HEIDENHAIN

Supplement to the Operating Instructions for VRZ 670 E

(Edition 2/91)

This supplement contains the changes
updating software numbers 246 008 03 and 246 008 04
to software number 246 008 05

February 1992

1. New Parameters

P 18 Second trigger point for output A2
Input value: 0 to 99999.999 [mm]

Parameter P 18 allows programming of a second trigger point before the MIN position (to activate P 18, see P 20).

Note:
Numerical input is only possible if code number 95148 has been entered in parameter P00.

P 20 Defining the functions of the trigger signal inputs E1, E2, E3
Input values: 0 or 1 with the +/- key.

0: A trigger pulse (0V) at inputs E1, E2, E3 will reset the position displays of the corresponding axes.

Input	Axis	Pin
E1	X	3
E2	Y	1
E3	Z	8

See also: VRZ 670 E Operating Instructions, section 7
"External Functions via 12-pole Flange Socket".

1: The eroding axis is defined according the switching of the inputs E1 and E2.

IE1	E2	Eroding Axis
LOW	LOW	Z
HIGH	LOW	Y
LOW	HIGH	X
HIGH	HIGH	Z

Input E3 allows selection of the effective trigger point for output A2 from parameter P 17 or P 18.

Input E3	Trigger point from
LOW	P 18
HIGH	P 17

Axes X, Y and Z can no longer be reset with the trigger pulse.

P 21 Definition of the trigger-point functions.
Input values: 0, 1, 2 with +/- key

0: Trigger-point functions as described in VRZ 670 E Operating Instructions, section 7.4 "Functional Description of the Trigger Signal Outputs".

1: Output A6 is assigned to an additional trigger position (no longer "HOME"). This trigger position is assigned to the key for datum point 1.

Output A7 (previously vacant) is likewise assigned to an additional trigger position. This trigger position is assigned to the key for datum point 2.

The two additional trigger points are referenced to the workpiece surface = 0 (these points can be used to change generator settings, for example).

The plane of the datum points can no longer be changed. The datum point plane last selected remains valid.

2: Trigger-point functions same as with P 21 = 1, except:
The trigger points are sent to outputs A3, A4, A6 and A7 in coded form as follows:

Output	Code	Significance
A3	Bit 0	$2^0 \triangleq 1$
A4	Bit 1	$2^1 \triangleq 2$
A6	Bit 2	$2^2 \triangleq 4$
A7	Bit 3	$2^3 \triangleq 8$

The assignment of code values to trigger points is described under parameters P 22 to P 25.

P 22 Assignment of code values to trigger points with coded trigger point output (P21 = 2).
to Input values: 0 to 15 [decimal]
P 25

Parameter	Code value for
P 22	First additional trigger point
P 23	Second additional trigger point
P 24	First trigger point before eroding depth
P 25	Second trigger point before eroding depth

Definition: Bit = 0 -> Output transistor conductive
Bit = 1 -> Output transistor blocked

Example: First trigger point before eroding depth P 24 = 10.

Significance	8	4	2	1	
Binary value	1	0	1	0	≙ Decimal value10
Output	A7	A6	A4	A3	
Transistor conductive		X		X	
Transistor blocked	X		X		

2. Entry and Display

- If the VRZ has been switched to MIN position display with the MIN key, the following values are displayed for the selected eroding axis:

Axis Display	Displayed value
X	Distance to go in the eroding axis (in respect to final eroding depth)
Y	Final eroding depth
Z	Minimum position of the eroding axis

- Negative values may also be entered for the compensation value of the final eroding depth (delta Z).
  Input range: -99999.999 to 99999.999 [mm]

3. New Error Messages

Error 61
Error 62 Monitoring of grating period with distance-coded reference marks.
Error 63

These error messages are displayed axis-specific, instead of the error message ERROR 06 (traverse too fast during calibration with distance-coded reference marks, or grating period in parameter P09 too small).

Error	Axis
Error 61	X
Error 62	Y
Error 63	Z

Error 64 Cannot store in EEPROM. EEPROM defective.
(Notify HEIDENHAIN Customer Service).