

# VI Tach CHARM

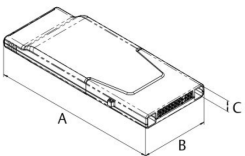
VI Tach CHARM is a single channel measuring module for the connection of:

- Externally powered eddy current sensor outputs
- Passive magnetic sensors
- Hall-effect sensors

The CHARM is equipped with an internal power supply to directly supply Hall-effect sensors. The CHARM calculates speeds and generates key-signals from the input signal within a frequency range of 0.0167 Hz to 2000 Hz. Parameters for the input signal processing are software configurable. The key-signal can be forwarded through the system, where the CHARM is installed, to other CHARMS that requires a key-signal for the signal processing. VI Tach CHARM can be installed in AMS Asset Monitor only. The standard CHARM terminal block KL4502X1-BA1 is required for the installation.



Electrical Data		
<b>Supply</b>		
Sensor Supply Voltage	+24V	+10% / -20%
Sensor Supply Load	35 mA	Short circuit proof
Charm Power Requirements	60 mA @ 24 VDC	
Charm Power Dissipation	0.6 W	
<b>Signal Input</b>		
Sensor Types	Hall-effect Magnetic Pickup (MPU) Converter output signal	
Nominal Signal Range	-24 to +24 V	
Extended Signal Range	30.3 V AC 85 V peak-to-peak (Sine Wave) 0.5 mA	
Input Frequency Range	0.01667 Hz to 20 kHz	At minimum 2 V peak-peak pulse amplitude, duty cycle 30% to 50%
Frequency Accuracy	0.02%	
Number of Teeth	1 to 1000	pulses per revolution

Passive Sensor Supervision	110 $\Omega$ to 10 k $\Omega$	
Sensing Current	240 $\mu$ A (typical)	Required for open sensor circuit detection of Hall-effect and passive magnetic sensors. The sensing current causes an open-circuit voltage of +12 V to +17 V, independently of the configured sensor type.
Input Impedance	40 to 160 k $\Omega$	
<b>Environmental Conditions and Mechanical Design</b>		
<b>Environmental Conditions</b>		
Operating Temperature	-40 to +70°C	
Storage Temperature	-40 to +85°C	
Humidity	5 to 95%	Noncondensing
Ip Protection Class	IP 20	According to IEC 60529
Shock	150 m/s <sup>2</sup>	According to IEC 60068-2-27, 4000 shocks per axis
Vibration	0.15 mm	10 to 58.1 Hz
	20 m/s <sup>2</sup>	58.1 to 150 Hz
	Floating sinus, 20 cycles, three axes	According to IEC 60068-2-6
Operating Altitude	< 2,000 m	Above sea level
<b>Mechanical Data</b>		
Status Indication	LED	One red/green bicolored LED
Weight	< 40 g (0.1 lb)	Without packaging
Dimensions	A = 116 mm ( 4.57 in ) B = 47 mm ( 1.85 in ) C = 11 mm ( 0.43 in )	

Compliance and Certifications	
CE	2014/30/EU (EN 61326-1) 2014/34/EU (EN 60079-0, EN 60079-11, EN 60079-15, DEKRA EXAM GmbH) 2011/65/EU (DIN EN 50581)
CSA	CAN/CSA C22.2 No. 61010-1-12, UPD1:2015, UPD2:2016 UL Std. No. 61010-1 (3rd Edition) CAN/CSA C22.2 No. 60079-0:19 CAN/CSA-C22.2 No. 60079-11:14 CAN/CSA-C22.2 No. 60079-15:16 Class I Division 2 Groups ABCD T4 Class I Zone 2 A/Ex ec IIC T4 Gc
IEC Ex	Ex ec nA nC [ic] IIC T4 Gc Ex tb [ic] IIIC T75°C Db
ATEX	II 3G Ex ec nA nC [ic] IIC T4 Gc II 2D Ex tb [ic] IIIC T75°C Db
Marine	DNV GL rules for classification - Ships, offshore units, and high speed and light craft
RoHS, REACH	

Only specifications with indicated tolerances or limit values are required. Data without tolerances or without error limits are informative data and not guaranteed. Technology is under constant development and specifications are subject to change without notice. If not otherwise specified, all data refer to a nominal supply voltage of 24 VDC and an environmental temperature of 23°C (73°F).

## Ordering Information

Model Number	Product Description
SE8701V03-TH	AMS Asset Monitor VI Tach CHARM

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