

# Dold UH6937 Frequency Monitor Relays



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

- 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

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

## Safety Standstill Monitor Relays Selection Chart

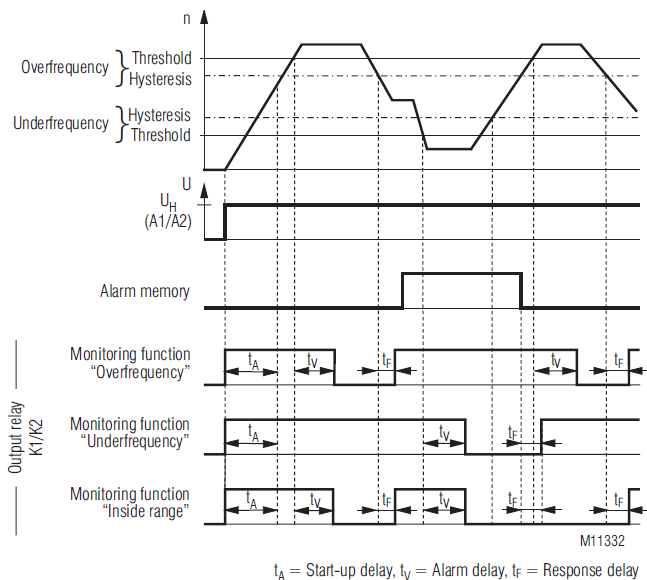
Part Number	Price	Marking Type	Frequency Range	Voltage	Outputs
<b>UH6937-02PS-24</b>	\$480.00	Frequency monitoring safety relay module	1-600 Hz	24VDC	2 N.O. 2 semiconductor
<b>UH6937-02PS-100-24</b>	\$480.00		1-1000 Hz		

## Safety Standstill Monitor Relays Specification Table

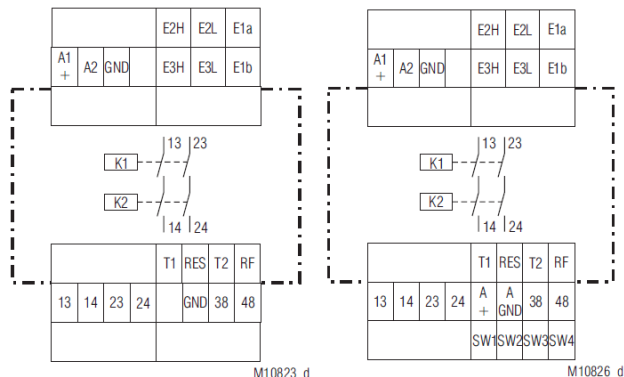
<b>General Specifications</b>	
<b>Temperature</b>	Storage: -20°C to 70°C (-4°F to 158°F) Operating: -20°C to 60°C (-4°F to 140°F)
<b>Altitude</b>	< 2,000m (6562ft)
<b>Vibration Resistance</b>	IEC/EN 60-068-2-6
<b>Degree of Protection</b>	Housing: IP40; Terminals IP20
<b>Housing</b>	UL 94V-0 Thermoplastic; DIN mount 35mm (1.38 in) x 7.5 mm (0.30 in)
<b>Weight</b>	320g (11.29 oz)
<b>Agency Approvals and Standards</b>	cULus file E107778, CE, RoHS, TUV
<b>Terminal Designation</b>	EN 50005
<b>Wire Fixing</b>	Captive slotted screw. Torque 0.8 Nm (7 lb-in)
<b>Input Specifications</b>	
<b>Nominal Voltage</b>	24VDC
<b>Measuring/Motor Voltage</b>	AC8: 280V – AC16: 690V
<b>Response Value Uan</b>	Variant /0_: adjustable from 1-600Hz Variant /1_: adjustable from 1-1000Hz
<b>Voltage Range</b>	0.8-1.1 VDC
<b>Nominal Consumption</b>	3.2W
<b>Nominal Frequency</b>	–
<b>Overvoltage Protection</b>	Internal VDR (Voltage Dependent Resistor)
<b>Output Specifications</b>	
<b>Electrical Contact Life</b>	To AC15 at 3A, 230V: 22x10 <sup>5</sup> switching cycles IEC/EN 60 947-5-1
<b>Mechanical Life</b>	20 x 10 <sup>6</sup> switching cycles
<b>Contact Type</b>	2 N.O. positively driven and 2 semiconductor outputs for monitoring
<b>Operate Delay on Standstill</b>	Depends on setting; adjust by potentiometer
<b>Release Delay on Overspeed</b>	t <sub>off</sub> = typ. 700 ms
<b>Nominal Output Voltage</b>	250VAC
<b>Thermal Current (I<sub>th</sub>)</b>	Max. 8A per contact. See continuous current limit curve in installation manual.
<b>Short Circuit Strength</b>	Max fuse rating: 10A gl (IEC/EN 60 9470-5-1)
<b>Switching Capacity IEC/EN 60 947-5-1</b>	AC15: N.O. contacts: 2A/230V; DC13 2A/24V
<b>Switching Frequency</b>	Max. 1,200 switching cycles/hr
<b>Semiconductor Monitoring</b>	100mA DC 24V; supply via A3+/A4

# Dold UH6937 Frequency Monitor Relays

## Function Diagram

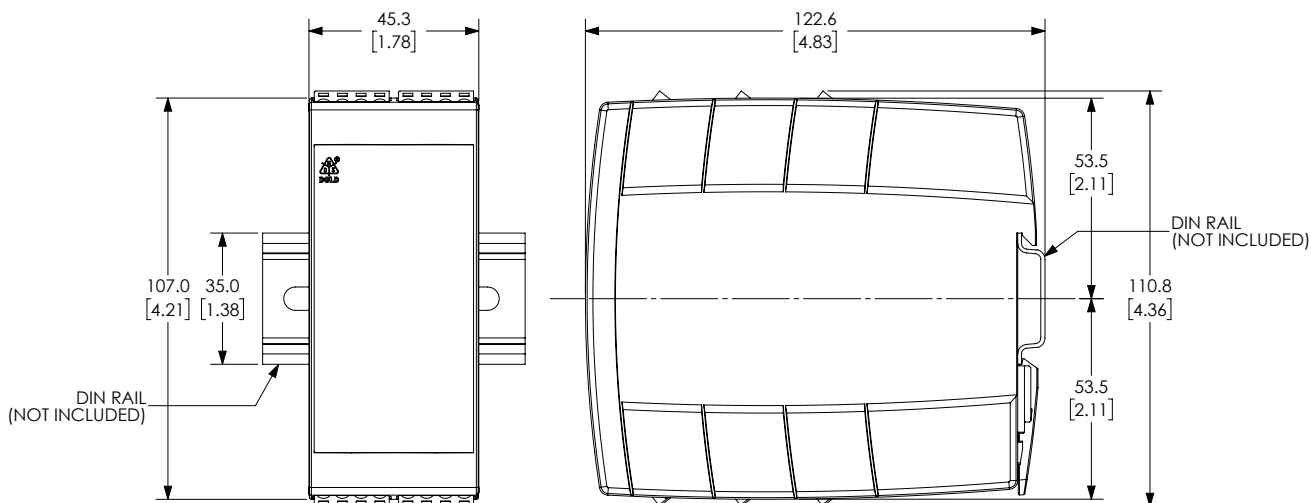


## Block Diagram



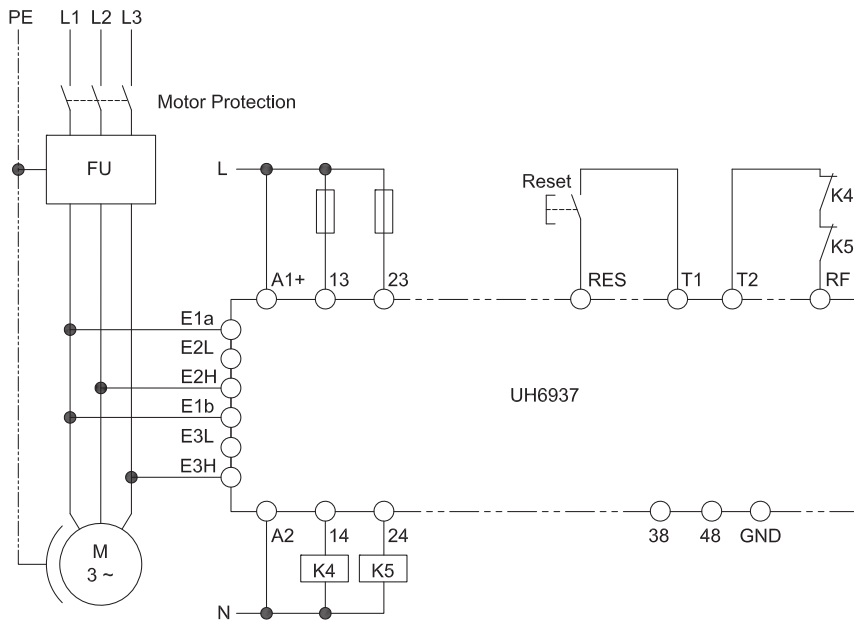
## Dimensions

mm [in]

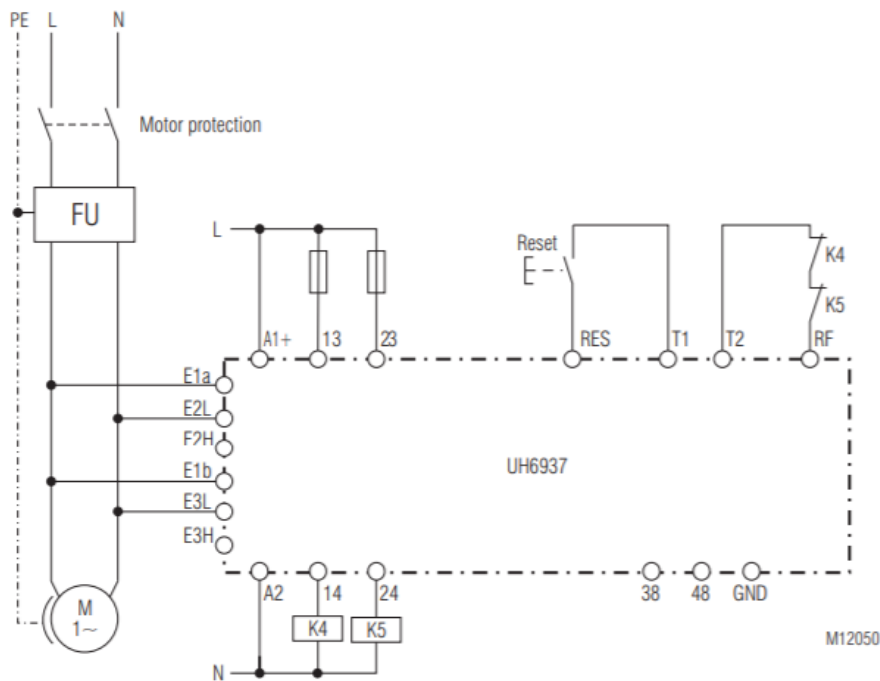


# Dold UH6937 Frequency Monitor Relays

## 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.*

*AutomationDirect does not provide design or consulting services, and cannot advise whether any specific application or use of our products would ensure compliance with the safety requirements for any application.*