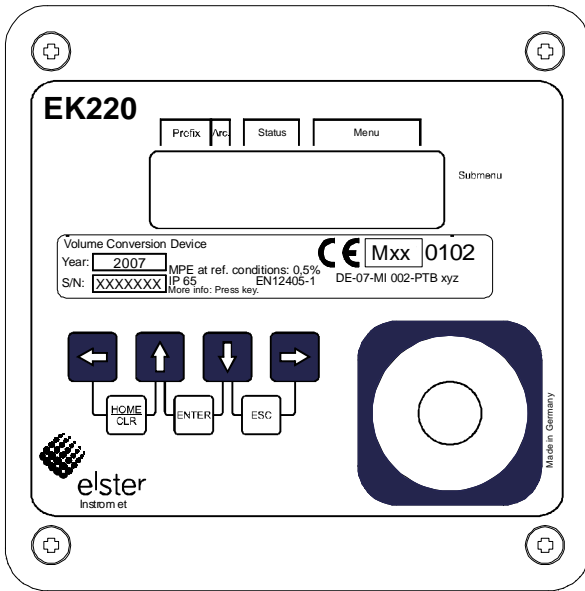


Short-Form Instructions (73020051)

Volume Conversion Device Type EK220



The display is activated on pressing any key and the momentary counter reading **Vb** (standard volume, pre-dec. places) is displayed in the menu **User**. All further data associated with the standard volume can be displayed by pressing the key **Ⓜ** (1x) and keys **←** or **→** (see first column "Standard volume" on the inside page of these instructions).

The key **Ⓜ** is pressed to display a value in the column, actual volume. Now, the menu **Act. V** (Actual volume) is displayed. Using the keys **←** and **→**, you can view all the values associated with the actual volume.

To change to a different menu (e.g.: **Press.**), the keys **←** or **Ⓜ** are pressed until the desired menu name appears in the display (see inside page of the operating instructions).

Entering values

Values in the volume conversion device which are not subject to the calibration lock or only computed (e.g. flow) or measured (e.g. pressure or temperature) can be changed. even without a PC or readout device.

In these short-form instructions all values which are subject to the calibration lock are identified with "C". All values which are determined or measured and therefore can only be read are identified with a "-".

Example of changing a value

(adjustable counter in the menu actual volume (Act.V.)

- The display is activated by pressing any key.

The momentary counter reading **Vb** (standard volume) is indicated in the menu **User** in the display.

Prefix			Arc.	Status			Menu								
							o	k	.		U	s	e	r	
V	b			0	0	0	0	0	0	1	2	3	4		m 3

Submenu

- Changing to the column Actual volume occurs by pressing the key **Ⓜ**

The momentary counter reading **V** (actual volume) is indicated in the menu **Act.V.** in the display.

Prefix			Arc.	Status			Menu								
							o	k	.		A	c	t	.	V
V	m			0	0	0	0	0	0	1	2	3	4		m 3

Submenu

- Within the menu, Actual volume, repeated pressing of the key **←** changes to the value **VmA** (adjustable counter).

Prefix			Arc.	Status			Menu								
							o	k	.		A	c	t	.	V
V	m	A		0	0	0	0	0	0	2	3	4	5		m 3

Submenu

- The entry-mode is activated by pressing **←** and **→** keys (ENTER).

The modifiable display location **flashes**.

The keys **←** and **Ⓜ** enable skipping to the other places of the displayed value.

These can be changed with the keys **←** and **→** and refreshed by pressing the ENTER keys.

Prefix			Arc.	Status			Menu								
V	m	A		0	0	0	0	0	0	2	3	4	5	.	0 0 0 0

Submenu

Pressing **←** and **Ⓜ** keys (before pressing ENTER) causes the entry to be cancelled.

User list	Stand. volume	Actual volume	Pressure	Temperature		
User	Std.V.	Act.V.	Press	Temp.		
Vb Vol. at base cond. (pre-dec.) CDL	Vb Vol. at base cond. (post-dec.) CDL	Vm Actual volume CDL	p Pressure -	T Temperature -		
VmA Act. vol. adjust. S	Qb Flow at base cond. -	Qm Actual flow -	pMin Lower alarm limit C	Tmin Lower alarm limit C		
p Pressure -	VbD Dist. quant. S	VmD Disturbance quant. S	pMax Upper alarm limit C	Tmax Upper alarm limit C		
T Temperature -	VbT Total quantity -	VmT Total quantity -	MRL.p Meas. range bottom C	MRL.T Meas. range bottom C		
Z Compres. factor -	VbA Adjustable count. S	VmA Adjustable counter S	MRU.p Meas. range top C	MRU.T Meas. range top C		
Zb Compres. factor at base cond. C	VbME Month end value -	VmME Month end value -	p.F Substitute value CDL	T.F Substitute value S		
C Conversion fact. -	Time Time of VnME -	Time Time of VbME -	pb Press. at base cond. C	Tb Tem. at base cond. C		
K.F K subst. value S	<p>Access rights</p> <p>The EK220 differentiates between the following access parties. In this short form instructions are shown on the factory setting parameterized rights.</p> <p>C = Calibration lock; CDL = Certification data log; M = Manufacturer's lock; S = Supplier's lock; K = Customer's lock</p> <p>C/S Calibration or supplier's lock, depending on national regulations. In case of verification of device under calibration regulations (e.g. acc. MID) the write access C must be used.</p> <p>- Values which are measured or computed by the volume corrector, but can only be layed and are identified with a dash.</p> <p>() Letters in brackets: Values can only be changed via interface and not via keypad.</p>			Md.T Temp. mode C		
VbME Month end value -				Md.p Pressure mode C	Typ.p Press. sens. type C	Typ.T Temp. sens. type C
Time Time of VbME -				SNp Serial no. of sen. C	SNT Serial no. sensor C	SNT Serial no. sensor C
VmME Month end value -				SMenu p coeff. S (C) Submenu p coeff.	SMenu T coeff. S (C) Submenu p coeff.	SMenu T coeff. S (C) Submenu p coeff.
Time Time of VmME -				p1Adj Adjustment val. 1 C/S	p1Adj Adjustment val. 1 C/S	TAdj1 Adjustment val. 1 C/S
Menu Display menu S				p2Adj Adjustment val. 2 C/S	p2Adj Adjustment val. 2 C/S	TAdj2 Adjustment val. 2 C/S
	Prog Accept adjust C/S	Prog Accept adjust C/S	Prog Accept adjust. C/S			
	p.atm Amb. press. fixed value C	p.atm Amb. press. fixed value C	T.Mes Temp. meas. -			
	p.Mes Pressure meas -	p.Mes Pressure meas -				
	p.Abs Absolute press. -	p.Abs Absolute press. -				
	SMenu Press.2 S (C) Submen p sen. 2 (acc. to Selp2)	SMenu Press.2 S (C) Submen p sen. 2 (acc. to Selp2)				
	p2Mes Pres. meas p sens. 2 (acc. to Selp2) -	p2Mes Pres. meas p sens. 2 (acc. to Selp2) -				

Entry errors

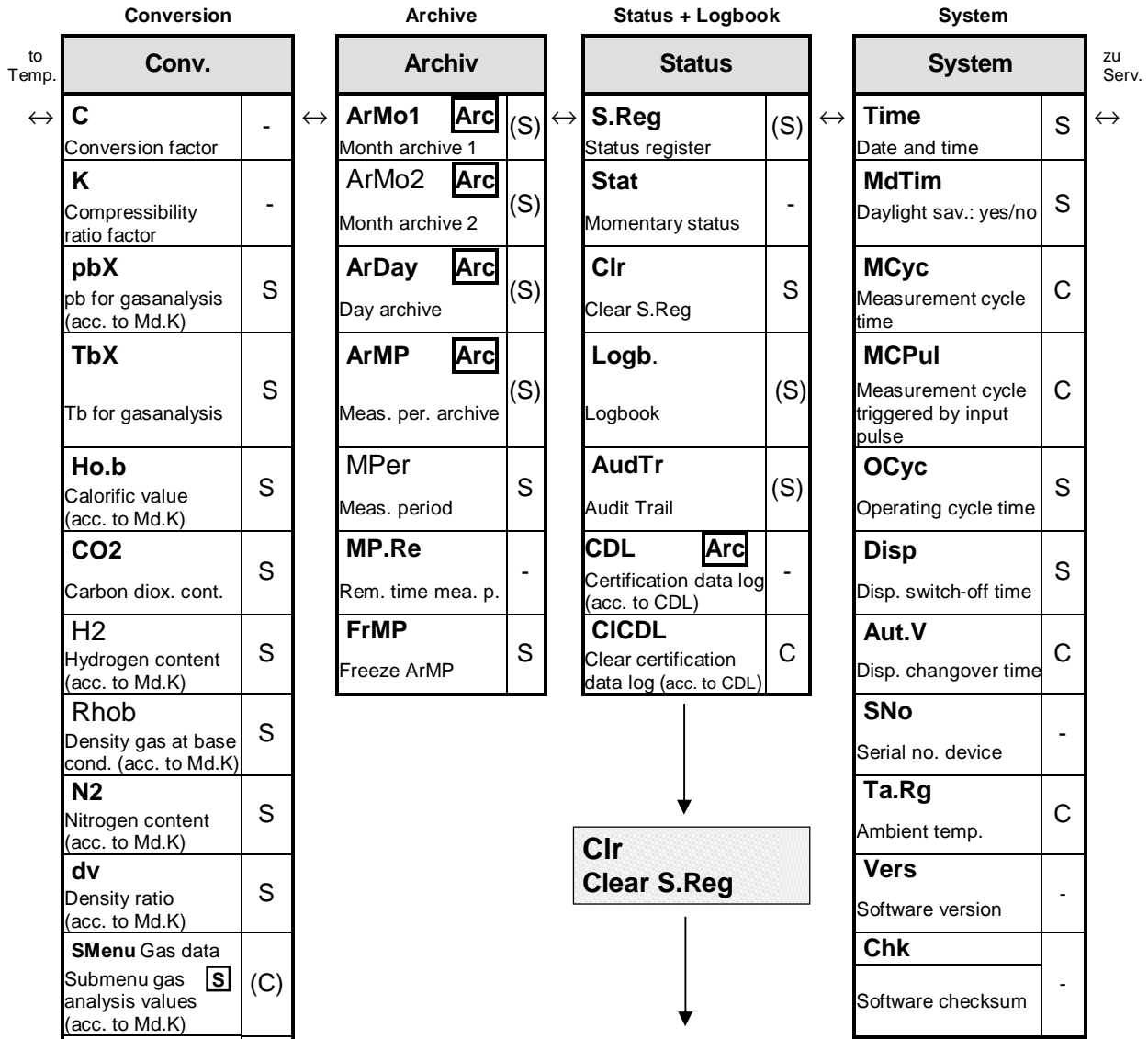
Entry errors are displayed if incorrect entries are made by the operator via the keypad. After the entry key is released, the display skips back to the original state.

----x---- the possible error codes correspond to the following table.

Example:

					o	k													
C	P	.	I	1	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-

Code	Description	Code	Description
1	The archive is empty	11	The entry of the calorific value <i>Ho.b</i> in the energy list is not permitted. Please change <i>Ho.b</i> in the Volume corrector list
2	The archive value cannot be read.	12	The entry of this source (address) is not permitted.
4	Parameter cannot be changed (constant)	13	Clock has to be set to its starting value
5	No authorisation for changing the value	14	Gas analysis parameters for AGA-NX-19 do not match
6	Invalid value.	20	Value for the application-specific display is not defined
7	Incorrect combination	21	Because the certification data log is full the calibration lock must be opened for changing the parameter.
8	Entry not possible due to special setting		



Clear status register

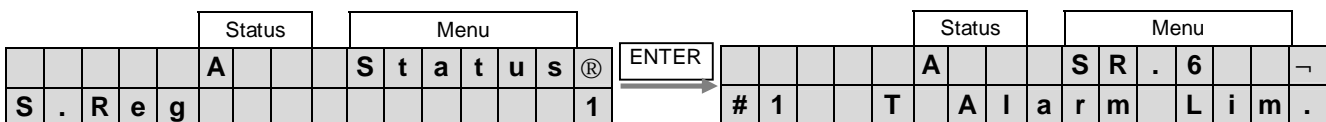
Warnings (W) and / or alarms (A) which are no longer prevailing, i.e. only displayed for information, but no longer flashig, are cleared in the menu "Status" - "Clr" by pressing the - - + - keys (ENTER) . To the right in the display a "0" flashes. By pressing the - key the value is set to "1". Pressing the - - + - keys (ENTER) again clears the status register and **ok** appears in the display. Alarm or warning statuses still prevailing are then again indicated with the letter A and/or W flashing in the display.

Device status

Output in the first line of the display:
A = Alarm; **W** = Warning; **B** = Batteries discharged; **P** = Calibration lock open; **L** = Certification data log (Calibration logbook) full, **o** = online
 A flashing device status signals a currently prevailing message, a steady device status shows a message no longer prevailing, but which is still located in the status register. The status register "S.Reg" documents all alarms and warnings since the last "clear".

Example of the display of a temperature sensor

- Change to the column Status by repeated pressing of the key ® .
- The "1" on the right in the display, indicates a temperature alarm.
- Press "ENTER" to recall Status information as short text



Service	Inputs	Outputs	Interfaces	Energy
Serv.	Inputs	Outp.	Ser.IO	Energy
Bat.R Remaining bat. life	cp.I1 cp-value Input 1	Md.O1 Mode for outp. 1	Md.S2 Mode interface 2	W Energy
Bat.C Battery capacity	cp.I2 cp-value Input 2	SC.O1 Source for out. 1	DF.S2 Data format interf. 2	P Power
St.SL Supplier lock	Md.I2 Mode for Input 2	cp.O1 cp value outp. 1	Bd.S2 Baud rate interface 2	WD W disturb.
Cod.S Supplier code	St.I2 Status on Inp. 2	SpO1 Status pointer for output 1	TypS2 Type interface 2 (acc. to Md.S2)	W.T W total
St.CL Customer lock	MdMI2 Mode monitoring I2	Md.O2 Mode for outp. 2	BusS2 Bus mode RS485 on / off (acc. to Md.S2)	W.A W adjust.
Cod.C Customer code	SC.I2 Source monitoring I2	SC.O2 Source for output 2	Num.T No. of ringing tones before accept. call (acc. to Md.S2)	Ho.b Calorific value for W
St.PL Calibration lock	L1.I2 Limit 1 for I2	cp.O2 cp value outp. 2	M.INI Initialise modem (acc. to Md.S2)	WME Month end value
Contr Display contrast	L2.I2 Limit 2 for I2	SpO2 Status pointer for output 2	SMenu S (C) Submenu GSM&SMS para. (acc. to Md.S2)	Time Time of WME
Adj.T Clock adjust. factor	SpI2 Stat. pointer mon. I2	Md.O3 Mode for outp. 3	DProt S (C) Submenu IDOM prot. (acc. to Md.S2)	
Save Save all data	St.I3 Status on Inp. 3	SC.O3 Source for output 3	SMenu S (C) Submenu Modbus para. (acc. to Md.S2)	
Clr.A Clear archives	MdMI3 Mode moni. I3	cp.O3 cp value outp. 3	Bd.S1 Baudrate interface 1	
Clr.V Clear counter	SC.I3 Source monitoring I3	SpO3 Status pointer for output 3	CW1.S Call window 1 start	
Clr.X Initialise device	L1.I3 Limit 1 for I3	Md.O4 Mode for outp. 4	CW1.E Call window 1 end	
Bin.T Temp. binary value	SpI3 Stat. pointer mon. I3	SC.O4 Source for out. 4	CW2.S Call window 2 start	
Bin.p Press. binary value	SNM SerNo gasmeter	cp.O4 cp value outp. 4	CW2.E Call window 2 end	
Bin2p Press. 2 binary value		SpO4 Status pointer for out. 4	CW3.S Call window 3 start	
Sel.T Select T sensor			CW3.E Call window 3 end	
Sel.p Select p sensor			CW4.S Call window 4 start	
Selp2 Select p sensor 2			CW4.E Call window 4 end	
SMenu S (C) Submenu ambient temperature			CWTst Test call window (acc. to Md.S2)	
Addr Addr. user display				
... User display				
SMenu S (C) Submenu Revisal				
ArCal (S) Frozen data				
Frz Freeze				
- Display test				