

A

Absolute humidity	3-3-2
Absolute pressure	3-6-1
AC measurement, split-core type transformer	3-7-1
AC voltage module for AC signals	4-10
Active extension cable for ALMEMO® sensors	3-10-1
Adapter cable with free ends	4-5
Additional functions	6-44
Adjustment module for checking the capacitive moisture sensor for materials	3-3-15
Air temperature sensor for heat flow measurement	3-2-3
Air velocity, dynamic pressure measurement	3-5-15
Air volume measurement, with mountable hopper	3-5-22
Alarm cable	5-3, 6-49
Alarm relay, assigning limit values	5-4, 6-48
Alarm value	6-50
All-weather housing, temperature / humidity sensors	3-4-14
ALMEMO® 10x MU connector ZA5590MU	4-5
ALMEMO® adapter cable with free ends	4-5
ALMEMO® atmospheric pressure measuring connector / module	3-4-1
ALMEMO® built-in pressure transducer	3-6-3
ALMEMO® connectors, overview and types	3-3
ALMEMO® DC measuring module	4-12
ALMEMO® DC voltage measuring module	4-12
ALMEMO® digital input cable	4-21
ALMEMO® displacement transducer, displacement tracer	3-6-15
ALMEMO® force transducers	3-6-8
ALMEMO® global radiation sensor	3-4-11
ALMEMO® input / output modules via sockets A1 and A2	1-6
ALMEMO® interface modules	5-9
ALMEMO® measuring instruments, equipment, overview of functions	2-3
ALMEMO® measuring instruments, overview	2-2
ALMEMO® measuring instruments, technical data	2-8
ALMEMO® measuring module for NiCr-Ni thermocouple	4-18
ALMEMO® moisture sensor for materials, capacitive	3-3-14
ALMEMO® output modules	5-2
ALMEMO® output modules, contents	5-1
ALMEMO® ozone sensor	3-9-24
ALMEMO® pH measuring system	3-9-3
ALMEMO® pH measuring system	3-9-3
ALMEMO® pressure measuring connector	3-5-17
ALMEMO® pressure measuring modules	3-6-2
ALMEMO® probe for measuring moisture in wood	3-3-19

ALMEMO® rainfall and precipitation sensor	3-4-8
ALMEMO® redox measuring system	3-9-6
ALMEMO® sensors, contents	3-1
ALMEMO® sensors, overview and measuring ranges	3-3
ALMEMO® special connectors	4-6
ALMEMO® speed meter	3-6-24
ALMEMO® standard connectors	4-2
ALMEMO® system, introduction	1-2
ALMEMO® thermoanemometers	3-5-4
ALMEMO® true / effective value current module	4-15
ALMEMO® true / effective value voltage module	4-15
ALMEMO® turbine flow meters	3-6-17
ALMEMO® version 5	1-4
ALMEMO® wind direction sensor	3-4-6
ALMEMO® wind velocity sensor	3-4-3
Ambient radiation	3-1-8
AMR-Control, PC terminal, configuration software	6-3
Analog output cable	5-2
Analog output functions	6-48
Assigning limit values to alarm relays	6-50
Assigning numbers to measuring operations	6-36
Atmospheric density	3-5-15
Atmospheric pressure compensation	6-7
Atmospheric pressure compensation, O ₂ probe for water	3-9-30
Atmospheric pressure compensation, psychrometer	3-3-8
Atmospheric pressure correction, dynamic pressure measurement	3-5-16
Atmospheric pressure measuring module / connector, technical data	3-4-2
Atmospheric pressure, ALMEMO® atmospheric pressure measuring module / connector	3-4-1
Atmospheric pressure, input	6-7
Atmospheric pressure, output	6-6
Averaging	6-14
Averaging mode	6-14
Axial turbine flow meter, installing	3-6-18
Axial turbine flow meter, technical data	3-6-20/-21

B

Barcode reader	5-10
Basic principles, conductivity measurement	3-9-9
Basic principles, dynamic pressure measurement	3-5-15
Basic principles, force measurement	3-6-8
Basic principles, heat flow measurement	3-2-1
Basic principles, humidity measurement	3-3-2
Basic principles, infrared measurement	3-1-8

Basic principles, measurement of moisture in materials	3-3-13
Basic principles, measuring oxygen in water	3-9-27
Basic principles, pressure sensors	3-6-1
Basic principles, thermal radiation	3-1-8
Basic values, thermocouples	3-1-2
Bluetooth wireless modules	5-24
Bridge power supply	4-8
Buffer solution, pH	3-9-4/-8

C

Cable extension for sensors	3-10-1
Cables, color coding	4-5
Calculation function	6-12
Calibration resistance, force transducers	3-6-9
Calibration value, heat flow plates	3-2-2
Calibration, conductivity probe for moisture in wood	3-3-20
Calibration, force transducers	3-6-10
Calibration, pH probe	3-9-4
Capacitive humidity sensor, maintenance and calibration	3-3-4
Capacitive humidity sensor, measuring principle, sensors	3-3-3
Capacitive moisture sensor for materials, checking the probes	3-3-15
Capacitive moisture sensor for materials, measuring principle, selecting materials	3-3-14
Capacitive moisture sensor for materials, programming the basic value, measuring procedure	3-3-16
Capacitive moisture sensor for materials, technical data	3-3-18
Carbon dioxide measurement	3-9-16
Carbon monoxide measurement	3-9-13
CCC dew-point method according to Heinze	3-3-23
Centering method, volume flow measurement	3-5-24
Changing the baud rate	6-52
Chemical probes	3-9-1
CO measuring technology	3-9-13
CO probe for gases	3-9-14
CO ₂ probe for gases	3-9-17/-18
CO ₂ probe for gases, measuring principle, ALMEMO® sensor	3-9-16
Cold junction compensation, deactivating	6-13
Cold junction temperature, measuring with external sensor	6-32
Cold junction temperature, stipulating	6-32
Cold junction, thermocouples	3-1-3
Color coding on cables	4-5
Column format	6-28
Comments	6-13
Communicating with the computer	6-56

Compressibility of the air	3-5-15
Compression sensors	3-6-11
Computer terminal, AMR-Control	6-3
Conductivity measurement, basic principles	3-9-9
Conductivity probe for moisture in wood, calibration, technical data	3-3-20
Conductivity probe for moisture in wood, measuring principle, measurement	3-3-19
Conductivity probe for moisture in wood, replacing the electrodes	3-3-20
Conductivity probe, maintenance, adjustment, accessories, dimensions	3-9-11
Conductivity probe, technical data	3-9-12
Conductivity probe, temperature compensation	3-9-10
Configuration for ALMEMO® output modules	6-50
Configuration software, AMR-Control	6-3
Configuring the number of channels	6-53
Connecting force transducers	4-8
Connecting NTC sensors	4-3
Connecting potentiometers	4-7
Connecting resistance sensors	4-3
Connecting thermocouples	4-2/-6
Connecting third-party devices via interface connectors	4-22
Connecting wire strain gauges	4-8
Connecting your own sensors and electrical signals	4-2
Connecting your own sensors and electrical signals, contents	4-1
Connectors, overview, type	3-3
Contents, ALMEMO® output modules	5-1
Contents, ALMEMO® sensors	3-1
Contents, connecting your own sensors and electrical signals	4-1
Contents, operation via the serial interface	6-1
Continuous measured value output	6-23
Conversion of units	6-13
Conversion rate	6-25
Conversion rate, 50 measuring operations per second	6-25
Conversion rate, output	6-5
Corrected measured value	6-15
Correction factors for temperature and atmospheric pressure, dynamic pressure measurement	3-5-16
Correction values	6-15
Cross-section surface	3-5-22
Current measurement	4-6
Current meter scanning	3-7-3
Cycles, output	6-5
Cyclic measured value output	6-23
Cylindrical probes	3-5-17

D

Dark correction, optical probes	3-8-7
Data cable, RS232 / V24	5-9
Data format	6-3
Data memory for measured values	6-36
Data transmission by modem	5-11
Data transmission via RS422 interface	5-16
Date	6-8
Decimal point setting	6-16
Decimal point shift	6-16
Delete measured values on startup	6-54
Determining the coefficients, heat flow / temperature difference	3-2-3
Device addressing	6-5
Device configuration, output	6-6
Device designation	6-6
Device programming	6-5
Device version, output	6-52
Dew detector, description, technical data	3-3-24
Dew-point diagram for compressed air	3-3-28
Dew-point measuring, mirror method	3-3-23
Dew-point sensor FH A646DTC1	3-3-25
Dew-point sensors, measuring principles	3-3-23
Dew-point temperature	3-3-2
Dielectric constant of water	3-3-14
Differential pressure	3-6-1
Differential voltage measuring, changing the input multiplexer	6-45
Differential voltage measuring, with bridge power supply	4-8
Diffuse celestial radiation, global radiation sensor	3-4-11
Digital input cable	4-21
Digital output modules	5-6
DIN k-value	3-2-1
Displacement transducer, displacement tracer, measuring principle	3-6-13
Displacement transducer, displacement tracer, technical data	3-6-16
Displacement transducer, displacement tracer, uses, sensors	3-6-15
Displayed measured value	6-15
Divider connector for voltage measurements up to 26 volts	4-7
Driving output relays via the interface	6-51
Driving output relays via the interface	6-51
Dry chamber method, measurement of moisture in materials	3-3-13
Dynamic pressure	3-5-15
Dynamic pressure measuring modules, basic principles	3-5-15
Dynamic pressure measuring modules, technical data	3-5-19

Dynamic pressure measuring modules, zero-point adjustment, temperature compensation 3-5-18

E

Electrical converters 3-7-1
Electrically isolated measuring modules for AC/DC signals 4-11
Electromagnetic compatibility (EMC), thermocouples 3-1-2
Element flags 6-46
Emission factor table, spectral emissivity 3-1-12
Emission factor, ambient temperature 3-1-8/-11
Emissivity 3-1-8
Entering the setpoint, force transducers 3-6-10
Enthalpy 3-3-2
Ethernet RS422 network driver 5-19
ETX software handshake 6-56
Experimental k-value 3-2-1
Exponent 6-16
Extended sensor programming 6-44
Extension cable for ALMEMO® sensors 3-10-1
Extension cable for ALMEMO® sensors 3-10-1
External air temperature, heat flow measurement 3-2-1
External control of analog output 6-49
External triggering 6-31

F

Factor 6-16
Fahrenheit, changing the units 6-13
FD 8214 Temperature-compensated pressure transducer 3-6-3
FD 9912-xx Pitot tubes 3-5-19
FD A602 Pressure measuring connector 3-5-17
FD A602L Low-cost pressure transducer 3-6-5
FD A612 Pressure measuring module 3-6-2
FD A612-MA Atmospheric pressure measuring module 3-4-1
FD A612-SA Atmospheric pressure measuring connector 3-4-1
FD A612LxAK Temperature measurement for refrigerants (absolute pressure) 3-6-6
FE A604 Split-core type transformer 3-7-2
Feet per minute, changing units 6-13
FH A636-MF Conductivity probe for moisture in wood 3-3-19
FH A646 Capacitive humidity sensor 3-3-3
FH A646-AG Temperature / humidity sensor, all-weather housing 3-4-14
FH A646DTC1 Dew-point sensor 3-3-25
FH A696-MF Capacitive moisture sensor for materials 3-3-14
FH A936-WD Water detection probe 3-3-21
FH A946-1 Dew detector 3-3-24

FI A628-x Infrared sensors	3-1-9
Field bus coupler ZA5079 MPI	5-28
Final value correction, force transducers	3-6-10
FK Axxx Compression sensors	3-6-11
FL A603 LDM2 Luminance probe head	3-8-15
FL A603 LSM4 Light flux probe head	3-8-16
FL A603 PS4/PS5 Photosynthesis probe head	3-8-21
FL A603 RW4 Radiometric probe head	3-8-20
FL A603 UVxx UVA probe head	3-8-18/-19
FL A603 VLx Lux probe head	3-8-17
FL A613-GS Global radiation probe	3-8-13
FL A613-UV UV probe	3-8-9
FL A613-UVA UVA probe	3-8-11
FL A613-UVB UVB probe	3-8-12
FL A613-VL Lux probe	3-8-8
FL A613-VLA V lambda radiation probe	3-8-14
FL A628-S Global radiation sensor	3-4-11
Flow meter, measuring principle	3-6-17
Flow sensors, selection, operating temperatures	3-5-1
FN A846 Hand-held psychrometer	3-3-8
FN A846-3 Stationary NTC psychrometer	3-3-10
FN A846-WB Psychrometer for WBGT measurement	3-1-7
Force measurement, measuring principle	3-6-9
Force transducers, basic principles	3-6-8
Force transducers, tare function, calibration	3-6-10
Force transducers, technical data	3-6-11
Formats, output protocols, measuring point scans	6-27
FP A805-GTS Globe thermometer	3-1-7
FP A836-3 Stationary Pt100 psychrometer	3-3-10
FQ A0xx Heat flow plates	3-2-2
FR A616D, FR8616D Rainfall detector	3-4-9
FR A916 Rainfall and precipitation sensor	3-4-8
FR8616D, FRA616D Rainfall detector	3-4-9
Frequency measuring module - for frequency and pulse signals	4-20
FT A430-1 Air temperature sensor for heat flow measurement	3-2-3
FU A919-2 Speed meter	3-6-24
FU A919-SZx Optical probe for current meters	3-7-3/-4
Full radiators	3-1-8
Function channels	6-12
FV A605 TA Thermoanemometer	3-5-8
FV A614 Wind direction sensor	3-4-6
FV A6152 Wind velocity sensor	3-4-3
FV A645-TH Thermoanemometer	3-5-6
FV A915 Rotating vanes	3-5-20

FV A915-VTH Axial turbine flow meter	3-6-21
FV A915-VTH25 Axial turbine flow meter	3-6-19
FV A935-TH Thermoanemometer	3-5-5
FW Axxx Displacement transducer and displacement tracer	3-6-15
FY 9600-O3 O ₃ probe	3-9-24
FY A600-CO CO probe for gases	3-9-14
FY A600-CO2 CO ₂ probe for gases	3-9-18
FY A640-O2 O ₂ probe for water	3-9-27
FY A641-LFPx Conductivity probe	3-9-10
FY96PH-xx pH probe	3-9-8
FY96RX-xx Redox probe	3-9-8
FYA600CO2H	3-9-17
FYA600O2	3-9-20

G

Gain adjustment	6-15
Gain correction	6-15
Global radiation	3-8-6
Global radiation probe	3-8-13
Global radiation sensor	3-4-11
Global radiation sensor, calibration	3-4-12
Global radiation sensor, determining the intensity of solar radiation	3-4-11
Global radiation sensor, maintenance and servicing, technical data	3-4-12
Global radiation sensor, measuring diffuse celestial radiation	3-4-11
Global radiation sensor, measuring short-wave radiation balance	3-4-12
Globe thermometer	3-1-7

H

Hand-held carbon dioxide sensor FYA600CO2H	3-9-17
Heat flow density	3-2-1
Heat flow measurement, air temperature sensor	3-2-3
Heat flow measurement, arranging and programming the sensors	3-2-3
Heat flow measurement, attaching the sensors	3-2-2
Heat flow measurement, surface temperature	3-2-3
Heat flow plates, measuring principle, calibration value	3-2-2
Heat-exposed workplaces, stress	3-1-7
Hectopascal	3-4-1
Humidity measurement, basic principles	3-3-2
Humidity sensor, capacitive, measuring principle, sensors, measurable variables	3-3-3
Humidity sensor, selection, overview	3-3-1
Hysteresis	6-8

I

Illuminance	3-8-2/-5
-------------	----------

Importing a file into a spreadsheet program	6-4
Infrared measurement, beam paths, measuring spot, sensor programming	3-1-8
Infrared measurement, sensors	3-1-9
Infrared sensors, measuring principle	3-1-8
Input multiplexer, changing	6-45
Input of programming parameters	6-14
Intelligent ALMEMO® extension cable	3-10-1
Intensity of solar radiation	3-4-11
Interface configuration	6-3
Interface input cable ZA9919AK for third-party devices	4-22
Interface protocol	6-3
Internal atmospheric temperature, heat flow measurement	3-2-1
International temperature scale ITS 90	3-1-6
Introduction, ALMEMO® system	1-2
Irradiation intensity	3-8-2/-5

K

Keypad locking	6-9
Knots	3-4-2

L

Light flux	3-8-1
Light flux probe head	3-8-16
Light measurement	3-8-1
Limit values	6-14
List format	6-27
List format output	6-27
Locking, sensor programming	6-18
Luminance	3-8-2
Luminance probe head	3-8-15
Luminous intensity	3-8-1
Lux probe	3-8-14
Lux probe head	3-8-17
Lux probe, measuring principle, spectral adaptation, technical data	3-8-8

M

Mains frequency noise suppression	6-54
Maximum value	6-19
mbar	3-4-1
Measurable variables, capacitive humidity measurement	3-3-3
Measurable variables, psychrometer	3-3-7
Measured data, output	6-39
Measured data, recording	6-38
Measured value output	6-20

Measured value, correcting, outputting	6-19
Measured value, setting to zero	6-15
Measured values list, outputting	6-19
Measured values, acquiring	6-19
Measured values, deleting all	6-19
Measured values, deleting on startup	6-54
Measurement accuracy, NTC sensors	3-1-5
Measurement accuracy, Pt100 sensors	3-1-5
Measurement accuracy, thermocouples	3-1-4
Measurement of moisture in materials, basic principles	3-3-13
Measurement of moisture in materials, capacitive, mineral-based construction materials, timber, paper, cardboard	3-3-14
Measurement of moisture in materials, conductivity principle	3-3-19
Measuring amplifier module with switch for calibration resistance	3-6-9
Measuring cycle	6-25
Measuring functions in measuring point scans	6-31
Measuring modules, electrically isolated, for AC/DC signals	4-11
Measuring operations	6-19
Measuring operations, starting and stopping	6-27
Measuring optical variables, basic principles	3-8-1
Measuring oxygen in air	3-9-20
Measuring oxygen in water, basic principles	3-9-27
Measuring point designation	6-13
Measuring point scan	6-20
Measuring point scan, end date and time-of-day	6-29
Measuring point scan, start date and time-of-day	6-29
Measuring point, selection	6-19
Measuring points, changing the number	6-53
Measuring points, configuring the number	6-53
Measuring principle, capacitive humidity sensors	3-3-3
Measuring principle, capacitive moisture sensor for materials	3-3-14
Measuring principle, conductivity probe for moisture in wood	3-3-19
Measuring principle, dew-point sensors	3-3-23
Measuring principle, displacement transducer, displacement tracer	3-6-13
Measuring principle, global radiation sensor	3-4-11
Measuring principle, heat flow plates	3-2-2
Measuring principle, infrared sensors	3-1-8
Measuring principle, NTC sensors	3-1-5
Measuring principle, ozone sensor	3-9-24
Measuring principle, psychrometer	3-3-7
Measuring principle, rainfall and precipitation sensor	3-4-8
Measuring principle, speed meter	3-6-23
Measuring principle, thermoanemometer	3-5-4
Measuring principle, thermocouples	3-1-2

Measuring principle, turbine flow meters	3-6-17
Measuring principle, water detection probe	3-3-21
Measuring principle, wind velocity sensor	3-4-2
Measuring radiation, infrared measurement	3-1-8
Measuring ranges	2-5
Measuring spot diameter, infrared sensors	3-1-10
Measuring, ozone sensor	3-9-24
Measuring, psychrometer	3-3-7
Memory activation in the measuring cycle	6-22
Memory activation, output	6-5
Memory connector	6-40
Memory location, output	6-5
Memory output to serial interface	6-39
Memory output, selective	6-39
Memory reading unit ZA1409SLG	6-41
Memory, time excerpt, end date and time-of-day	6-39
Meteorological sensors	3-4-1
Minimum sensor supply voltage	6-47
Minimum value	6-20
Mixture ratio	3-3-2
Modem adapter connector	5-11
Modem, analog	5-11
Modem, GSM	5-11
Modem, ISDN	5-11
Moisture in wood, conductivity probe	3-3-19
Moisture sensors for materials	3-3-13
Mountable hopper for measuring the volume of air	3-5-22
MS-EXCEL, importing data	6-4
MT 84x5, thermoanemometer transmitter	3-5-13
Multiplexer, changing	6-45

N

Natural humid temperature	3-1-7
Nautical mile	3-4-2
Network cable	5-14
Network cable with optic fiber	5-15
Network distributor, RS422	5-17 / -20
Network driver, Ethernet RS422	5-21
Network driver, RS232-RS422	5-19
Network driver, RS232-RS422, with optic fiber	5-17
Network measurement, volume flow measurement, VDI/VDE 2640	3-5-23
Networking of measuring instruments	5-13
NiCr-Ni thermal connector	4-6
Non-selective radiators	3-1-8

NTC sensors, connecting	4-3
NTC sensors, measuring principle, measurement accuracy	3-1-5
NTC sensors, resistance table	3-1-6
Number output from memory	6-39
Numbers list, outputting	6-36
Numbers, entering, deleting, outputting	6-36
O	
O ₂ probe for gases, measuring principle, ALMEMO® sensor	3-9-20
O ₂ probe for gases, technical data	3-9-23
O ₂ probe for water	3-9-27
O ₂ probe for water, atmospheric pressure compensation, calibration	3-9-30
O ₂ probe for water, maintenance and servicing	3-9-33
O ₂ probe for water, technical data, accessories	3-9-34
O ₃ probe, maintenance, technical data	3-9-26
O ₃ probe, measuring principle, ALMEMO® ozone sensor, calculation formulae	3-9-24
O ₃ probe, uses, installation notes, connection plan	3-9-25
Object radiation	3-1-9
Once-only measured value output	6-22
One-bar measuring chain, pH probe	3-9-1
Operating parameters	6-54
Operation via a computer terminal	6-3
Operation via the serial interface	6-3
Optic fiber, network cable	5-15
Optic fiber, RS232 data cable	5-10
Optic fiber, RS422 network distributor	5-17
Optical probe for current meters	3-7-3
Optical probes	3-8-1
Optical probes as per DIN class B	3-8-15
Optical probes for indoor applications, handling, dark correction	3-8-7
Optical probes for outdoor applications, handling, maintenance	3-8-10
Output cables / modules	5-2, 6-50
Output format, setting	6-27
Output function, changing	6-47
Output, all programming	6-5
Output, atmospheric pressure	6-7
Output, device configuration	6-6
Output, device version	6-52
Output, extended sensor programming	6-44
Output, measuring point programming	6-10
Overpressure	3-6-1
Overview of functions, ALMEMO® measuring instruments	2-3
Ozone measurement, ALMEMO® ozone sensor	3-9-24

P

Partial vapor pressure, capacitive humidity sensors	3-3-3
Partial vapor pressure, psychrometer	3-3-7
Peak values	6-19
pH and redox probes	3-9-1
pH and redox probes, treatment, storage, useful life, servicing	3-9-7
pH measurement, pH measuring chains	3-9-1
pH probe, calibration	3-9-4
pH probe, temperature compensation	3-9-5
pH probes and accessories	3-9-8
Photometry	3-8-1
Photosynthesis probe head	3-8-21
Physical transducers	3-6-1
Pitot tubes	3-5-19
Point method, volume flow measurement	3-5-22
Prandtl Pitot tube	3-5-15
Pressure measuring modules, technical data	3-6-2
Pressure sensors, basic principles, versions	3-6-1
Pressure transducer (absolute) for refrigerants FDA612LxAK	3-6-6
Pressure transducer (thread connection), technical data	3-6-4/-5
Print cycle	6-24
Print cycle factor	6-48
Print header	6-6
Probe head for measuring irradiation	3-8-14
Probes for measuring optical variables	3-8-1
Programming example in BASIC, communicating with the computer	6-56
Programming the emission factor and the ambient temperature	3-1-11
Programming values, entering	6-14
Programming, output all	6-5
Programming, output per measuring point	6-9
Psychrometer, atmospheric pressure compensation	3-3-8
Psychrometer, measuring principle, measurable variables	3-3-7
Psychrometer, technical data	3-3-12
Pt100 psychrometer	3-3-10
Pt100 sensor, resistance table	3-1-6
Pt100 sensors, measuring principle, measurement accuracy	3-1-5
Pt1000, switching over the measuring current	6-46
Pulse measurement	4-8, 6-29
Pyranometer	3-4-11

R

Radiancy	3-8-2
Radiation balance, global radiation sensor	3-4-12
Radiation capacity	3-8-2

Radiometric probe head	3-8-20
Radiometry	3-8-2
Rainfall and precipitation sensor, measuring principle	3-4-8
Rainfall and precipitation sensor, technical data	3-4-8
Rainfall detectors, FR8616D, FRA616D	3-4-9
Recording cable	5-2
Redox measurement	3-9-6
Reference measuring point	6-12
Reference value	6-16
Reflection coefficient	3-1-8
Reflective spots, speed meter	3-6-24
Refrigerants, temperature measurement	3-6-6
(absolute pressure) FD A612LxAK	
Relative humidity	3-3-2
Relative pressure	3-6-1
Relay adapter	5-3
Relay adapter, analog, RTA2	5-6
Relay trigger adapter, analog, RTA	5-4
Relay trigger cable	5-3, 6-49
Replacing the cotton stocking	3-3-9/-11
Resistance sensors	3-1-5
Resistance sensors, connection	4-3
Resistance table, Pt100, NTC	3-1-6
Retroreflective photoelectric sensor, speed meter	3-6-23
Ring memory, configuring	6-54
Rotating vanes, equipment, technical data	3-5-21
Rotating vanes, measuring principle, measurement	3-5-20
RS232 data cable	5-9
RS232 data cable with optic fiber	5-10
RS232-RS422 adapter as network driver	5-19
RS232-RS422 network driver with optic fiber	5-17
RS422 interface	5-16
RS422 network distributor	5-20
RS422 network distributor with optic fiber	5-17

S

SA0000Q2Special version (50 measuring operations per second)	6-25
Saturation vapor pressure	3-3-2
Saving data in the memory connector	6-37
Saving data to external storage media	6-37
Scaling, analog output	6-48
Scaling, measured values	6-16
Second analog output	6-49
Selecting a measuring instrument / module	6-5

Selecting a measuring point	6-19
Selecting an output channel	6-5
Selecting flow sensors	3-5-1
Selecting humidity sensors	3-3-1
Selecting temperature sensors	3-1-1
Selecting the input channel	6-9
Selecting the measuring range	6-10
Selective memory output	6-39
Sensor breakage detection, deactivating	6-47
Sensor locking	6-18
Sensor programming	6-9
Sensor supply in connector	4-2
Sensor supply in connector	4-4/-5/-6/-9
Sensor supply voltage, monitoring	6-47
Sensor supply, 12 volts, in connector	4-9
Sensors, contents	3-1
Sensors, overview, measuring ranges	3-3
Shunt connector for current measurement	4-6
Side-by-side output	6-27
Smart media card	6-40
Software switch, conversion rate	6-24
Solar radiation, intensity	3-4-11
Special functions	6-44
Special measuring ranges	2-7
Special version SA0000Q2 (50 measuring operations per second)	6-25
Spectral emissivity of certain materials	3-1-12
Speed measurement	4-22
Speed meter, measuring principle	3-6-23
Speed meter, technical data	3-6-25
Split-core type transformer	3-7-1
Split-core type transformer	3-7-1
Spreadsheet software, importing files	6-4
Sprung formula, psychrometer	3-3-7
Starting and stopping by means of external triggering	6-30
Starting and stopping by means of limit values	6-29
Starting and stopping measuring point scans	6-27
Starting and stopping via interface	6-27
Starting and stopping with start date and time-of-day, and end date and time-of-day	6-29
Static pressure	3-5-15
Stefan Boltzmann law	3-1-8
Stipulating the channel from analog output	6-48
Stress in heat-exposed workplaces	3-1-7
Structural statics sensors	3-2-1

Summation, pulse measurement	6-31
Surface measuring method, volume flow measurement	3-5-24

T

Table format	6-27
Tare function, force transducer	3-6-10
Technical data, ALMEMO® measuring instruments	2-8
Technical data, atmospheric pressure measuring module / connector	3-4-2
Technical data, axial turbine flow meter	3-6-20/-21
Technical data, built-in pressure transducers	3-6-4/-5
Technical data, capacitive humidity sensor	3-3-5
Technical data, capacitive moisture sensor for materials	3-3-18
Technical data, CO probe for gases	3-9-15
Technical data, CO ₂ probe for gases	3-9-18/-19
Technical data, conductivity probe	3-9-12
Technical data, conductivity probe for moisture in wood	3-3-20
Technical data, current meter probe	3-7-5
Technical data, dew detector	3-3-24
Technical data, displacement transducer, displacement tracer	3-6-16
Technical data, dynamic pressure measuring modules	3-5-19
Technical data, force transducers	3-6-11
Technical data, global radiation probe	3-8-13
Technical data, global radiation sensor	3-4-13
Technical data, interface modules	5-27
Technical data, lux probe	3-8-8
Technical data, O ₂ probe for gases	3-9-23
Technical data, O ₂ probe for water	3-9-34
Technical data, O ₃ probe	3-9-26
Technical data, pH transducer	3-9-8
Technical data, pressure measuring modules	3-6-2
Technical data, psychrometer	3-3-12
Technical data, rainfall and precipitation sensor	3-4-8
Technical data, rotating vanes	3-5-21
Technical data, speed meter	3-6-25
Technical data, split-core type transformer	3-7-2
Technical data, thermoanemometer module	3-5-7
Technical data, UV probe, FLA613-UV	3-8-9
Technical data, UVA probe	3-8-11
Technical data, UVB probe	3-8-12
Technical data, water detection probe	3-3-22
Technical data, wind direction sensor	3-4-6
Technical data, wind velocity sensor	3-4-4
Temperature / humidity sensors in all-weather housing	3-4-14
Temperature compensation	6-7

Temperature compensation, dynamic pressure measurement	3-5-16
Temperature compensation, dynamic pressure measuring modules	3-5-18
Temperature compensation, pH probe	3-9-5
Temperature measurement for refrigerants (absolute pressure) FD A612LxAK	3-6-6
Temperature scale IPTS-68	3-1-6
Temperature sensors, selecting	3-1-1
Tensile force sensors	3-6-12
Thermal conductivity measurement	3-2-4
Thermal transfer coefficient	3-2-1
Thermal transition coefficient	3-2-1
Thermal transmittance coefficient	3-2-1
Thermoanemometer	3-5-4
Thermoanemometer transmitter MT 84x5	3-5-13
Thermoanemometer, measuring operations, technical data	3-5-7
Thermoanemometer, measuring principle	3-5-4
Thermocouples, cold junction	3-1-3
Thermocouples, connection	4-2/-6
Thermocouples, measuring principle, basic values	3-1-2
Thermocouples, uses, measurement accuracy	3-1-4
Thermoelectric effect	3-1-2
Thermoelectric voltage, thermocouples	3-1-2
Time frame, memory output	6-39
Time-based averaging	3-5-23, 6-31
Time-of-day	6-8
Torr	3-4-1
Total radiation	3-1-8
Transferring data to a file	6-4
Trigger cables	5-3, 6-29/41
Turbine flow meter, installation notes	3-6-18
Turbine flow meter, measuring principle	3-6-17
Two-wire transmitter	4-9

U

Units of atmospheric pressure	3-4-1
Units, changing and converting	6-13
USB-RS232 converter	5-11
UV probe, measuring principle, spectral evaluation, technical data	3-8-9
UVA probe	3-8-11
UVA radiation	3-8-6
UVA radiation probe head	3-8-18/-19
UVB probe	3-8-12
UVB radiation	3-8-6

V

V24 data cable	5-9
Voltage measurement with 12-volt sensor supply	4-9
Voltage measurement with ALMEMO® standard connector	4-4
Voltage table, thermocouples	3-1-2
Volume flow measurement, formula, with centering probe	3-5-22
Volume flow, determined from average value and cross-section	3-5-22

W

Wall temperature, external, heat flow measurement	3-2-1
Wall temperature, internal, heat flow measurement	3-2-1
Water detection probe,	3-3-22
checking the probes and the measuring process	
Water detection probe, measuring principle	3-3-21
Water detection probe, replacing the electrodes, technical data	3-3-22
Water tank, filling, psychrometer	3-3-9/-11
WBGT sensor, arranging and programming	3-1-7
Wet-bulb globe temperature (WBGT) measurement	3-1-7
Wind direction sensor, technical data	3-4-6
Wind scale	3-4-2
Wind velocity sensor, measuring principle	3-4-2
Wind velocity sensor, technical data	3-4-4
Wireless modules, Bluetooth	5-24

Y

Year indication	6-54
-----------------	------

Z

ZA 1000-xx Relay trigger cable	5-3
ZA 1409-SLG Memory reading unit	6-41
ZA 1601-RK Recording cable	5-2
ZA 1709-AS Modem adapter connector	5-11
ZA 1709-GSM ALMEMO® modem, GSM	5-11
ZA 1709-MK ALMEMO® modem, analog	5-11
ZA 1719-BTxx Bluetooth wireless modules	5-24
ZA 1904-SSx Memory connector	6-40
ZA 1909 DK USB-RS232 converter	5-11
ZA 1909-DK ALMEMO® RS232 data cable	5-6
ZA 1909-DKL ALMEMO® RS232 data cable with optic fiber	5-10
ZA 1945-DK ALMEMO® Ethernet cable	5-12
ZA 1999-NK ALMEMO® network cable	5-14
ZA 1999-NKL Network cable with optic fiber	5-15
ZA 5079-MPI Field bus coupler	5-28
ZA 5099-AS Network driver, RS232-RS422 adapter	5-17

ZA 5099-NTL Network driver, RS232-RS422, with optic fiber	5-16
ZA 5099-NVB RS422 network distributor	5-20
ZA 5099-NVE Network driver, Ethernet RS422	5-21
ZA 5099-NVL RS422 network distributor with optic fiber	5-17
ZA 5590MU ALMEMO® 10x MU connector	4-5
ZA 7909-BCL Barcode reader	5-10
ZA 8000-RTA Relay trigger adapter, analog, RTA	5-4
ZA 8000-RTA2 Relay adapter, analog, RTA2	5-6
ZA 9000-AK ALMEMO® adapter cable with free ends	4-5
ZA 9000-EK ALMEMO® digital input cable	4-21
ZA 9000-ES ALMEMO® digital input cable	4-22
ZA 9000-FS ALMEMO® standard connector	4-2/-4
ZA 9020 VK ALMEMO® extension cable for NiCr-Ni sensors	3-10-1
ZA 9020-FS ALMEMO® NiCr-Ni thermal connector	4-6
ZA 9030-FS ALMEMO® connector for Pt100	4-3
ZA 9040-FS ALMEMO® connector for NTC	4-3
ZA 9060-VK ALMEMO® extension cable for sensors	3-10-1
ZA 9060-VKC Intelligent ALMEMO® extension cable	3-10-1
ZA 9601-FS ALMEMO® shunt connectors for current measurement	4-6
ZA 9602-FS ALMEMO® divider connector for voltages up to 26 volts	4-7
ZA 9603-AK ALMEMO® AC voltage module for AC signals	4-10
ZA 9610-AKY Transducer for pH probes	3-9-3/-8
ZA 9612-FS Measuring amplifier module for calibration resistance	3-6-9
ZA 9640-AKY Transducer for pH probes, with temperature sensor	3-9-6/-8
ZA 9650-FS ALMEMO® connector with 5-volt voltage supply	3-6-9, 4-8
ZA 9900 AB ALMEMO® DC voltage measuring module	4-12
ZA 9901 AB ALMEMO® DC measuring module	4-12
ZA 9903 AB ALMEMO® true / effective value voltage module	4-15
ZA 9904 AB ALMEMO® true / effective value current module	4-15
ZA 9909-AK ALMEMO® frequency measuring module	4-20
ZA 9919-AK ALMEMO® interface connector for third-party devices	4-22
ZA 9920 AB Measuring module for NiCr-Ni thermocouple	4-18
ZA5590MU ALMEMO® 10x MU connector	4-5
ZA960xFSxV12 Voltage measurement with 12-volt sensor supply	4-9
ZB 1709-M PC modem, analog	5-11
ZB 2280-RA Relay adapter	5-4
ZB 9640-xx Accessories for O ₂ probe for water	3-9-34
ZB 9696-PE Adjustment module for the capacitive moisture sensor	3-3-17
ZB 96LF-RL Reference solution, conductivity	3-9-11
ZB 98PH-PLx pH buffer solution	3-9-4/-8
ZB 98RXPL2 Redox buffer solution	3-9-6/-8
Zero-point adjustment	6-15
Zero-point adjustment, dynamic pressure measuring modules	3-5-18
Zero-point correction	6-15
Zero-setting cable	5-3
ZV 9915-LM Mountable hopper for measuring the volume of air	3-5-22