



PRODUCT MANUAL

Digital recorder with a touchscreen ZEPAREX 560 Type 560

APPLICATION

- for remote measurement and recording of up to 18 physical quantities of various ranges, eg for displaying and recording data on water treatment, heat treatment and process technology, or as equipment for resistance testing in the environment
- type as a of replacement for Zeparex 559
- For the environment, where mechanical resistance is required pursuant to EN 60068-2-6 (class AH2) and seismic capability of the electrical equipment of the safety system of the nuclear power stations pursuant to IEC 980 (MVZ level SL-2)

Digital recorders are rated products pursuant to the Directive 2014/35/EU and 2014/30/EU of the European Parliament and the Council and EU Declaration of Conformity **EU-560000-EN** is issued for them..

DESCRIPTION

The recorder offers unmatched input accuracy with a total sampling rate of 125 ms up to 18 input channels simultaneously. Input channels are freely configurable to suit your process requirements.

Each device has an intuitive touchscreen display that allows operators to view process data in a clear view. The recorder has built-in flash memory (96Mb), Ethernet communication capability, and CF card slot and USB flash drive (up to 8Gb). Data is stored in a tamper-resistant binary format that can be used to secure a long-term recording of your processes. The recorder is designed for today's world-connected networks and provides access via a local network, Intranet or the Internet.



TABLE 1 - AVAILABLE EQUIPMENT

Display	5,5" 1/4 VGA
Channels	6 – 12 – 18
Relay	up to 12 (3 – 6 – 9 – 12), switch contacts
Event inputs	24 (6 per optional card)
Groups	up to 12 (6 groups standard)
Auditor features	Auditor or Audit trail
Virtual channels*	36, 96, 128
Timers	Fitted as standard
Alarms	4 per channel
Bath	Optional
Bridge-remote viewing software	Lite version standard (full version optional)
Screen builder	optionally up to 24
Security	Unlimited unique user names with configurable access permissions and passwords
Configuration software	Standard
Review/Quickchart Lite Software	Lite version standard (full version optional)
Standard views	Vertical and horizontal trending, Vertical and horizontal bargraphs, Circular trend and numeric values

* Virtual channels can be configured as math, totalisers, counters or comms.

Data logging an archiving

The recorders have internal Flash memory for secure data storage. They are also able to accept various removable media types (Compact Fhash, SD card or UBS flash disc.) Data stored within the internal memory can be archived to the removable media on demand or at pre-set intervals. The device will give an indication of how long its internal memory and that of the removable media installed will last according to the configuration of the recorder. Approximate continuous recording time for one group of six channels is shown in Table 1.

The recorder can be configured to archive to the removable media and/or over Ethernet. Archiving files over Ethernet effectively gives a secure, infinite archiving capacity.

Time synchronisation (SNTP)

The recorder support Simple Network Time Protocol with, when enabled, updates the device time every 15 minutes from the configured SNTP server. The unit can also act as a Unicast. SNTP server on the network, allowing client instruments to synchronise with device to a resolution of one millisecond.

Bath recording

Up to ten user-defined fields can be used to enter bath specific data

Field Descriptor	Operator entered bath information
up to 20 characters	up to characters

The user can choose to log any number of the given fields on start and or stop of a bath. The information will appear on the cart as a message and cannot be separated from the process data to which it relates.

TABLE 2 - APPROXIMATELY RECORDING TIME OF ONE GROUP OF SIX CHANNELS (at high compression)

Archive Media	Sample rate [s]						
	0,125	0,5	1	5	10	30	60
Internal flash 96 Mb (approx. 12 million samples)	8,49 days	33,9 days	67,8 days	339 days	1,86 years	5,57 years	11,1 years
CF Card or USB flash disc 4 Gb (approx. 500 million samples)	352 days	3,8 years	7,8 years	38,4 years	76 years	232 years	464 years
CF Card or USB flash disc 8 Gb (approx. 1000 million samples)	1,9 years	7,8 years	15,2 years	76,8 years	152 years	464 years	928 years
Ethernet (FTP server)	Unlimited						

Auditor

This software option, designed in accordance with the requirements of the FDA 21 CFR, Part 11 for Electronic Data Recording and Signatures, provides additional security, such as password aging, electronic signatures, and time stamped audit trail.

Audit trail

Sub-function of the Auditor function, which provides a time-stamped audit trail. revision. It does not include password aging and electronic signatures.

Microsoft® Active Directory® directory service

A utility designed to manage the user's personal computer access. It is a tool used by IT administrators to manage user access across a wide network of companies. Allows users to be given access according to their functions by allocating them to a group with defined privileges. It also includes necessary features such as password expiration, automatic logout, minimum length password, etc. It allows users to manage their password from any node on the system.

Modbus master

Allows users to view data from multiple devices connected either by a local network connection using Modbus TCP or a Modbus RTU serial connection.

ASCII printer output (reports)

Selecting an ASCII text printer, installed as standard, provides the ability to generate up to 10 simple messages that can be routed to a serial ASCII text printer. Event triggered reports can be configured to include parameters such as time and date, batch names, process values, and user-defined messages.

Dynamic Host Configuration Protocol (DHCP)

Dynamic Host Configuration Protocol the successor to BootP, allows the host to obtain network parameters such as IP address, Subnet Mask, default gateway, and DNS server address dynamically. Implementing DHCP significantly reduces overhead over device network management

TECHNICAL DATA

Zeparex 560 is designed to comply with EN 61140 as an electrical protection class I for use in networks with overvoltage category II and pollution level 2 according to EN 61010-1, the follow-up device must comply with Article 6.3 of this standard.

Measuring range: according to the input signal

Electric strength pursuant to EN 61010-1 Article 6.8.3:

- the input terminals (channel) against the instrument body:
1500 V AC (50/60 Hz), 1 min
- between input terminals (channels)
2500 V AC (50/60 Hz), 1 min

Electric insulation resistance: >10 MΩ at 500 V DC

Power supply: max. 60 VA
(Inrush current 36 A)

Protection according to EN 60529:

Bezel and display: IP66
Sleeve : IP20

Operation position pursuant to EN 60051-1: D1

Maximum installed angle: ±45°

Size of the front bezel: 144 x 144 mm

Panel cut out dimensions: 138 x 138 mm

Type of operation: continuous

Weight: max. 3 kg

Applied materials: Sleeve varnished steel

Type of connection terminals: screw;
for wire 0,081 mm² (28 AWG) to 4,13 mm² (11 AWG)

Displaying instrument:

Colour TFT LCD with cold cathode backlight, fitted with resistive, analogue Touch-Panel
Size and resolution: ¼ VGA (320 x 240 pixels) 5,5"

Backup battery:

Type: Poly-carbonmonofluoride/lithium (BR2330)
Support time (RTC):
min. 1 year with recorder unpowered
Replacement period: 3 years

Stored data:

Time; date; values for totalisers, counters and timers, bath data; Fvalue; Rolling average, Stopwatch; etc.

Ethernet communications:

Type: Ethernet 10/100baseT (IEEE802.3)
Protocols: TCP/IP, FTP, DHCP, BOOTP, SNMP, Modbus, SMTP, ICMP, EtherNet/IP server
Cable: Type: CAT5
Maximum length: 100 m
Termination: RJ45

Serial communication option

Number of ports: 2
Protocol: ASCII (typical applications: Input ASCII string inputs from Barcode readers, Credit card readers etc.)
ASCII printer support
Modbus RTU Master and Slave
Isolation:
Terminals to ground: 50 V RMS or DC (base insulation)
Transmission standard: EIA232 or EIA485 (software selectable)

OPERATION CONDITIONS

The environment is defined by a set of parameters and their degree of severity IE 36 to EN 60721-3-3 and the following operating conditions.

Ambient temperature: 0 to +50 °C

Humidity limits of the environment: 5 % to 80 %

Vibrations: (10 to 150 Hz): pursuant to EN 60873, part 9, 18

Altitude: < 2000 meters

Supply voltage: 100 to 230 V AC ±15%; 47 to 63 Hz or 110 to 370 V DC

Fuse type: None

Interrupt protection Standard:

Holdup >200 ms, at 240 V AC with full load

Electromagnetic Compatibility:

Emissions and immunity comply with EN 61326-1

Time of stabilization: 30 minute

METROLOGICAL DATA

Measuring interval: 0,125 s; 0,5 s; 1 s; 5 s; 10 s; 30 s; 1 min

Number of inputs: 6, 12, 18 – according to design (6 per board)

Type of inputs signal:

DC voltage
DC current (+ shunt)
Thermocouple, dual thermocouple
Resistance (2 wire / 3 wire)
Contact closure (not channels 1, 7, 13) >60 ms

Input type combination: freely configurable

A/D conversion method: >16 bits, 2nd order delta sigma

Input ranges: see table 3 and 4

Noise rejection (48 to 62 Hz):

Common mode: >140 dB (channel to channel and channel to ground)
Series mode: >60 dB

Max. common mode voltage: 250 V, continuous

Max. series mode voltage: 45 mV at lowest range ;
23,74 V peak at highest range

User linearization curves: up to 66 points

Isolation

Channel to channel: 300 V RMS or DC
(double isolation)

Channel to common electronics:
300V RMS or DC
(double isolation)

Channel to ground: 300V RMS or DC
(basic isolation)

Input Impedance: >10M Ω (38 mV, 150 mV, 1V)
65,3k Ω (20V)

Overvoltage protection: peak 50 V
(150 V with attenuator)

Open circuit detection:

Detection current: max. \pm 57 nA

Recognition time: 500 ms

Break resistance: min. 10 M Ω

Update / archive rates:

Input / Relay -output sample rate: 8Hz

Trend update: 8Hz maximum

Archive sample value: Latest value at archive time

Display value: Latest value at display update
time (8 Hz)

DC input ranges:

Shunt: externally mounted resistor modules

Attenuator: externally mounted resistor modules

Additional error due to shunt: 0,1% of input

Additional error due to Attenuator: 0,2% of input

Input T/:

Temperature scale: ITS 90

Bias current: 0,05 nA

Types of cold junction: off, internal, external,
remote

Cold junction error: max. 1°C at 25°C

Cold junction rejection ratio: minimum 50:1

(when changing the ambient temperature by 50 ° C
error 1 ° C)

Interrupt Response Function T/C^o:

Options: displays the maximum temperature

displays the minimum temperature

function disabled

(optional for each thermocouple channel)

Additional error: typical 0,01 ° C

Input RTD:

Range (including lead resistance):

0 to 150 Ω , 0 to 600 Ω , 0 to 5 k Ω

Influence of lead resistance:

error: negligible

Temperature scale: ITS90

TABLE 3 - TYPE AND RANGE OF THERMOCOUPLES AND RESISTANCE SENSORS

Type TC	Overall range [°C]	Standard	Maximum linearization error [°C]
B	0 to +1820	EN 60584-1	for range 0 to 400 = 1,7 for range 400 to 1820 = 0,03
C	0 to +2300	Hoskins	0,12
D	0 to +2495	Hoskins	0,08
E	-270 to +1000	EN 60584-1	0,03
G2	0 to +2315	Hoskins	0,07
J	-210 to +1200	EN 60584-1	0,02
K	-270 to +1372	EN 60584-1	0,04
L	-200 to +900	DIN 43710:1985 (dle IPTS68)	0,02
N	-270 to +1300	EN 60584-1	0,04
R	-50 to +1768	EN 60584-1	0,04
S	-50 to +1768	EN 60584-1	0,04
T	-270 to +400	EN 60584-1	0,02
U	-200 to +600	DIN43710:1985	0,08
NiMo / NiCo	-50 to +1410	ASTM E1751/E1751M-09e1	0,06
Ni / NiMo	0 to +1406	Ipsen	0,14
Platinel	0 to +1370	Engelhard	0,14
Pt20%Rh / Pt40%Rh	0 to +1888	ASTM E1751/E1751M-09e1	0,07
Type RTD	Overall range [°C]	Standard	Maximum linearization error [°C]
Cu10	-20 to +400	General Electric Co.	0,02
Cu53	-70 to \pm 200	RC21-4-1966	<0,01
JPT100	-220 to +630	JIS C1604:1997	0,01
Ni100	-60 to +250	DIN43760:1987	0,01
Ni120	-50 to +170	DIN43760:1987	0,01
Pt100	-200 to +850	EN 60751	0,01
Pt100A	-200 to +600	Eurotherm Recorders SA	0,09
Pt1000	-200 to +850	EN 60751	0,01

TABLE 4 - VOLTAGE AND RESISTANCE RANGE - ACCURACY AND RESOLUTION

Range (DCV)	Resolution	Typical error (at 20°C) of measured value + of range	Maximum error (at 20°C) of measured value + of range	Maximum ripple when changing ambient temperature by 1°C
-38mV to 38mV	1,4 μ V	0,013% + 0,031%	0,030% + 0,052%	25ppm
-150mV to 150mV	5,5 μ V	0,013% + 0,028%	0,029% + 0,039%	25ppm
-1V to 1V	37 μ V	0,013% + 0,024%	0,029% + 0,029%	25ppm
-20V to 20V	720 μ V	0,075% + 0,027%	0,393% + 0,033%	388ppm
Range (RTD)	Resolution	Typical error (at 20°C) of measured value + of range	Maximum error (at 20°C) of measured value + of range	Maximum ripple when changing ambient temperature by 1°C
0 Ω to 150 Ω	5m Ω	0,027% + 0,034%	0,037% + 0,077%	30ppm
0 Ω to 600 Ω	22m Ω	0,027% + 0,035%	0,037% + 0,057%	30ppm
0 Ω to 5k Ω	148m Ω	0,030% + 0,034%	0,040% + 0,041%	30ppm

DESIGNATION**Data on head label:**

- Trademark of the manufacturer
- Made in Czech Republic
- type and size of the supply voltage, max. input power
- Product ordering number
- protection
- Serial number
- Conformity marking CE

DELIVERY

Unless agreed otherwise with the customer, each delivery includes

- Delivery note
- digital recorder pursuant to the purchase order
- standard accessories
 - mounting holder 2 pcs
 - power cable (2 m) 1 pcs
 - power connector 1 pcs
 - application software Lite version (CD-ROM) 1 pcs
- optional accessories pursuant to table 7
 - shunt resistance (to be ordered for direct current measurement)
 - divider
 - memory Stick CF
 - flash disc
 - application software Full version (CD-ROM)
- Accompanying technical documentation
 - Product manual
 - instruction manual
 - Product quality and completeness certificate, which also serves as the warranty certificate

If it is established in the purchase contract or agreed otherwise, the following documentation can be also delivered with the product:

- Declaration of Conformity of the supplier pursuant to EN ISO/IEC 17050-1
- EU Declaration of Conformity
- Test report about the seismic and the vibration qualification

PACKING

The device and accessories are delivered in a packing ensuring resistance to the impact of thermal effects and mechanical effects pursuant to controlled packing regulations..

TRANSPORT

The device may be transported on conditions corresponding to the set of combinations of classes IE 21 pursuant to EN 60721-3-2 (i.e. by airplanes and trucks, in premises that are ventilated and protected against atmospheric conditions, airplanes are only assumed to be heated by airborne overflown cargo spaces).

STORAGE

The device may be stored on conditions corresponding to the set of combinations of classes IE 12 pursuant to EN 60721-3-1 but with ambient temperature between -20 and 70 °C and humidity between 5 to 85% (i.e. in places without a special threat of an attack with biological agents, with vibrations of small significance and not situated close to sources of dust and sand.)

ORDERING ZEPAREX 560

The purchase order shall specify

- Name
- Product ordering number
- Whether an optional accessory is required
- Request for other documentation pursuant to article. DELIVERY
- Number of pieces

EXAMPLE OF PURCHASE ORDER**Standard design:**

Digital recorder with a touchscreen ZEPAREX 560
 560 /U06 /XXX /PANEL /NOLCK /SLV /VH /NOITPS
 /XXXXXX /096M /CF /NOMC /NOMS /0RUSB /0SRL
 /NONE /NOCAL /03 /00 /00 /00 /00 /0 /NOS /0
 /XXXXX /BLITE /RLITE /NOADT /NOSM /06GROUP
 /MTC00 /NOBTCH /NOSB /NOMSTR
 1 pcs

TABLE 5 - APPLICATION SOFTWARE - STANDARD

(use Eurotherm software for graphic recorders series 6000, type 6100A)

NAME	DESCRIPTION	OPERATING SYSTEM	UPDATE
Bridge Lite version	online preview via Ethernet	Windows NT/2000/XP Home SP3/XP Pro SP3/Vista/Server 2003/Win7/Server 2008 rev2	can be downloaded at www.eurotherm.com/products/recorders/ software/download/
Review & Quickchart Lite version	for reading, printing, archiving, sending over Ethernet		
C-edit	for off-line configuration editing		

TABLE 6 – DESING OF RECORDER TYPE 560

SPECIFICATION								
ZEPAREX 560		Digital recorder with a touchscreen, display 5,5" TFT 1/4 VGA						
560	1	2	3	4	5	6	7	8
		XXX	PANEL			VH		XXXXXX
9	10	11	12	13	14	15	16	17
096M	CF							
18	19	20	21	22	23	24	25	26
00	00		00					
27	28	29	30	31	32	33	34	

TABLE 7: INDIVIDUAL PRODUCT VARIATIONS

1	Number of channels
U06	6 Input channels
U12	12 Input channels
U18	18 Input channels
2	
XXX	
3	CASE OPTIONS
PANEL	Panel mounting
4	LOCK
NOLCK	Media lock not fitted
LOCK	Electronic lock fitted
5	BEZEL COLOUR
SLV	Silver
GRN	Green
BLK	Black
6	POEWR SUPPLY
VH	90 ÷ 264V AC (110 ÷ 370V DC) 47 ÷ 63Hz
7	24V ISOLATED TRANSMITTER POWER SUPPLY
NOITPS	
230TPS	For 3 transmitter
8	NON STANDARD
XXXXXX	Non standard option
9	INTERNAL MEMORY
096M	96 MB FoR history – approx. 12 millions samples
10	REMOVABLE MEDIA
CF	Compact Flash and front USB port
11	MEMORY CARD CF
NOMC	Not fitted
004G	4 GB
008G	8 GB
12	USB FLASH DISC SIZE
NOMS	Not fitted
004GMS	4 GB
008GMS	8 GB
13	REAR USB
0RUSB	No rear USB port
2RUSB	2 USB port
14	SERIAL COMMUNICATION PORTS
0SRL	Not fitted
2SRL	2EIA 232/422/485
15	ETHERNET COMMUNICATION PROTOCOL É
NONE	Not fitted
ESERV	EtherNet/IP server
16	CALIBRATION CERTIFICATES
NOCAL	Not required
CAL	Calibration certificate
17	CHANGEOVER RELAYS
00	Not fitted
03	3 (1 option board)
06	6 (2 option boards)
09	9 (3 option boards)
12	12 (4 option boards)

18	NORMALLY CLOSED RELAY
00	Not fitted

19	NORMALLY OPEN RELAY
00	Not fitted

20	EVENT INPUTS
00	Not fitted
06	06 (1 board)
12	12 (2 boards)
18	18 (3 boards)
24	24 (4 boards)

21	ANALOGUE OUTPUTS
00	None

22	QUANTITY OF SHUNTS
-	Enter qty required

23	SHUNT VALUE
NOS	Not required
100	100 ohm shunt
250	250 ohm shunt

24	QUANTITY OF 100:1 ATTENUATORS
-	Enter qty required

25	WARRANTY
XXXXX	Standard warranty
WL005	Extended warranty

26	BRIDGE SW
BLITE	Lite (supplied as standard)
BFULL	Full

27	REVIEW & QUICKCHART SW
RLITE	Lite (supplied as standard)
RFULL	Full

28	AUDITOR
NOADT	Not required
ALITE	Audit Trail
AFULL	Auditor Full

29	SECURITY MANAGER
NOSM	Not required
SECMAN	Security Manager (inc. Active Directory)

30	GROUPS
06GROUP	6 (supplied as standard)
12GROUP	12

31	MATHS, TOTALISER AND COUNTERS
MTC00	Not required
MTC36	36 virtual channels
MTC96	96 virtual channels
MTC128	128 virtual channels

32	(BATCH)
NOBTCH	Not required
BATCH	Batch

33	SCREEN BUILDER
NOSB	Not required
ADSB	Advanced

34	MASTER COMMUNICATIONS
NOMSTR	Not required
MSTR16	16 Slaves.
MSTR32	32 Slaves.

OPTIONAL CONFIGURATION (specifications)

SOURCE FOR POWER SUPPLY TRANSMITTER (separate module)

The source is designed as an electrical device for use in networks with overvoltage category II and pollution level 2 according to EN 61010-1.

Power voltage: 220 ... 240 V AC
Fuse according to EN 60127-2: T630L250V
 Number of outputs: 3
 Output voltage: 25 V nominal
 Maximum current: 20 mA per output
Isolation:
 between output terminals:
 100 V RMS or DC (double insulation)
 between output terminals to ground:
 100 V RMS or DC (basic insulation)

Protection according to EN 60529: IP20

RELAY OUTPUT BOARD

Max number of relay board: 4
 Max number of relay outputs: 12 switching
 Number of relay per board: 3
 Expected mechanical life: 30 000 000 operations

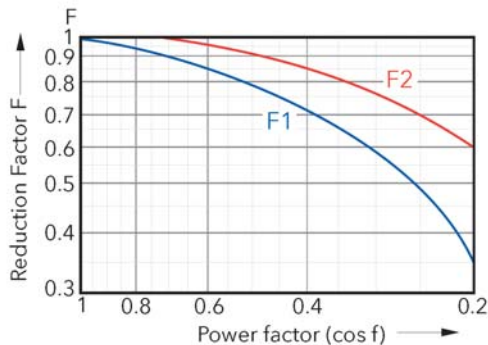
AC load rating

Reduced load capacity:
 Resistance loads, reactive or inductive loads are shown in graphs 1 and 2, load reduction see graph 1, in which:
 F1 = actually measured results on representative samples
 F2 = typical values according to experience
 Contact live = resistive contact life x reducing factor
 Max. switching power: 500 VA
 Max. contact voltage: 250 V provided this does not cause an overshoot maximum switching power (above) to be exceeded
 Max. contact current: 2 A provided this does not cause an overshoot maximum switching power (above) to be exceeded

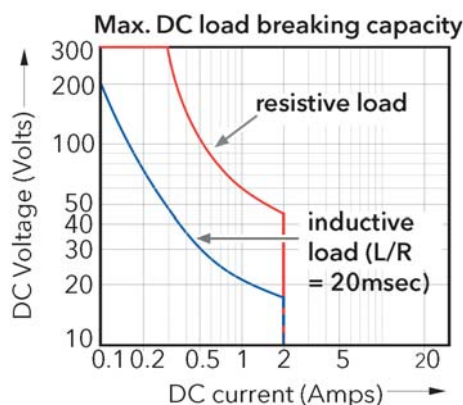
DC load rating

Max. switching power: see graph 2 for operating volt/amp envelope
 Max. contact voltage /current: see graph 2 for example

GRAPH 1 DERATING CURVES FOR AC LOAD



GRAPH 2 – DC LOAD SWITCHING CURVES



Isolation

Relay to relay: 300 V RMS or DC (double insulation)
 Relay to ground: 300 V RMS or DC (basic insulation)

EVENT INPUT

Number of input on board: 6 discrete inputs
 Max. number of board: 4
 Type of input: contact switching, voltage level
Recognition levels (input to "C"):
 „Active“: -30 to +0,8 V (switch contacts closed, R < 35kΩ)
 „Inactive“: +2 to +30 V (switch contacts opened, R > 200kΩ)
 „Undefined“: +0,8 to 2 V (35kΩ < R < 200kΩ)
 R = contact resistance
 Maximum frequency: 8Hz
 Minimum pulse width: 62,5 ms
 Maximum current for inputs: 10mA

Isolation

Event input to ground: 50 V RMS or DC (double insulation)
 Event input to Event input: 0V

INSTALLATION AND CONNECTION

The device is mounted in a panel made of steel sheet 3 to 25 mm with two holders as shown below. Mount the holders on top and bottom or left and right. The recommended torque for tightening the screws to mount the holders to the panel is 0,8 to 1,2 Nm. Tightening screws longer than recommended may cause the cover to become deformed or damage to the holders.

FIGURE 1: PANEL MOUNTING TECHNIQUE

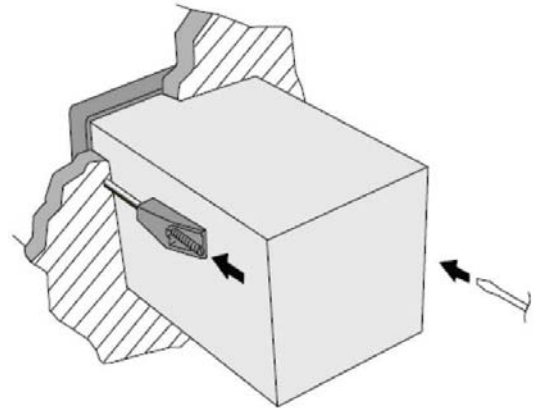


FIGURE 2: MAXIMUM INSTALLED ANGLE

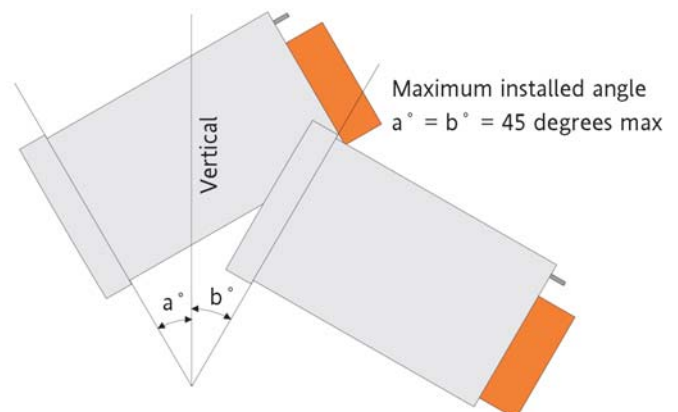
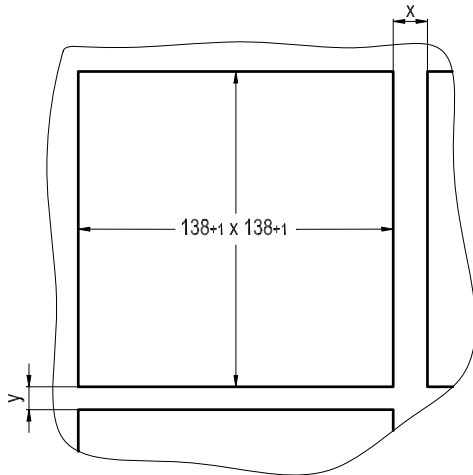


FIGURE 3: PANEL CROSS-SECTION



Minimum recommended spacing between units	
Holders on the sides	Holders up and down
x = 15 mm	x = 10 mm
y = 10 mm	y = 15 mm

The electrical connection may be only realized by qualified workers.

Rear Panel Terminal Arrangement - See Figure 5.

For a further description of the connection and commissioning, refer to the installation manual included with the delivery.

COMMISSIONING

After the installation of the Zeparex 565 into the panel, connection of the follow-up (evaluation) device to the supply voltage and the settlement period of the converter, the equipment is prepared for operation

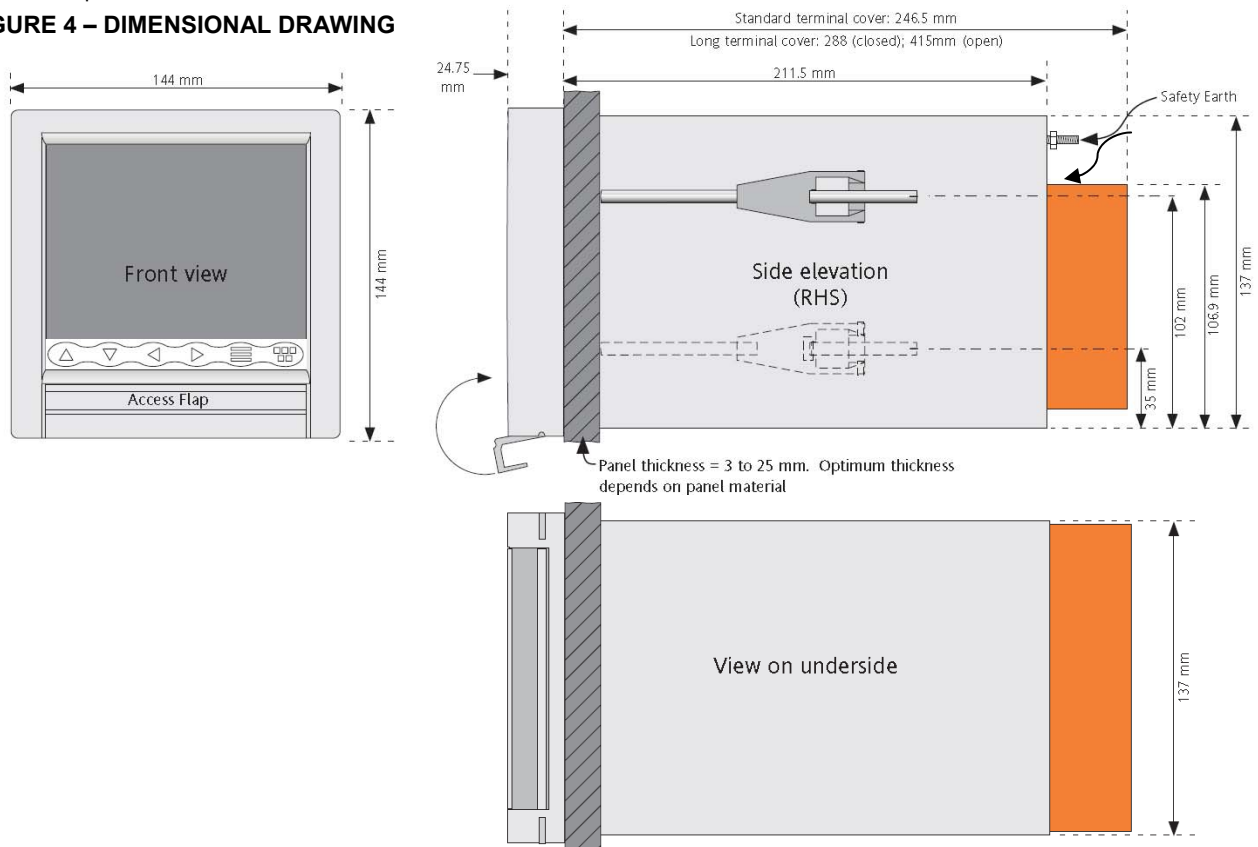
OPERATION AND MAINTENANCE

The operation shall be performed pursuant to the operation manual M-359821.

We recommend replacing the battery after 3 years (the recorder has a diagnosis that will evaluate when to replace the battery).

For relay outputs 560-ROCRT05 we recommend replacing 30,000,000 operations.

FIGURE 4 – DIMENSIONAL DRAWING



SPARE PARTS

Spare parts are supplied by the manufacturer.

SPECIFICATION	ORDERING NUMBER
Power supply	560-PSUCRT01
6-channel input card	560-ICHCRT02
Complete display part	560-DMCRT03
Complete kit for battery replacement	560-BKCRT04
Relay output card	560-ROCRT05

WARRANTY

The warranty period is 24 months from the receiving of the product by the customer, unless established otherwise in the contract. Rejection of defects shall be enforced in writing at the manufacturer within the warranty period. The rejecting side shall identify the product name, ordering and manufacturing numbers, date of issue and number of the delivery note, clear description of the occurring defect and the subject of the claim. If the rejecting side is invited to send the device for repair, it shall do so in the original package of the manufacturer and/or in another package ensuring safe transport.

The warranty shall not apply to defects caused by unauthorized intervention into the device, its forced mechanical damage or failure to comply with operation conditions of the product and the product manual.

REPAIRS

The device shall be repaired by the manufacturer. They shall be sent for repair in the original or equal package without accessories.

DISABLING AND LIQUIDATION

The product and its package do not include any parts that could impact the environment.

Products that are withdrawn from operation, including their packages (with the exception of products marked as electrical equipment for the purposes of return withdrawal and separate salvage of electrical waste), may be disposed of to sorted or unsorted waste pursuant to the type of waste.

The manufacturer realizes free return withdrawal of marked electrical equipment (from 13.8.2005) from the consumer and points out the danger connected with their illegal disposal. The package of the sensor can be recycled completely. Metal parts of the products are recycled, non-recyclable plastic materials and electrical waste shall be disposed of in accordance with applicable legislation.

FIGURE 5 – TERMINAL CONNECTIONS

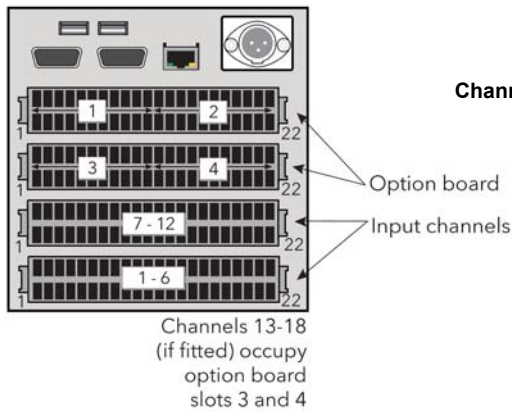


FIGURE 6 - INPUT BOARD WIRING

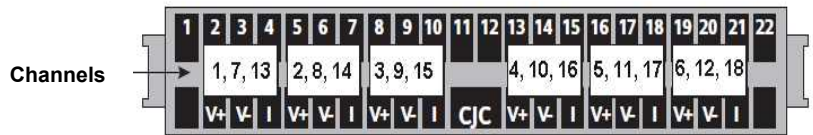


FIGURE 7: INPUT BOARD SIGNAL WIRING

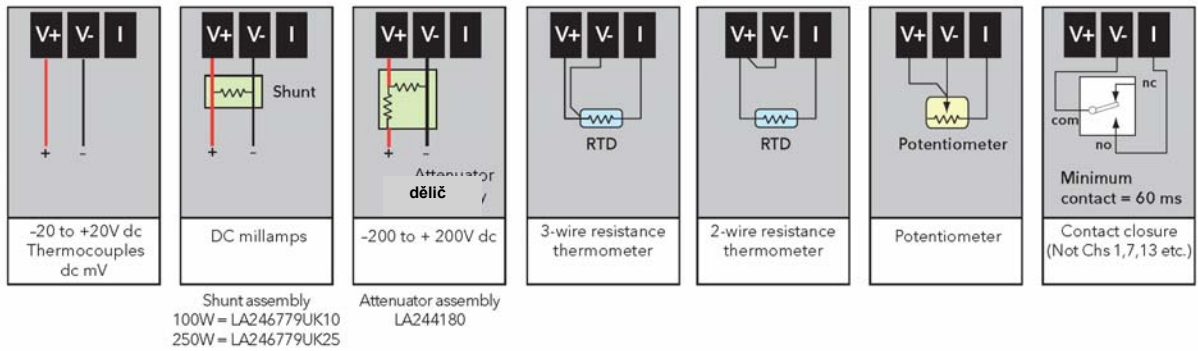
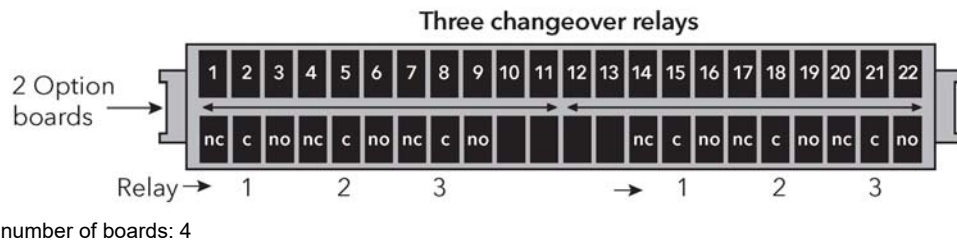


FIGURE 8 – RELAY BOARD WIRING



Maximum number of boards: 4

FIGURE 9 – EVENT INPUT BOARD WIRING

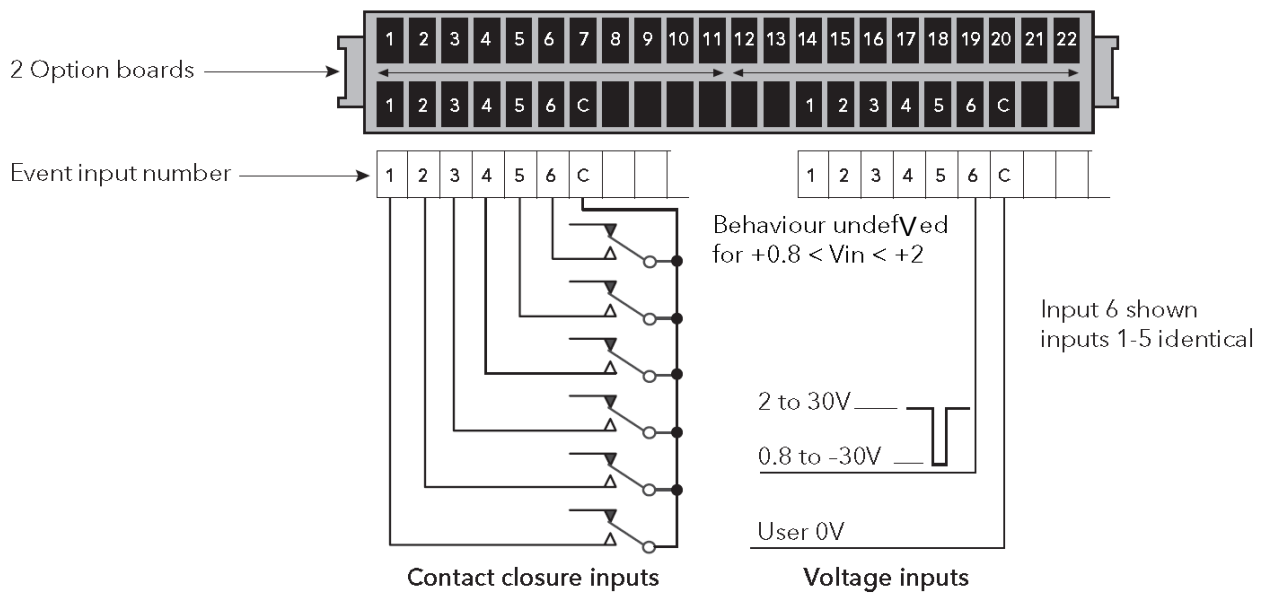


FIGURE 10 – COMMUNICATION CONNECTORS

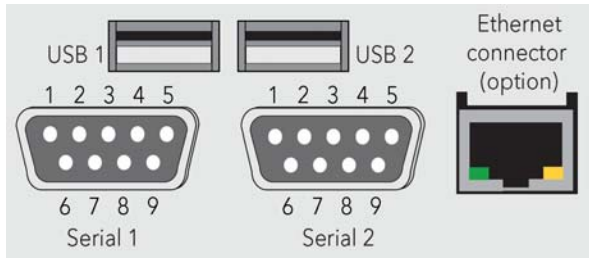
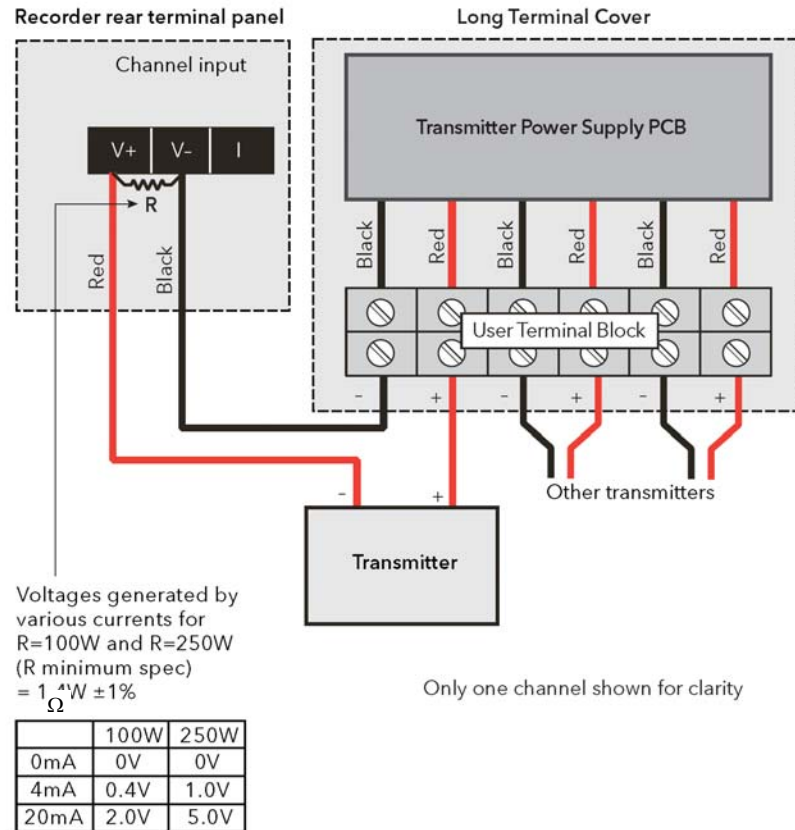


FIGURE 8: SERIAL COMMUNICATION PORT PINOUT

Pin	EIA232	EIA485 (5-wire)	EIA485 (3-wire)
1	Non connected	RxA	Link to pin 7
2	Rx	Non connected	Non connected
3	Tx	Non connected	Non connected
4	DTR	Non connected	Non connected
5	Signal ground		
6	Non connected	RxB	Link to pin 8
7	Non connected	TxA	TxA/RxB
8	Non connected	TxB	TxB/RxA
9	5,0 V via 1500 Ω		

FIGURE 11 - CONNECTION OF SOURCES FOR POWER SUPPLY TRANSMITTER



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