product focus

HOLROYD INSTRUMENTS

Smart Condition Monitoring Sensors for Industry

Small, Quick and Easy to install
Applicable to most rotating machines
MHC - DS1 works down to 35rpm
MHC - SM1 works down to 0.25 rpm !

Dual alarms with holdoff
Directly drives LED indicators
Analogue outputs for trending
Designed for 24/7
More sensitive than overall vibration

THE MHC - DS1 and MHC - SM1 smart sensors represent the distillation of the unique technology that underpins a range of field proven Condition Monitoring instruments into simple, inexpensive sensors for permanent installation. They are a breakthrough in miniaturisation incorporating a high frequency transducer, signal conditioning and advanced digital signal processing.

MHC - *DS1*ä

The Smart CM Sensor for Rotating Machinery

The MHC - DS1 internally generates a version of the sensitive yet easily interpreted parameters of Distress® & dB Level. This successful approach to the condition monitoring of rotating machinery has been in use on the industrial shop-floor in our portable MHC instruments since the early 1990's. It has gained an enviable reputation for the sensitive detection of wear and degradation in rotating machinery and can even detect inadequate lubrication before permanent damage is done. Unlike vibration monitoring it is much less sensitive to other effects such as speed variations, the operation of adjacent machines and in certain cases changes in operation (such as on / off line).

Alarm functions are pre-programmed in the sensors non-volatile memory from your PC using the SI/RT interface (sold separately). The alarm outputs can be used to directly drive a local LED indication of alarm state or act as inputs into a PLC or SCADA system. Analogue outputs of Distress & dB Level are also available to allow either monitoring or trending.

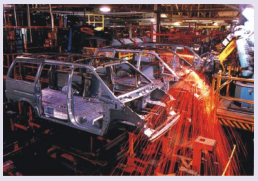
MHC - *SM1*ä

The Smart CM Sensor for Very Slowly Rotating Machinery

The MHC - SM1 incorporates the patented Super Slo method which has been extensively field proven over the years in the MHC-Memo Pro and MHC-SloPoint instruments. Time and again it has detected the early signs of wear and degradation in very slowly rotating machinery whilst requiring the minimum of set-up (just enter the time per revolution in seconds). The MHC-SM1 uses advanced processing to generate and act upon any two of the derived parameters of Extent®, Peak, Intensity and dB Level (Extent is sensitive to generalised damage, Peak to singular defects like from a cracked race & dB Level to constant friction).

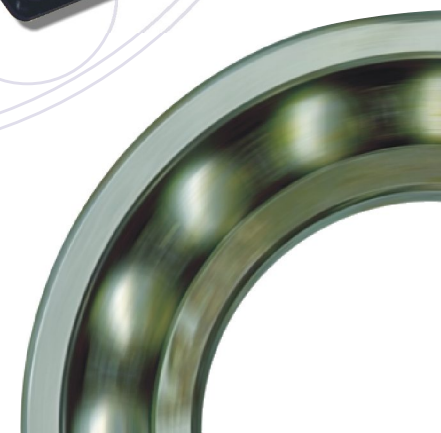
Analogue outputs and alarm functions are selected and pre-programmed in the sensors non-volatile memory from your PC using the SI/RT interface (sold separately). The alarm outputs can be used to directly drive a local LED indication of alarm state or act as inputs into a PLC or SCADA system. Analogue outputs of the selected parameters are also available to allow either monitoring or trending.

condition monitoring just got easier



ideal for
bearings - mixers - motors
pumps - fans - RBC's
HVAC - helical gears
variable speed machines
etc...

Don't leave it to chance,
put some science
into keeping your site running !



PRODUCT	MHC-DS1	MHC-SM1
SIGNAL MEASUREMENT		
Applicable speed range	Suitable for machine rotational speeds down to 35 rpm.	Suitable for machines rotating from 60 rpm down to 0.25 rpm.
Measurement interval	10 second update interval.	9 x T (where T = selected time per rev in seconds between 1 and 255).
Measurements	dB Level : 0 to 90 dB typical (i.e. 30,000 to 1) with 1 dB resolution Distress : 0 to > 40 typ. with 1 unit resolution	dB level (0 to 90 dB with 1 dB resolution). E, Percent of rotation with significant activity (0 to 100% with 1% resolution) P, Log scaled peak signal level (0 to 90 dB with 1 dB resolution). I, Log. scaled selected av. signal level (0 to 90 dB with 1 dB resolution).
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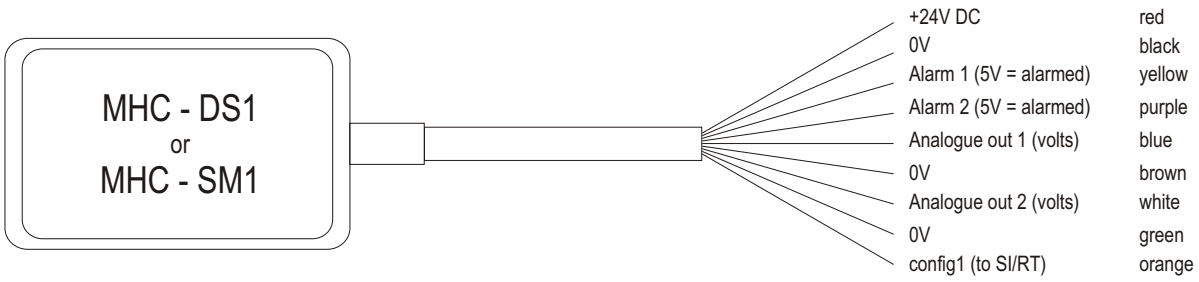
ALARM OUTPUTS		
General	2 qty - programmed via SI/RT into its non volatile memory.	2 qty - programmed via SI/RT as dB, P, I or E in its non volatile memory.
Electrical characteristics	5V @ 10mA when in alarm e.g. for LED illumination or input to PLC	
Operating function	Each alarm acts upon both Distress & dB Level configured as OR function	Each alarm acts upon one pre-selected parameter (dB, P, I or E).
Action	Alarm output switching action only occurs when computed signal characterisation consistently reaches or exceeds alarm level for the Hold-Off number of consecutive measurement intervals (selectable from 1 to 255).	
Reset	interrupting the sensor power supply	
ANALOGUE OUTPUTS		
Quantity	2 qty.	
Electrical characteristics	0 to +10V DC updated every measurement interval. Scaling of 100 mV per measured unit	
Analogue 1 output	Distress characterisation.	parameter selected for Alarm 1.
Analogue 2 output	dB Level characterisation.	parameter selected for Alarm 2.
PC Set-up Interface	Requires SI/RT programming unit (bought separately)	
GENERAL		
Sensing element	Resonant piezoelectric at ~100 kHz	
Power Requirement	24V DC (+/- 10%) nominal @ 35mA when not in alarm supply must be EN61000-6-4, EN61000-6-2, EN61000-4-5 compliant	
Operating Temperature	-15 to + 75 deg C (other options may be available consult factory)	
Dimensions	54 (l) x 35 (w) x 19 (h) mm (excluding 1m cable)	
Housing material	Painted mild steel (polyurethane coated available as an option)	

specifications subject to change without notice



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