

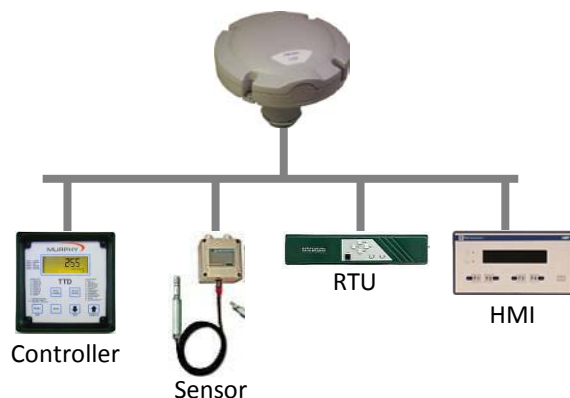
Modbus-compatible and certified for use in hazardous locations, the DMR-800D Class 1 Division 2 terminal delivers cost-effective and reliable communications for SCADA and other remote monitoring applications around the world.



Combining reliable satellite coverage, GPS information and local control interfaces, the DMR-800D Class 1 Division 2 (C1D2) is ideal for monitoring and controlling fixed, portable or mobile assets in hazardous locations around the world.

The terminal combines local sensor, actuator and serial interfaces with a cost-effective satellite modem. Software controllable events, RS485 and discrete input/output lines make the DMR-800D C1D2 a highly flexible supplement and in some cases, a low-cost alternative to external RTU (Remote Terminal Unit) or PLC (Programmable Logic Controller).

Whether using standalone or with RTU/PLC, native Modbus support on the DMR-800D C1D2 provides a direct connection to common industrial automation equipment, for quick and easy integration of a telemetry link with new or existing SCADA systems.



## FEATURES & BENEFITS

- **Class 1 Division 2, Groups A, B, C, D certified** terminal meets industry standards for electronic equipment in Oil and Gas markets.
- **Modbus protocol** interfaces directly with common SCADA devices such as RTU, PLC and flow meters to quickly and easily implement reporting and telemetry capabilities for remote equipment.
- **RS485 serial interface** allows connection to SCADA devices over large distances to enable flexible deployment in a wide range of operating conditions.
- **Embedded logic control** in many cases eliminates the need for a separate PLC, reducing cost and simplifying installation.

### Plus all the features and benefits of the DMR-800D including:

- **Seamless global coverage** based on the Inmarsat satellite constellation enables SCADA operational benefits in remote regions.
- **Expanded operating temperature** range allows reliable deployment in some of the world's most demanding environments.
- **Exception-based reporting** based on operating thresholds, shutdown codes, daily status or other criteria reduces operating costs for remote monitoring and maintenance of critical assets.
- **Discrete input/output feeds** enable monitoring and control of local devices not using Modbus.
- **Over-the-air programming** enables remote reconfiguration of parameters such as threshold levels or report frequency— anytime, anywhere.
- **Embedded Data Log** stores months of historical operating data that can be selectively queried without the cost of dispatching a technician.

# DMR-800 CLASS 1 DIVISON 2 SATELLITE TERMINAL

## PHYSICAL

Size • 160mm (diameter) x 47 mm (height)  
• C1D2 mounting kit adds 70mm to height

Mass • ~535 g

## ENVIRONMENTAL

Operating Temperature • -40°C to +70°C

Storage Temperature • -40°C to +85°C

Humidity • 95% Relative Humidity at +30°C non-condensing

Dust & Water Ingress • IP67/NEMA-4X

Vibration • 5-20 Hz; 1.92 m2/s3 random noise  
• 20-500 Hz: -3dB octave random noise

Shock (survival) • Half sine 6ms, 300 m/s<sup>2</sup>

## ELECTRICAL

Input Voltage • 9 VDC to 32 VDC

Power Consumption (Typical @ 12VDC) • Transmit mode: 7.6 W  
• Tracking mode (GPS on): 0.9W  
• Sleep: 7mW

RS485 ESD • ± 15kV HBM

Mating Connector • Conxall Mini-Con-X® 6282-8SG-3DC

## SATELLITE COMMUNICATIONS (D+/ISATM2M)

Frequency • Rx: 1525.0 to 1559.0 MHz  
• Tx: 1626.5 to 1660.5 MHz

EIRP • 9 dBW max

Elevation Angle • 0 to +90 degrees

## GPS

Channels • 16 channels; 1575.42 MHz

Acquisition • Cold-start: 34s  
• SuperSense®: -148 dBm

Accuracy • 3 m CEP; 5 m SEP

## CERTIFICATIONS / COMPLIANCE

Satellite • Inmarsat D+/IsatM2M Type Approval

Regulatory • ANSI/ISA-12.12.01-2007 (supercedes UL1604); CAN/CSA C22.2 No.142,213; UL916; UL50  
• FCC, RoHS, Anatel, IC pending  
• CE0 Mark (R&TTE)

## MEMORY

Data Log • 320kB: Up to 17,200 positions

## EXTERNAL INTERFACES

Serial • RS232: console interface; supports NMEA output  
• RS485: MODBUS RTU interface

Analog/Digital • 2 Software-configurable input/output  
• Digital or 10-bit A/D input  
• Digital output; max sink 250mA  
• 4-20mA current detection (pin 8 only)

## PROGRAMMING CAPABILITIES

Script Logic • 128 Actions  
• 64 Alarms  
• 64 Timers  
• 32 Data transformers  
• 2 programmable I/O lines – digital or analog  
• 128 Geofences (circular, rectangular, polygons)  
• Low Power modes

Modbus • Read/write up to 64 registers

## SATELLITE MESSAGING

From-Terminal • 10.5 bytes or 25.5 bytes

To-Terminal • 4 alert codes + up to 100 bytes

## ORDERING CODES

SM200253-4LG • DMR-800D C1D2 with bottom-mount connector  
• RS485 Modbus (requires external termination)

SM200268 • Evaluation Flex-Kit  
• Includes cables for DMR and SureLinx terminals, airtime, support, training  
• Order terminal separately; select terminal variant



Positioning technology provided by u-blox

## About SkyWave Mobile Communications

SkyWave Mobile Communications designs and manufactures integrated D+/IsatM2M satellite terminals, dual-mode satellite/GPRS terminals and provides network services to enable dependable, low-cost, remote management, security and logistics solutions for fixed and mobile assets. SkyWave's products are designed for a broad range of industries including land mobile, marine, oil & gas, SCADA, government and defence.

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