# **Dold UH6937 Frequency Monitor Relays**





UH6937 frequency monitoring safety relay modules monitor the output frequency of inverters or rotor frequency of slip-ring

- No external sensors necessary
- Independent of direction
- Broken wire detection
- 2-channel operation for frequency monitoring
- LED status indicator
- Time delay settings available

Safety Data – Values per EN ISO 13849-1					
Category	4				
Performance level	е				
MTTF <sub>d</sub>	139.6 years				
DC <sub>avg</sub>	99%				
Safety Data – Values per IEC/EN	62061/IEC/EN 61508				
SIL CL	3				
SIL	3				
HFT (Hardware Failure Tolerance)	1				
DC <sub>avg</sub>	99%				
PFHD	1.9e-10				

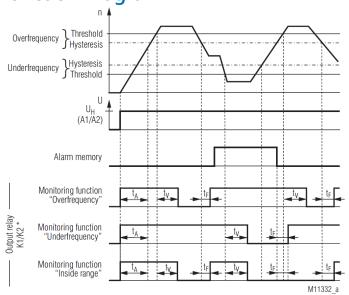
Safety Frequency Monitor Relays Selection Chart					
Part Number	Price	Marking Type	Frequency Range	Voltage	Outputs
UH6937-02PS-24	\$650.00	Fragues of manifesting and the radial made to	1-600 Hz	24VDC	2 N.O.
UH6937-02PS-100-24	\$650.00	Frequency monitoring safety relay module	1-1000 Hz	24VDC	2 semiconductor

Safety Frequency Monitor Relays Specification Table						
General Specifications						
Temperature	Storage: -20°C to 70°C (-4°F to 158°F) Operating: -20°C to 60°C (-4°F to 140°F)					
Altitude	< 2,000m (6562ft)					
Vibration Resistance	IEC/EN 60-068-2-6					
Degree of Protection	Housing: IP40; Terminals IP20					
Housing	UL 94V-0 Thermoplastic; DIN mount 35mm (1.38 in) x 7.5 mm (0.30 in)					
Weight	320g (11.29 oz)					
Agency Approvals and Standards	cULus file E107778, CE, RoHS, TUV					
Terminal Designation	EN 50005					
Wire Fixing	Captive slotted screw. Torque 0.8 Nm (7 lb-in)					
Input Specifications						
Nominal Voltage	24VDC					
Measuring/Motor Voltage	8 to 280 VAC for single phase 16 to 690 VAC for three-phase					
Response Value Uan	Variant /0: adjustable from 1-600Hz Variant /1: adjustable from 1-1000Hz					
Voltage Range	0.8-1.1 VDC					
Nominal Consumption	3.2W					
Nominal Frequency	-					
Overvoltage Protection	Internal VDR (Voltage Dependent Resistor)					
Out	tput Specifications					
Electrical Contact Life	ontact Life To AC15 at 3A, 230V: 22x10 <sup>5</sup> switching cycles IEC/EN 60 947-5-1					
Mechanical Life	20 x 10 <sup>6</sup> switching cycles					
Contact Type	2 N.O. positively driven and 2 semiconductor outputs for monitoring					
Operate Delay on Standstill	Depends on setting; adjust by potentiometer					
Release Delay on Overspeed	t <sub>off</sub> = typ. 700 ms					
Nominal Output Voltage	250VAC					
Thermal Current (Ith)	Max. 8A per contact. See continuous current limit curve in installation manual.					
Short Circuit Strength	Max fuse rating: 10A gl (IEC/EN 60 9470-5-1)					
Switching Capacity IEC/EN 60 947-5-1	AC15: N.O. contacts: 2A/230V; DC13 2A/24V					
Switching Frequency	Max. 1,200 switching cycles/hr					
Semiconductor Monitoring	100mA DC 24V; supply via A3+/A4					

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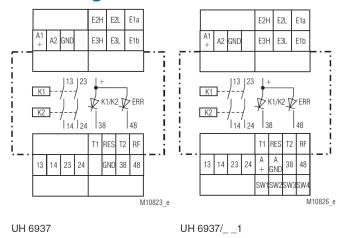


### **Function Diagram**



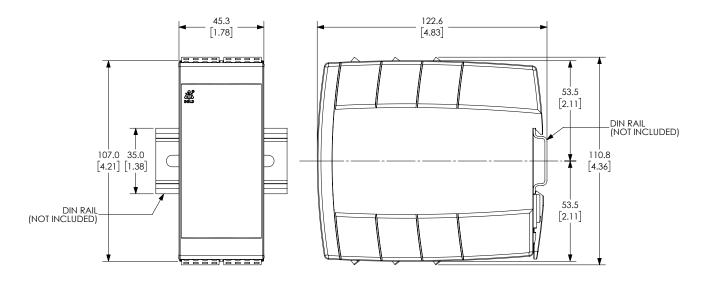
 $t_{\Delta}$  = Start-up delay,  $t_{V}$  = Alarm delay,  $t_{F}$  = Reset delay

### **Block Diagram**



#### **Dimensions**

mm [in]

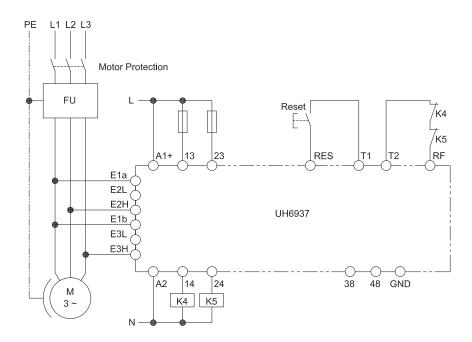


<sup>\*</sup> Depending on the direction of rotation monitoring

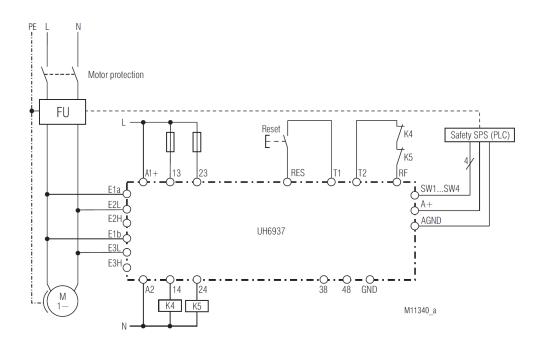
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## **Application Examples**



Inverter monitoring function, 3-phase, suited up to SIL3, Performance Level e, Cat. 4



Inverter monitoring function, single-phase, suited up to SIL3, Performance Level e, Cat. 4

## **Safety Products**



Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors' products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

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