KLIXON®

Motor Protectors from Texas Instruments

31, 32 & 33 HM Series

Hermetically Sealed On Winding 3-phase

- **Protect WYE wound 3-phase motors from 1 to 15 HP. Used in refrigeration compressors, submersible pumps and other restrictive environments.**
- **Increased protection in small size, with a rugged all welded construction. Low profile shape allows for close coupling to motor windings.**
- **Hermetic reliability designed for leakage rates less than 1 x 10^{-9} per second of air with 1 atmosphere pressure differential.**
- **KLIXON snap-action discs assure positive make and break action and controlled temperature differential.**

The KLIXON 31HM, 32HM, and 33HM on-winding motor protectors are 3-phase line break, automatic reset devices wired in series with each phase at the neutral point.

These protectors are designed to protect 3-phase refrigeration and air conditioning compressor motors from excessive winding temperatures; however, applications may be made to any 3-phase motors where an environmental seal is required. Small size permits the devices to be installed directly on the motor windings for precise temperature monitoring, thus affording protection against such severe overload conditions as loss of refrigerant charge, low voltage locked rotor, and single phasing.

The 31HM, 32HM, and 33HM are designed to reduce installation costs by replacing pilot control systems with a simple, economical, compact device.

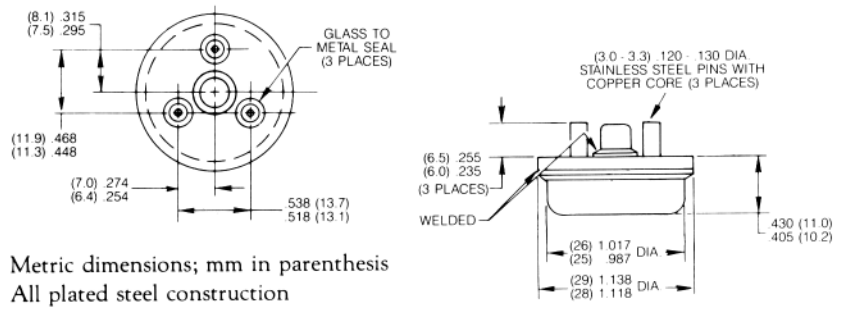
Locked Rotor Current Capacity

	Std. Series			400 Series			500 Series		
	230V	460V	575V	230V	460V	575V	240V	460V	575V
31HM	70	40	Not Available	60	Not Available		90	50	40
32HM	135	70	55	180	Not Available		200	100	80
33HM	Not Available			250	Not Available		285	145	115

Current Ratings are based on life test data which demonstrates greater than 90% reliability at 2000 cycles at 0.7 power factor

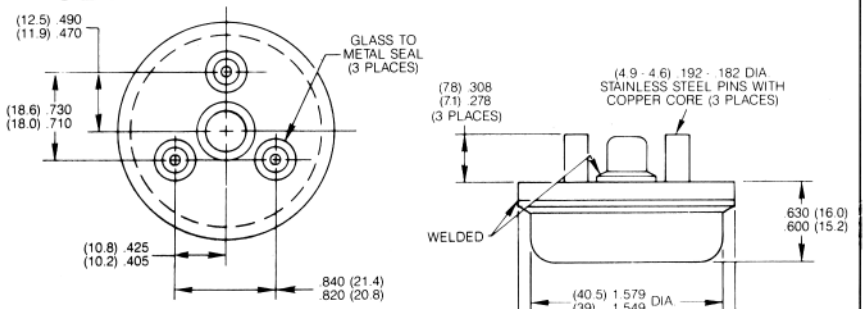
These capacities are intended as a guide for applicaton work.

31HM Series Hermetic Motor Protector



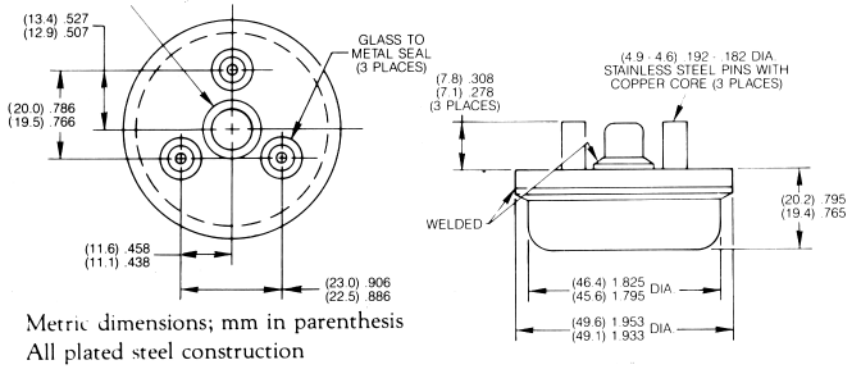
Metric dimensions; mm in parenthesis
All plated steel construction

32HM Series Hermetic Motor Protector

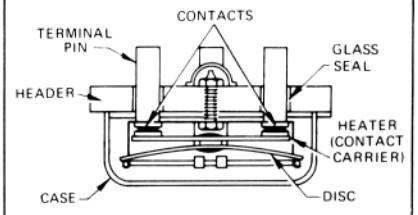


Metric dimensions; mm in parenthesis
All plated steel construction

33HM Series Hermetic Motor Protector



Metric dimensions; mm in parenthesis
All plated steel construction



The basic element of both the 31HM, 32HM and 33HM is the famous KLIXON snap-acting disc.

Standard Operating Temperature

Opening Temperature

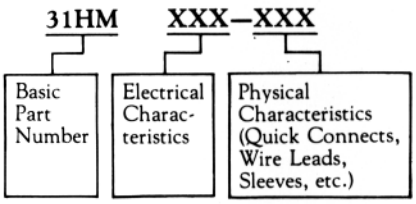
90°C to 170°C in 5°C increments. Tolerance ±5°C

Closing Temperature

to suit application
Tolerance
±9°C for <150°C opening
±15°C for ≥150°C opening

Coding System

When making an inquiry on KLIXON hermetically sealed motor protectors, be certain to specify the entire part number for your application, if known. The six digits following the series identification indicate your specific electrical and physical requirement.



UL & CSA Listings

UL File #31HM-E15962-Sec 15
UL File #32HM-E15962-Sec 26
UL File #33HM-E15962-Sec 46
CSA File #31HM-LR11372 SecX
CSA File #32HM-LR11372 SecHH

VDE approval with factory surveillance:

31HMXXX-XX Class I, T200, 1 K/Min

$$\frac{16(16\ \text{Max}\ 55)}{250} \sim \frac{10(10\ \text{Max}\ 40)}{380} \sim$$

32HMXXX-XX Overheat protection, T200, 1 K/Min

$$\frac{33(33\ \text{Max}\ 200)}{250} \sim \frac{16(16\ \text{Max}\ 16)}{380} \sim$$

33HMXXX-XX Overheat Protection, T200, 1 K/Min

$$\frac{36(36\ \text{Max}\ 165)}{380} \sim$$

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