
maximum AC  
voltage, phase  
loss, neutral loss,  
incorrect phase  
sequence and  
asymmetry relay

Type of system

Three-phase  
with/without  
neutral

Power supply

Auxiliary supply voltage $U_s$		Self powered
Operating voltage range		0.7...1.2 $U_e$
Rated frequency	Hz	50/60 $\pm 5\%$
Power consumption Max	VA	27
Power dissipation Max	W	1.9

Control circuit

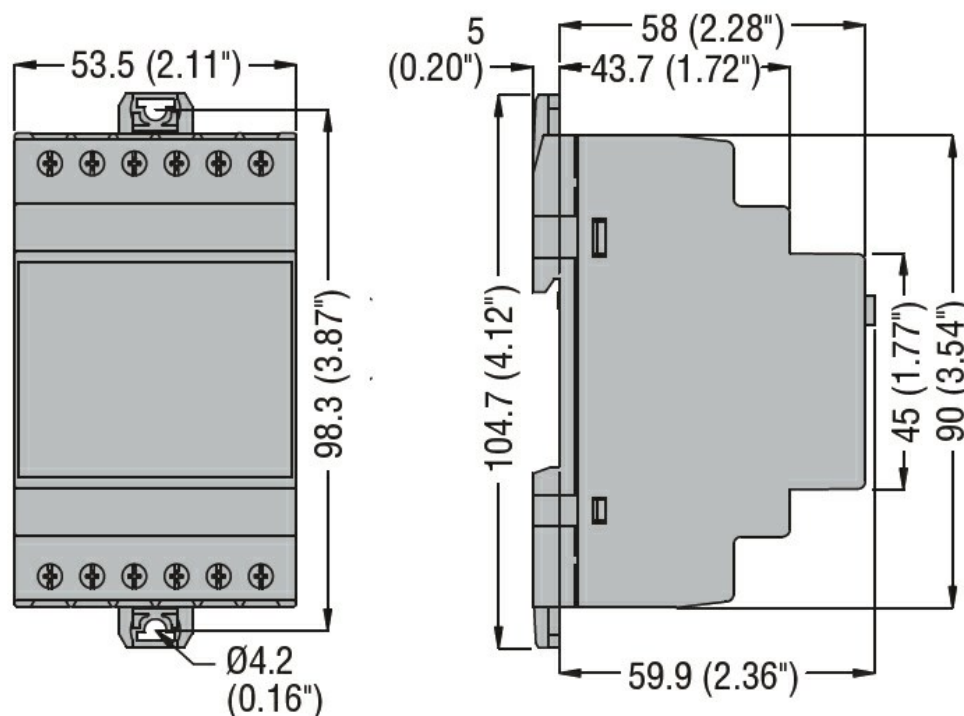
Rated voltage to control ( $U_e$ )	min	VAC	380
	Max	VAC	440
Voltage set-point ( $\%U_e$ )	min	%	80...95
	Max	%	105...115
Asymmetry set-point ( $\%U_e$ )		%	5...15
Tripping delay		s	0.1...20
Resetting time		s	0.5
Resetting hysteresis		%	3
Instantaneous tripping for $U_e$			Voltage $< 70\% U_e$
Type of reset			Automatic
Repeat accuracy		%	$\pm 0.1$
Tripping time for phase loss		ms	60

Relay outputs

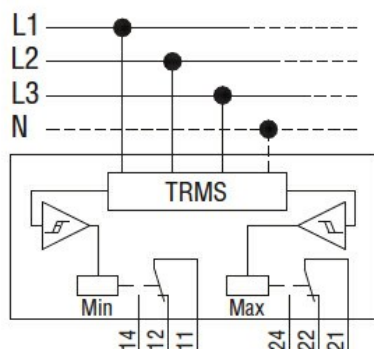
Number of relays	Nr.	2
Relay state		Normally energised De- energises at tripping
Contact arrangement		2 changeover SPDT
Rated operational voltage AC (IEC)	VAC	250
Maximum switching voltage	VAC	400
IEC Conventional free air thermal current $I_{th}$	A	8

UL/CSA and IEC/EN 60947-5-1 designation			B300		
Electrical life (with rated load)			cycles	100000	
Mechanical life			cycles	30000000	
Functions					
Modular version			3U		
Minimum AC voltage			Yes		
Maximum AC voltage			Yes		
Natural loss			Yes		
Phase loss			Yes		
Incorrect phase sequence			Yes		
Asymmetry			Yes		
Minimum frequency			No		
Maximum frequency			No		
Programmable via NFC technology and APP			No		
Indications					
Indication			1 green LED for power on and tripping and 3 red LEDs for tripping		
Connections					
Terminals type			Screw		
Tightening torque for terminals			max	Nm	0.8
			max	lbin	7
Conductor cross section					
AWG/Kcmil			min	AWG	24
			Max	AWG	12
IEC					
			min	mm <sup>2</sup>	0.2
			Max	mm <sup>2</sup>	4
Insulations					
Rated insulation voltage Ui			V	600	
Rated impulse withstand voltage Uimp			kV	6	
Operating frequency withstand voltage			kV	4	
Ambient conditions					
Temperature					
Operating temperature			min	°C	-20
			max	°C	+60
Storage temperature					
			min	°C	-30
			max	°C	+80
Housing					
Execution (n° of modules)			3		
Material			Self-extinguishing polyamide		
Mounting			35mm DIN rail (IEC/EN 60715)		
IEC degree of protection			IP40 on front; IP20 at terminals		
Dimensions (W x H x D)			mm	35.8 x 104.7 x 64.9	
Weight			g	200	

## Dimensions



## Wiring diagrams



## Certifications and compliance

### Compliance

IEC/EN 60255-5  
IEC/EN 61000-6-2  
IEC/EN 61000-6-3

### Certificates

EAC

## ETIM classification

ETIM 8.0

EC001438 -  
Voltage  
monitoring relay