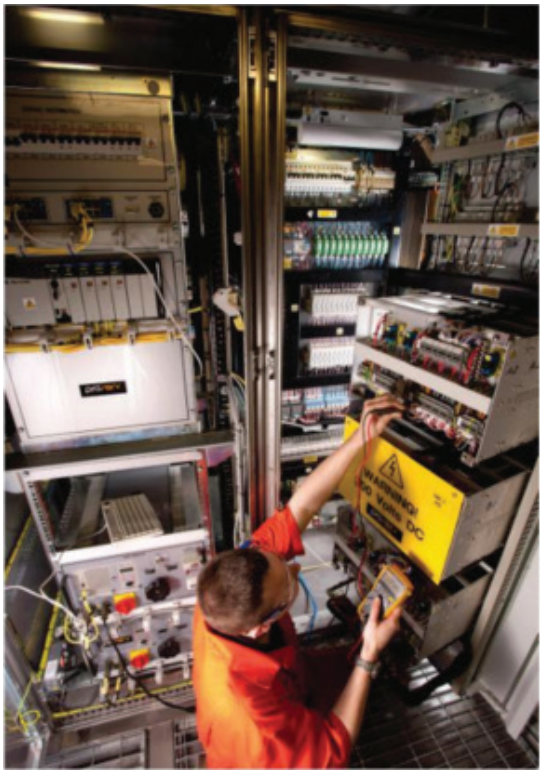
Proserv Master Control Station (MCS)

Proserv Master Control Station provides subsea operators with the latest advances in topside control and data monitoring systems. The design is based on the JIP MDIS (MCS/DCS Interface Standardization) current recommendations. The MCS is backward compatible with legacy systems such as Modbus allowing existing customers to upgrade or extend fields without any obsolescence issues.



Mechanical design

The mechanical design uses standard 19" rack mounted equipment and using a single umbilical both MCS and EPU can be located within one 19" rack providing a space saving solution.

Communications to Subsea

The MCS contains Proserv's proven communications technology providing multi-drop powerline capabilities up to 4 Mbit (OFDM) using copper or 100 Mbit using fiber optic to the subsea network. Subsea power and communications is delivered through the EPU and TPCU modules in the MCS.

Communications to DCS

DCS communications can be either Modbus, OPC UA/DA or any industrial client specified protocol.

Transparent Communications

Communications to Subsea devices are provided transparently at the MCS; additionally CanBus TM devices connected to the SEM are mapped via MODBUS and are available in the Modbus format for receipt or transfer to other systems.

Seamless Gateway

For larger systems requiring data to be pushed to various clients, Proservs 'TIACS' software suite allows data to be gathered centrally and pushed to many clients using different protocols and formats. No protocol converters or expensive bespoke software drivers are required.

Technical Specification	
Single Cabinet	
Unit size	800 x 600 x 1800 mm high. 0n 100 mm high plinth
Overall weight	450 kg (992 lbs.)
Internal equipment mounting system	Rittal/ Type 19" equipment racking modules
Equipment location	Safe area location only
MCS Consists of:	Engineering work station Redundant PLC modules type Allen Bradley Control Logix c/w Flex I/O Dual Redundant AC and DC Power Distribution Filter Isolation Module Redundant communication modules - TPCU Redundant electrical power units - EPU's Optional TIACS server providing protocol gateway to clients
External connections	Terminals for top or bottom cable entry
Internal connection type	Canon or Elco type connectors
Power supply	2 off 120-230 VAC 50/60 Hz 16A rated from UPS
Hardwired ESD/PSD inputs	Yes
PCS/DCS communication	Yes, Modbus TCP, Modbus RTU , OPC UA/DA
HPU Communication	Allen Bradley Ethernet DLR (Device Level Ring)

info@proserv.com
www.proserv.com

PRODUCT SPECIFICATION SHEET SUBSEA

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External Interfaces	
Ethernet	Ethernet devices (ISO / IEC 8802.3)
Transparent	User defined and CanBus TM interfaces to subsea
Fiber optic	up to 120 km single mode fiber
Serial	RS232, RS485/422
Integral Engineering Workstation (EWS) – Typical of…	
EWS	Provides graphics interface for the MCS
Unit size	8u x 360 mm
Weight	20 kg (44 lbs.)
Keyboard	Integral membrane on EWS
Mouse	Touch Pad on EWS
Media	CD-RW / USB
VDU	Min 15.4" TFT LCD
CPU	Latest Intel / AMD min 1.8 GHz
RAM	8 GB
Hard drive	Min 200 Gb unformatted size
Operating system	Windows 7 / Windows 2008 server
Application software	Factory Talk View (FT View) / Wonderware InTouch
Electrical Power Unit (EPU)	
EPU	Provides subsea AC power per channel
Unit size	6u x 421 mm (1' 46")
Weight	35 kg (72.75 lbs.)
VAC Input	120:230 VAC 50/60 Hz, 16A via Type D MCB
VAC Output	Nominal 0-600 VAC, 4 A / 0-700 VAC, 5A - providing cable ratings are upgraded
Control	Manual via keyswitch and ramp up / down power handle and Auto using MCS PLC control
Topside Power & Communications Unit (TPCU)	
TPCU	Provides subsea communications per channel
Unit size	3u x 415 mm (1' 46")
Weight	10 kg (22 lbs.)
VAC Input	120 VAC 50/60 Hz, 1A via Type C MCB
VAC Input (Subsea)	0-760 VAC Rated (Diplexer rating)
VAC Output (Subsea)	0-760 VAC Rated (Diplexer rating)
Instrumentation	Line Insulation Unit (LIM), DIRUS Power Monitoring Unit, OCC or OCX topside modem, media switches

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