

# PROSMART

## Parts and Services Catalog



*Engineered for life*

<b>CM's &amp; DM's</b>	Communication Module Options	3
	Data Monitoring Options	4
<b>Sensors &amp; Cables</b>	Vibration/Temperature Sensor Options	5
	Mounting Adapter for Vibration/Temperature Sensor	5
	Tachometer Sensor	6
	Tachometer Collar	6
	Extension Cables	6
<b>Plug &amp; Play (P&amp;P) Parts</b>	Plug & Play Power Supply	7
	Plug & Play Power Cables	7
	Plug & Play Splitter	8
	Plug & Play DM22x Conduit Connector	8
	Plug & Play DM22x Mini Cap Lock	8
<b>ProNet Service</b>	Customized ProNet Dashboards	10
<b>Mounting Equipment</b>	Mounting Bracket for Data Monitor	11
	Mounting Stand and Baseplate (for DM)	11
	Mounting Stand and Baseplate (for CM)	12
<b>Miscellaneous</b>	Power Supplies	13
	Signal Conditioning Module for Analog Inputs	13
	Class 1 Division 2 Cap Lock	13
	Spare Antennas (for CM/DM)	14

## Communication Module

The ProSmart® Communication Module (CM) the internet gateway. Much like a wireless router this hardware provides access to the internet. The CM first acquires data from the Data Monitor (such as vibration and temperature readings) via a 2.4 GHz inter-module radio communication link. The data is then securely sent from the CM to the ProNet user interface via LAN, DSL, cell, or 802.11 wireless routers.

### Communication Module Options

#### LAN



#### Modem



#### Communication Module: Ethernet Connection (LAN, DSL)

Part number- B05686A01

Information is sent by the Communication Module over a customer provided LAN/DSL line. This unit is CSA certified for Class 1 Division 1 hazardous area operation.

#### Communication Module: CDMA Modem Connection (Verizon)

Part number- B06481A02

Information is sent by the Communication Module over a wireless cellular network. This option also includes an 110VAC plug for ease of installation.

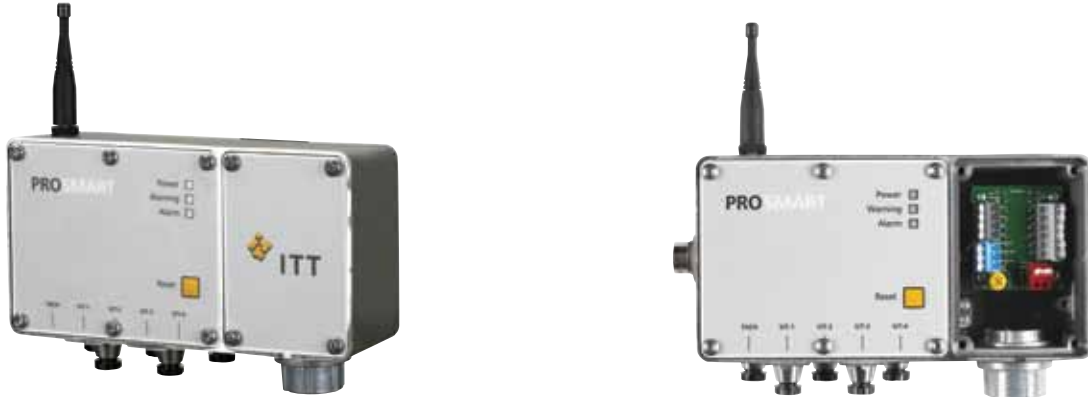
#### Communication Module: GSM Modem Connection (AT&T)

Part number- B05686A02

Information is sent by the Communication Module over a wireless cellular network. This option includes the necessary cellular antenna as pictured above.

## Data Monitor

The ProSmart DM22x is a powerful digital signal processor, capable of analyzing 22 channels of data every 5 seconds, including 1,000 line spectrums on 12 channels of vibration data. The DM has an investment cast enclosure rated for NEMA 4X and an approved Class 1, Division 2, Group ABDC T4 rating. The DM is equipped with one tachometer input, four vibration/temperature inputs, three Analog Inputs (4-20 mA), two Digital Inputs, and one Form C Relay output.



## Data Monitor Kit Options

*Purchasing a DM Kit is the quickest and most cost-effective way to get started. Not only does a kit save you money, but it also saves you the hassle of placing multiple orders.*

### Stand alone Data Monitor unit:

D12102A: Data Monitor without any sensors.

### Packaged Data Monitor with Vibration/Temperature and speed sensors

A09440A01: Data Monitor with 1 tachometer and 1 Tri-axial Vibration/Temperature Sensor.  
 A09440A02: Data Monitor with 1 tachometer and 2 Tri-axial Vibration/Temperature Sensors.  
 A09440A03: Data Monitor with 1 tachometer and 3 Tri-axial Vibration/Temperature Sensors.  
 A09440A04: Data Monitor with 1 tachometer and 4 Tri-axial Vibration/Temperature Sensors.

### Packaged Data Monitor with Vibration/Temperature sensor(s)

A09440A09: Data Monitor with 1 Tri-axial Vibration/Temperature Sensor.  
 A09440A10: Data Monitor with 2 Tri-axial Vibration/Temperature Sensors.  
 A09440A11: Data Monitor with 3 Tri-axial Vibration/Temperature Sensors.  
 A09440A12: Data Monitor with 4 Tri-axial Vibration/Temperature Sensors.

\*Note: See pages 5 and 6 for descriptions/pictures of the tachometer sensor and the vibration/temperature sensor

### Vibration/Temperature Sensor

- Part Number - B05966A (Sensor Only)
- Part Number - B059630A (Cable Only 2m)
- Part Number - B06150A06 (Armored Cable Only 2m)
- Part Number - B05966A01 (Sensor & Cable Kit 2m)
- Part Number - B05966A03 (Armored Sensor Kit 2m)

The Vibration/Temperature Sensor is a tri-axial MEMs based accelerometer with an integrated temperature sensor. Accelerometers are the industry standard transducer for vibration analysis systems—they output electrical signals in response to mechanical accelerations. These accelerations are typically used to measure vibration levels on bearing housings, in order to keep accurate vibration measurement and condition diagnosis.

The temperature sensor can provide valuable data related to rolling element bearing conditions. Temperature trending will provide indications of changes in machine condition.

Frequency Range: 6-3500 Hz.  
 Temperature Range: -40°F to 185°F



### Mounting Adapter for Vibration/ Temperature Sensor

Part Number- A08560A

When a direct connection between the Vibration/ Temperature sensor and the equipment is not desired, the sensor can be screwed into the mounting adapter and then connected to the machinery. The adapter can be mounted either mechanically with the standard (1/4-28UNF) vibration sensor connection or with the use of Epoxy. Includes Mounting Adapter (with set screw), threadlocker, and an Epoxy kit.



The Mounting Adapter prevents the need to directly screw the V/T sensor into the equipment.

### Magnetic Mounting Adapter for Vibration/Temperature Sensor

Part Number- A09961A

The magnetic adapter is threaded into the mounting adapter, which threads onto the Vibration/Temperature sensor, when drilling and tapping the equipment is not desired. This allows for a fast and noninvasive sensor installation. The rare-earth magnet is rated at a 60lbs pull off.



The magnetic mounting adapter allows for a fast and noninvasive sensor installation.

Note: This will not work on non-ferrous materials.

**Tachometer Sensor**

Part Number- A08762A (Standard Sensor & Cable Kit)  
 Part Number- A09530A02 (Armored Sensor & Cable Kit)

The tachometer is a high quality inductive proximity sensor. This will sense ferrous metal as it passes in front of the sensor. During each rotation of the shaft, a raised metal component passes and the sensor face is triggered to send the voltage pulse, which is used as a count to measure the RPM.

The tachometer can be used to detect a detent or shaft keyway—an LED on the sensor housing will illuminate when the sensor is triggered.

*The included cable is 2m/6.5 Ft in length.*



The tachometer sensor provides an accurate measurement of rotation speed.

**Tachometer Collar**

See factory for pricing and lead times.

This two-piece clamp-type collar makes for easier installation of the tachometer sensor. The collar locks onto the machine’s shaft and bypasses the need to precisely locate the tachometer sensor between 4mm and 5mm away from the top of the shaft key. Please note that these aluminum collars are not suitable for highly corrosive areas.

*Tachometer collars are available in a variety of sizes, please call with information regarding shaft size and any height and width requirements.*



The tachometer collar locks onto almost any shaft, creating an easy tachometer sensor installation.

**Extension Cable(s)**

Extension cables provide the necessary extra length in order to connect the Vibration/Temperature Sensor or the Tachometer Sensor to a Data Monitor without interfering with the operation and maintenance of the equipment. This allows for more DM placement options.



**Extension Cable(s) for Vib/Temp Sensor**

Part Number- A08366A01 (1.5m/5Ft)  
 Part Number- A08366A02 (3.0m/10Ft)  
 Part Number- A08366A03 (6.0m/20Ft)

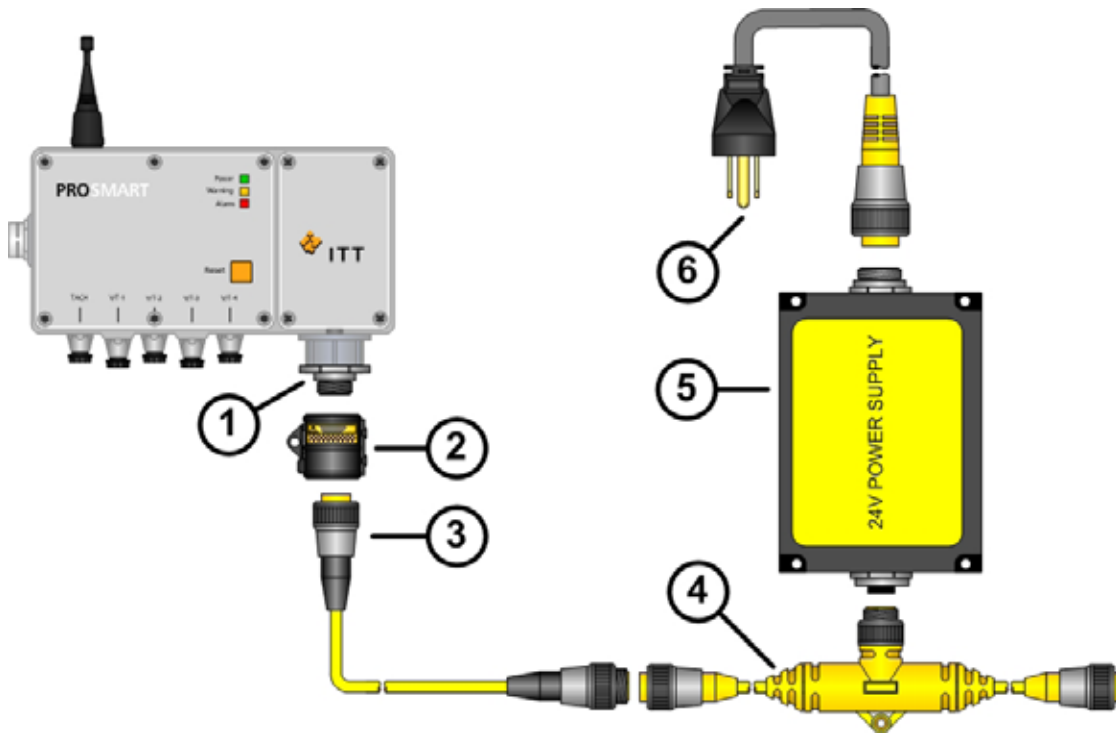


**Extension Cable(s) for Tachometer**

Part Number- A09461A (3.0m/10Ft)  
 Part Number- A09462A (6.0m/20Ft)  
 Part Number- A09450A (10.0m/33Ft)

## DM22x Plug & Play Setup

\*All numbered parts (1-6) are available for purchase and can be found on pages 8 and 9.



#	Part Description	Part Number	
1	P&P DM22x Conduit Connector	A09818A01	
2	P&P DM22x Mini Caplock	A09819A	
3	P&P DM22x CID2 Armored Power Cable	3m (10Ft)	A09821A01
		8m (26Ft)	A09821A02
		16m (52Ft)	A09821A03
4	P&P Splitter	A09820A01	
5	P&P Power Supply	A09817A01	
6	P&P 110V <sub>AC</sub> Power Cable with Wall Plug	A09822A01	

\*NOTE: See Page 7 for the proper setup of a complete Plug & Play (P&P) system.

## P&P Power Supply

Part Number- A09817A01

This 24V<sub>DC</sub> (2A) power supply is a vital part of ProSmart's new Plug & Play feature. Available in 110V<sub>AC</sub> or 230V<sub>AC</sub> input, the power supply combines with the other Plug & Play accessories to provide the necessary external power needed to run any Data Monitor from a non-hazardous location.

Will power up to six (6) Data Monitors.



The P&P Power Supply is a quick and simple way to get any DM up and running.

## P&P DM22x CID2 Armored Power Cable

Part Number- A09821A01 (3.0m/10Ft)

Part Number- A09821A02 (8.0m/26Ft)

Part Number- A09821A03 (16.0m/52Ft)

Reinforced with an armored covering, the P&P Power Cable is ready to bring power to the Data Monitor. The Plug & Play aspect of this cable allows for a quick and painless setup—just connect the female end to the P&P Power Supply and the male end to a Data Monitor equipped with a conduit connector (see next page).



The Armored Power Cable can bring power to the Data Monitor in any C1D2 rated hazardous area.

## P&P AC Power Cable with Wall Plug

Part Number- A09822A01 (3.0m/10Ft)

Another important component of ProSmart's Plug-n-Play technology, this power cable plugs into a standard three-prong wall outlet. It will accept 100-240VAC alternating current.



Run this AC power cable from the P&P Power Supply to a three-prong wall outlet.



## P&P DM22x Conduit Connector

Part Number- A09818A01

The final piece to the Plug & Play design, the P&P DM22x Conduit Connector screws into the Data Monitor, creating the correct receptacle for female end of the P&P Power Cable. This conduit connector allows for a quick power disconnect and rapid deployment.



The Conduit Connector screws into any Data Monitor, creating a receptacle for the P&P Power Cable.

## P&P DM22x Mini Cap Lock

Part Number- A09819A

The P&P Mini Cap Lock is an essential device that helps preserve the safety of the machines and the people working around them. In order to prevent a potentially dangerous open receptacle, the P&P Mini Cap Lock secures the connection between the P&P Power Supply and the P&P Power Cable.



The P&P Mini Cap Lock is used to add extra security to the P&P Power Supply and Power Cable connection.

## P&P Splitter

Part Number- A09820A01

The P&P Splitter gives the user the ability to power several Data Monitors from just one P&P Power Supply. Rather than buying multiple power supplies and 110V<sub>AC</sub> power cables, the P&P Splitter will direct the 24V<sub>DC</sub> output to several DMs.



The P&P Splitter allows for many Data Monitors to be powered from just one P&P Power Supply.

**Option #1:  
Standard ProNet Dashboard**

The simple, yet powerful design of the standard ProNet Dashboard provides a quick view into the primary sensor categories (e.g. Vibration and Temperature). Every standard dashboard comes equipped with alarm status icons, trending capabilities, and FFT spectrum links for each sensor.



The standard ProNet dashboard includes an interactive interface for every Data Monitor.

**Option #2:  
Customized Plant Dashboard**

Part Number- DASHBOARD

Customized ProNet Dashboards are available to customers who would like a personally tailored dashboard interface. A custom plant-level dashboard can provide users with overall machine summaries for quick status updates, helpful plant images for navigation purposes, or any other personal preference.



A custom plant-level dashboard makes overall navigation much easier for ProNet users.

**Option #3:  
Customized Machine Dashboard**

Part Number- DASHBOARD

ProNet Dashboards may also be customized at the machine-level. A custom machine-level dashboard usually contains an image of the machine being monitored as well as labels showing where the respective sensors are located. More information and features can be included to suit to specifics of the individual machine.



At the machine-level, a custom dashboard can be created to suit the characteristics of a specific machine.

## Mounting Bracket for DM22x

(with mounting bolts)

Part Number- A09397A99

The Data Monitor Mounting Bracket allows for the Data Monitor to be properly fixed to a sturdy wall or I-beam. It is recommended that the Data Monitor be screwed into the wall or I-beam in a vertical, upright position at least four feet above the ground.



The DM Mounting Bracket provides a quick and easy way to mount the DM onto a wall or I-beam.

## Mounting Stand for DM22x

(with mounting bolts)

Part Number- D12120A01

At approximately four feet tall, the Data Monitor Mounting Stand provides optimal placement and positioning. Four 1/4-20 UNC mounting holes are provided on the rear of DM22x for mounting properly onto the stand. The Data Monitor easily screws onto the mounting stand in a vertical, upright position.



The DM Mounting Stand allows the Data Monitor to sit in its proper position at an optimal height. \*

## DM Mounting Stand Baseplate

Part Number- A09825A

The DM Mounting Stand Baseplate provides the extra support and security that is often needed in the factory or field. This sturdy baseplate, when used in conjunction with the DM Mounting Stand, is a secure and reliable solution that will prevent just about any unwanted tips that could damage the DM or nearby machinery.

Measurements: 18"x18"



The DM Mounting Stand Baseplate offers extra support in order to protect the DM and nearby machinery. \*

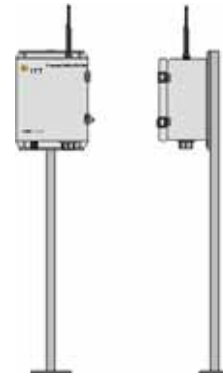
\* DM not included.

## Mounting Stand for CM

(with mounting bolts)

Part Number- A09823A

The Communication Module Mounting Stand is an ideal alternative when mounting the CM to a wall or pillar is not desired. The Mounting Stand easily supports the 15 pound CM, while placing it at its necessary height of approximately 6 feet above the ground. The CM screws into the Mounting Stand in the proper vertical and upright position.



The CM Mounting Stand provides the required height and support for proper placement.\*

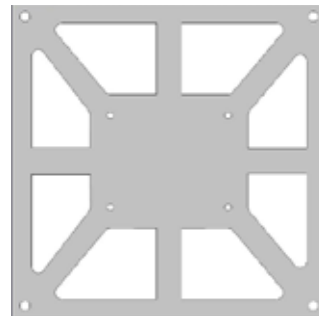
## CM Mounting Stand Baseplate

(with mounting bolts)

Part Number- A09824A

The CM Mounting Stand Baseplate provides the extra support and security that is often needed in the factory or field. When screwed onto the CM Mounting Stand, this baseplate will offer the additional reliability and sturdiness that will prevent just about any unwanted tips that could damage the CM or nearby machinery.

Measurements: 24"x24"



The CM Mounting Stand Baseplate offers extra reliability and sturdiness.

\* CM not included.

## Power Supplies

Part Number- A08974A ~ 110V to 24V (2A, 100W)

Part Number- A08972A ~ 110V to 24V (1A, 50W)

Part Number- A08973A ~ 110V to 12V (1A, 50W)

Every Communication Module and Data Monitor must be powered by an external power supply. Available in three different outputs in order to accommodate all different power needs.

The CM needs to be powered by an externally supplied 12 V<sub>DC</sub> power supply. The DM needs to be powered by an externally supplied 12-24 V<sub>DC</sub> power supply.



Power Supplies provide the necessary external power needed to run the CMs and DMs.

## Signal Conditioning Module for Analog Inputs (Isolator)

Part Number- A08968A

The Signal Conditioning Module is an important tool to be used when the Data Monitor is powered using the available analog inputs. Since analog inputs are not galvanically isolated, the Signal Conditioning Module may need to be used on each analog input.



If necessary the signal conditioning Module is to be used on all analog inputs.

## CID2 Sensor and Cable Caplock

Part Number- A08569A

For hazardous areas classified as Class I Division 2 Group A B C D T4, Cap Lock should be used on all plug and play connections of the Data Monitor, whether there is a sensor connected or only a protective screw cap, to prevent the event of an open receptacle.

Cap Locks are to be used on DM22x connections, cable to cable connection points, and sensor cable to sensor housing connection.



Cap Locks are used as an imperative safety precaution in Class I Division 2 areas

### Spare Antenna (DM22x assembly)

Part Number- A09998A01

At less than three inches long, this sturdy antenna design provides great reliability. The spare DM22x antenna mounts onto a Data Monitor in a vertical upright position, allowing for communication between the Communication Module and the Data Monitor. 2.4 GHz, 2 dB antenna



The CM antenna allows for communication from the many Data Monitors in the field.

### Spare Antenna (CM only)

Part Number- A09998A02

At approximately seven inches long, the spare CM antenna mounts onto a Communication Module in a vertical upright position. This allows for inter-module communication between the Communication Module and numerous Data Monitors. 2.4 GHz, 5dB antenna



The DM22x antenna sends important measurements to the Communication Module.

### Spare Antenna (Cellular Only)

Part Number- A08554A

At approximately fourteen inches long, the spare cellular antenna has a magnetic base mount that needs to be placed at least 3 feet away from the CM antenna.



The cell antenna sends all data to the internet via the cellular data connection.

