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Find the *Dewetron DEWE-31-16* at our website: *Click HERE*



Automotive
Energy & Power Analysis
Field Service
Environmental
Research & Development

DEWE-31-16

Technical reference manual

ISO9001

... the precision signal conditioning company

worldwide
DEWETRON
www.dewetron.com

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Warranty Information

A copy of the specific warranty terms applicable to your DEWETRON product and replacement parts can be obtained from your local sales and service office.

Support

For any support please contact your local distributor first or DEWETRON directly.

For Asia and Europe, please contact:

DEWETRON Ges.m.b.H.
Parkring 4
A-8074 Graz-Grambach
AUSTRIA
Tel.: +43 316 3070
Fax: +43 316 307090
Email: support@dewetron.com
Web: http://www.dewetron.com

The telephone hotline is available
Monday to Friday between
08:00 and 17:00 CET (GMT +1:00)

For the Americas, please contact:

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10 High Street, Suite K
Wakefield, RI 02879
U.S.A.
Tel.: +1 401 284 3750
Toll-free: +1 877 431 5166
Fax: +1 401 284 3755
Email: support@dewamerica.com
Web: http://www.dewamerica.com

The telephone hotline is available
Monday to Friday between
08:00 and 17:00 GST (GMT -5:00)

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DEWETRON GesmbH
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A-8074 Graz-Grambach / Austria

Printing History

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Safety instructions

Safety symbols in the manual



Indicates hazardous voltages.

WARNING	*Calls attention to a procedure, practice, or condition that could cause bodily injury or death.*

CAUTION	*Calls attention to a procedure, practice, or condition that could possibly cause damage to equipment or permanent loss of data.*

WARNINGS

The following general safety precautions must be observed during all phases of operation, service, and repair of this product. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the product. DEWETRON Elektronische Messgeraete Ges.m.b.H. assumes no liability for the customer's failure to comply with these requirements.

All accessories shown in this document are available as option and will not be shipped as standard parts.



For safety reasons max. 50 V may be applied to the BNC input-connectors!
Refer to the regulation of maximum allowable touch potential.

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Safety instructions for all DEWETRON systems

- The DEWETRON data acquisition systems may only be installed by experts.
- Read your manual before operating the system.
- Observe local laws when using the instrument.
- Ground the equipment: For Safety Class 1 equipment (equipment having a protective earth terminal), a non interruptible safety earth ground must be provided from the mains power source to the product input wiring terminals or supplied power cable.
- DO NOT operate the product in an explosive atmosphere or in the presence of flammable gases or fumes and do not bring the system in contact with water.
- DO NOT operate damaged equipment: Whenever it is possible that the safety protection features built into this product have been impaired, either through physical damage, excessive moisture, or any other reason, REMOVE POWER and do not use the product until safe operation can be verified by service-trained personnel. If necessary, return the product to a DEWETRON sales and service office for service and repair to ensure that safety features are maintained.
- Keep away from live circuits: Operating personnel must not remove equipment covers or shields. Procedures involving the removal of covers or shields are for use by service-trained personnel only. Under certain conditions, dangerous voltages may exist even with the equipment switched off. To avoid dangerous electrical shock, DO NOT perform procedures involving cover or shield removal unless you are qualified to do so.
- No modifications are allowed at the instrument. The fuse in the power module has to be replaced by the same type. For continued protection against fire, replace the line fuse(s) only with fuse(s) of the same voltage and current rating and type. DO NOT use repaired fuses or short-circuited fuse holder labels and print on the power module may not be removed.
- DO NOT service or adjust alone. Do not attempt internal service or adjustment unless another person, capable of rendering first aid and resuscitation, is present.
- DO NOT substitute parts or modify equipment: Because of the danger of introducing additional hazards, do not install substitute parts or perform any unauthorized modification to the product. Return the product to a DEWETRON sales and service office for service and repair to ensure that safety features are maintained.
- Before opening the instrument (experts only) or exchanging the fuse in the power module disconnect power!
- Don’t touch internal wiring!
- Don’t use higher supply voltage than specified and take care of the correct polarity, otherwise the system will be damaged!
- Use only original plugs and cables for harnessing.
- Install filler-panels in unused slots.
- The power-cable and -connector serve as Power-Breaker. The cable must not exceed 10 feet, disconnect function must be possible without tools.
- Keep the ventilation slots free and check them frequently to avoid an overheating of the system. The cleaning interval of the filter pads depends on the environmental conditions.
- Safety of the operator and the unit depend on following these rules.
- DEWETRON is not responsible for any damage or injury that could result from improper connection or misuse!

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General Information

CAUTION

- The system BIOS is protected by password. Any change in the BIOS may cause a system crash. When the system is booting, do not press ESC-button on keyboard. This may clear the BIOS settings and cause system faults.
- Any change in the file structure as deleting or adding files or directories might cause a system crash.
- Before installing software updates contact DEWETRON or your local distributor. Use only software packages which are released by DEWETRON. Further informations are also available in the internet (http://www.dewetron.com).
- After power off the system wait at least 10 seconds before switching the system on again. Otherwise the system may not boot correct. This prolongs also the life of all system components.

Environmental Considerations

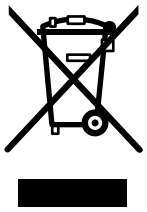
Information about the environmental impact of the product.

Product End-of-Life Handling

Observe the following guidelines when recycling a DEWETRON system:

System and Components Recycling

Production of these components required the extraction and use of natural resources. The substances contained in the system could be harmful to your health and to the environment if the system is improperly handled at it's end of life! Please recycle this product in an appropriate way to avoid an unnecessary pollution of the environment and to keep natural resources.



This symbol indicates that this system complies with the European Union's requirements according to Directive 2002/96/EC on waste electrical and electronic equipment (WEEE). Please find further informations about recycling on the DEWETRON web site www.dewetron.com

Restriction of Hazardous Substances

This product has been classified as Monitoring and Control equipment, and is outside the scope of the 2002/95/EC RoHS Directive. This product is known to contain lead.

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DEWE-31-16 signal conditioning box

- 16 channel mainframe for DEWETRON MDAQ modules
- 1 m cable to DEWE-ORION-16xx series cards
- A/D converter specs: see appendix A
- Wiring to A/D converter: see appendix B



System specifications

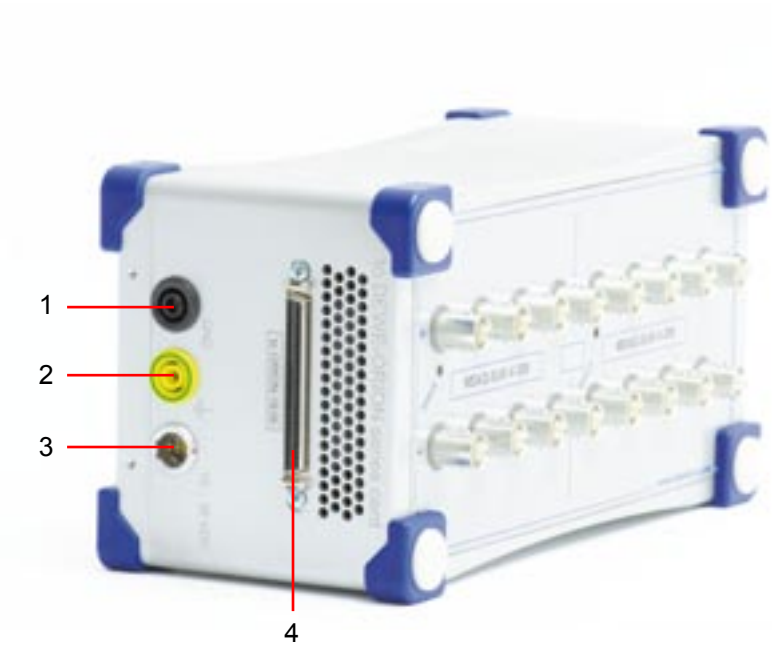
	DEWE-31-16																	
	❑ MDAQ-DIRECT	❑ MDAQ-V-10	❑ MDAQ-V-100	❑ MDAQ-SUB-V-200	❑ MDAQ-SUB-ACC-x	❑ MDAQ-SUB-ACC-A-x	❑ MDAQ-SUB-BRIDGE	❑ MDAQ-SUB-STG	❑ MDAQ-BASE-5	❑ MDAQ-BASE-10	❑ MDAQ-FILT-5-BU	❑ MDAQ-FILT-5-BE	❑ MDAQ-FILT-5-BU-S1	❑ MDAQ-FILT-10	❑ MDAQ-FILT-10-S1	❑ MDAQ-AAF4-5-BU
Channel 0 to 7 Channel 8 to 15	❑	❑	❑	❑ ❑	❑ ❑	❑ ❑	❑ ❑	❑ ❑	❑	❑	❑	❑	❑	❑	❑	❑
Signal output:	❑ up to ±5 V ❑ up to ±10 V															
Power supply:	10 to 36 V_{DC} typically +12 V directly from the slot-panel of the DEWE-ORION card															
Operating temperature:	-5 °C to 50 °C (standard)															
Storage temperature:	-20 °C to +70 °C															
Humidity (operating):	10 % to 80 %, non condensing 5 % to 95 %, rel. humidity															
Vibration:	MIL-STD 810F 514.5 procedure I operating test procedure frequency range: 5 to 200 to 5 Hz; 5 x 12 min each direction displacement amplitude ±3.5 mm (5 to 8.45 Hz) acceleration amplitude 1 g (8.45 to 92 Hz) displacement amplitude 92 to 113 Hz: ±0.029 mm acceleration amplitude 1.5 g (113 to 200 Hz)															
Shock:	MIL-STD 810F 516.5 procedure I non operating test procedure ½ sinus 11 ms 10 g, 3 shocks positive, 3 shocks negative															
Dimensions (W x D x H):	approx. 208 x 67 x 108 mm (8.2 x 2.6 x 4.3 in.) or 208 x 95 x 108 mm (8.2 x 3.7 x 4.3 in.) depending on config.															
Weight:	typ. 1.6 kg (3.5 lbs), depending on configuration															

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Connection

The power supply of the DEWE-31-16 is typically directly provided from the DEWE-ORION-16xx series boards slot panel.Optionally, the DEWE-31-16 comes with an external AC adapter. The remote control of the MDAQ modules is done via RS485 bus, which is already included in the connection cable from the DEWE-31 module to the DEWE-ORION board.

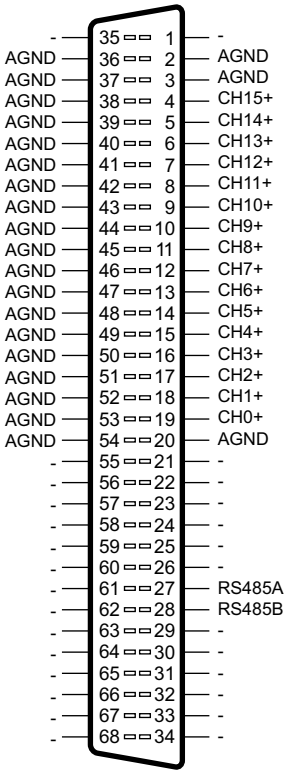




1.) GND
2.) Ground Connector
3.) Power supply connector (10 to 36 V_{DC})
4.) Analog signals connector

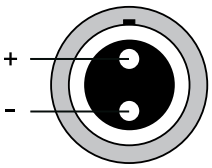
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Analog signals connector



68-pin Amplimite series
(AMP: 174339-5) SCSI II

Power supply connector



10 to 36 V_{DC}

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Main System

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Internal Wiring

Please find information about the MDAQ amplifiers in the attached DEWE-MDAQ series modules manual. The latest version of the manual can be downloaded from:

http://www.dewetron.com/download/index.php?search=MDAQ&catkey=manuals-amplifiers

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Internal Wiring

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EC-Certificate of conformity

Manufacturer: **DEWETRON Elektronische Messgeraete Ges.m.b.H.**

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A-8074 Graz-Grambach Austria

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Fax: +43 316 3070 90
e-mail: sales@dewetron.com
http://www.dewetron.com

Name of product: **DEWE-31-16**

Kind of product: *ADC RACK*

The product meets the regulations of the following EC-directives:

73/23/EEC
"Directive on the approximation of the laws of the Member States relating to electrical equipment designed for use within certain voltage limits amended by the directive 93/68/EEC"

89/336/EEC
"Directive on the approximation of the laws of the Member States relating to electromagnetic compatibility amended by the directives 91/263/EEC, 92/31/EEC, 93/68/EEC and 93/97/EEC

The accordance is proved by the observance of the following standards:

LV	**Safety**	IEC/EN 61010-1:1992/93 IEC/EN 61010-2-031	IEC 61010-1:1992/300 V CATIII Pol. D. 2 IEC 1010-2-031
EMC	**Emissions**	EN 61000-6-4	EN 55011 Class B
	Immunity	EN 61000-6-2	Group standard

Graz, April 25, 2008
Place / Date of the CE-marking

Ing. Herbert Wernigg / Managing director

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