domat
control system

DATALOGGER
Data acquisiton box for PV plant monitoring

Summary

Cabinet with system for local data storage and presentation over a web interface, local backup and data transfer to a central EMS management station.

Application

- ▪ **Solar photovoltaic system – data concentration from communication interfaces, optional alarming**

Function

The datalogger is connected to one or more COM.INTERFACEs over the local (on-site) Ethernet network. It reads data from the interfaces, stores them on the internal hard drive or another media, and converts for transfer to the management station. If the datalogger is not part of a central management system it may provide all data over a web server.

With optional accessories (GSM modem), the datalogger is able to send alarm SMS messages. Using local connectivity, alarm e-mails may be sent and connection to a central management station may be configured. (Systems with EMS usually send SMS alarms from the central management station, together for more plants.) If local connectivity is not available, it is possible to use a GPRS router provided the GSM signal level is strong enough and the service is available from the operator.

All plant values are available at the Ethernet interface and communicated to the EMS supervisory system or available over a web server.

Technical data

Power	230 V AC, max. 35 VA
Interfaces	
Ethernet	Ethernet 10/100BaseT, RJ45 for communication to SCADA and optionally inverters
GSM	optional – GSM modem with antenna, FME connector
Cabinet	Polyester – SMC Preprec, grey cable glands below, fixed by 4x M8 scrwes or on any flat base, UV resistant, self-extinguishing, halogen-free
Dimensions	400 (w) x 600 (h) x 300 (d) mm
Protection	IP54

	Outside temperature	-20...50°C
	Surge protection	Type I and II according to IEC 61643-1
	Power terminals	Screw terminals, cables up to 6 mm2

Shop drawings of the panel and item list are in a separate document and are not part of this data sheet.

The device is optionally delivered for **19" rack installation** as a 2U server.

Terminals

Ethernet (RJ45) connects directly to the PC in the cabinet and is not brought to the terminal rail.

Terminal	Description
X:L	power – live
X:N	power – common
X:PE	power – protective earth

Optional accessories

RC-Vision-x	SCADA software, 3rd party integration
GSM	GSM modem for alarm SMS and remote control
GPRS	GPRS router for remote access

Related products

COM.INTERFACE	communication interface for PV monitoring
RFVE	string monitoring box
RPQC	active and reactive power controller
Domat EMS	graphical supervisory system for energy controls

Topology:

Domat COM.INTERFACE

Solar radiation intensity
Outside temperature
Panel temperature
Energy meter
Inverter integration
Other signals if necessary
Communication to EMS
  and to datalogger

1x per transformer station

EMS

Ethernet

Domat COM.INTERFACE

Solar radiation intensity
Outside temperature
Panel temperature
Energy meter
Inverter integration
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Communication to EMS
  and to datalogger

Domat DATALOGGER

Data recording
Local visualisation
Web access
Communication to EMS

1x per power plant

Domat COM.INTERFACE

Solar radiation intensity
Outside temperature
Panel temperature
Energy meter
Inverter integration
Other signals if necessary
Communication to EMS
  and to datalogger

08/2010 Subject to technical changes.