



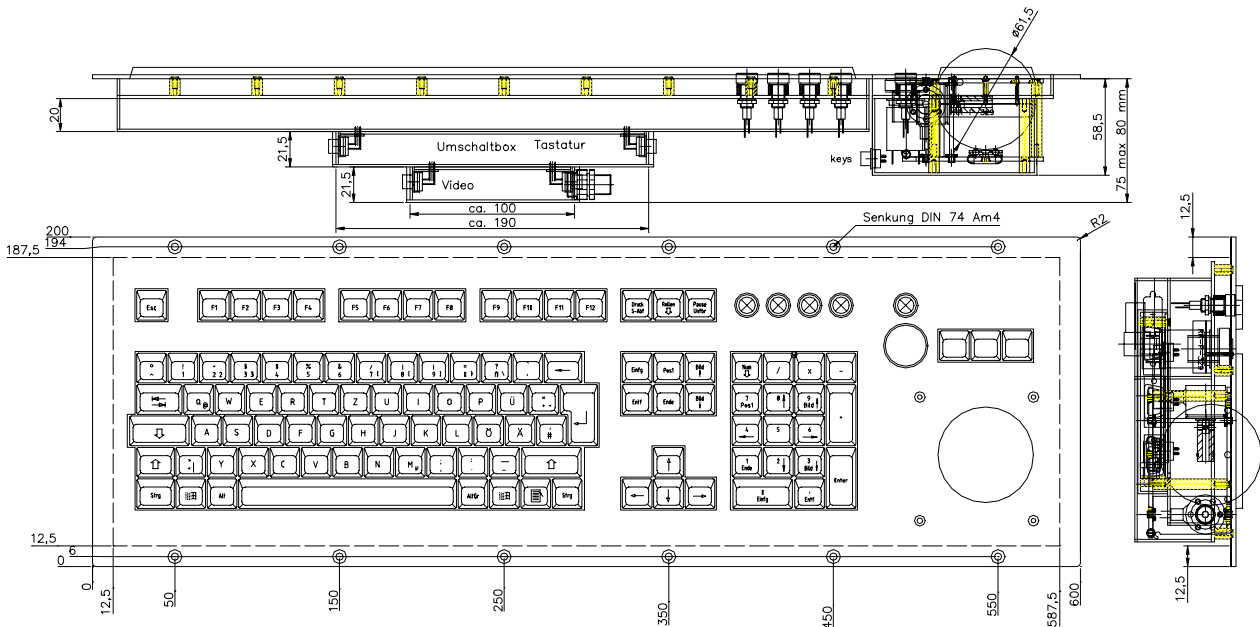
R&R industrial keyboard IKW95ET - for harsh environment

front panel
housing

AlMg3, anodized
AlMg3

(h x w x d)

200 x 600 x 75 mm



keyboard layout

WIN95, English

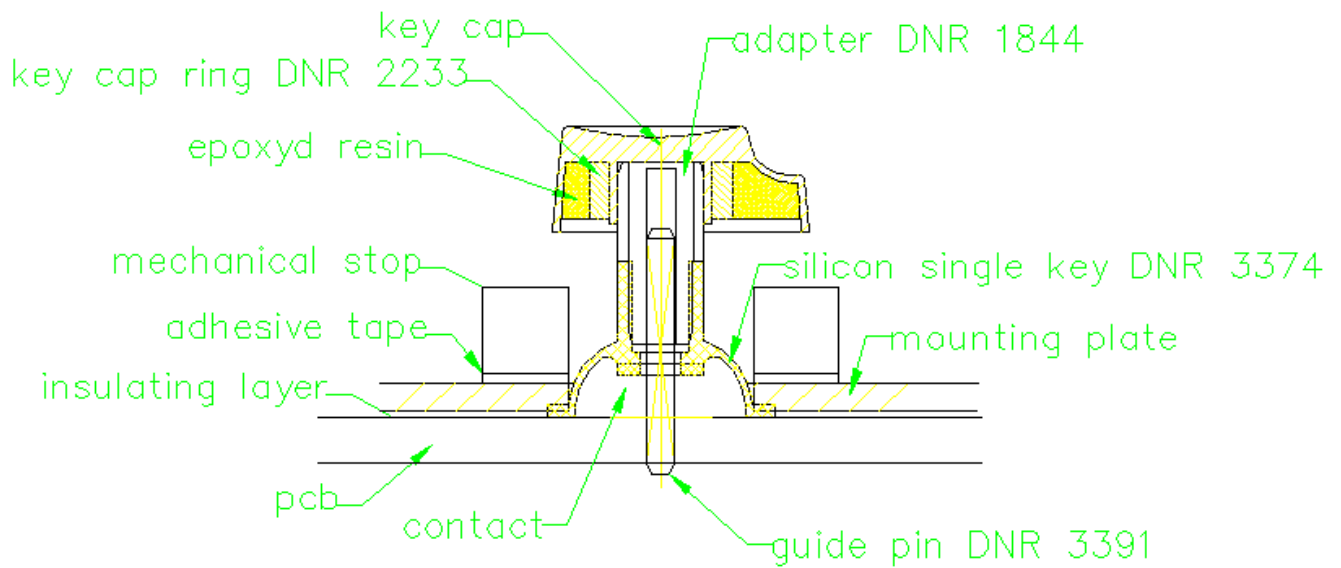
22/06/2004

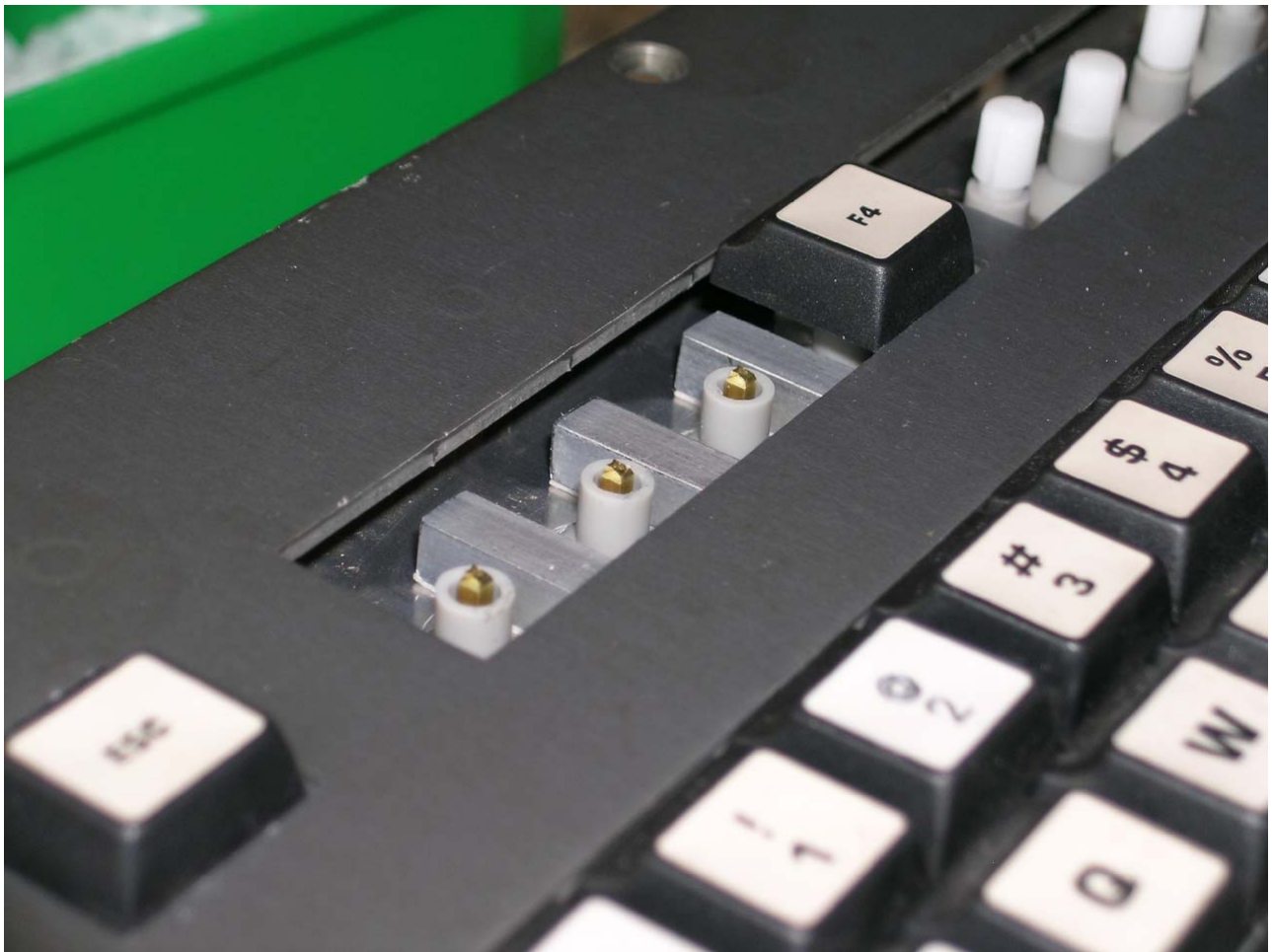
keys
silicon single key DNR 3374
silicon single key DNR 4715

patented R&R keys
lift 3 mm, actuation force 1 N
lift 1.2 mm, actuation force 1.5 N

reinforced keys

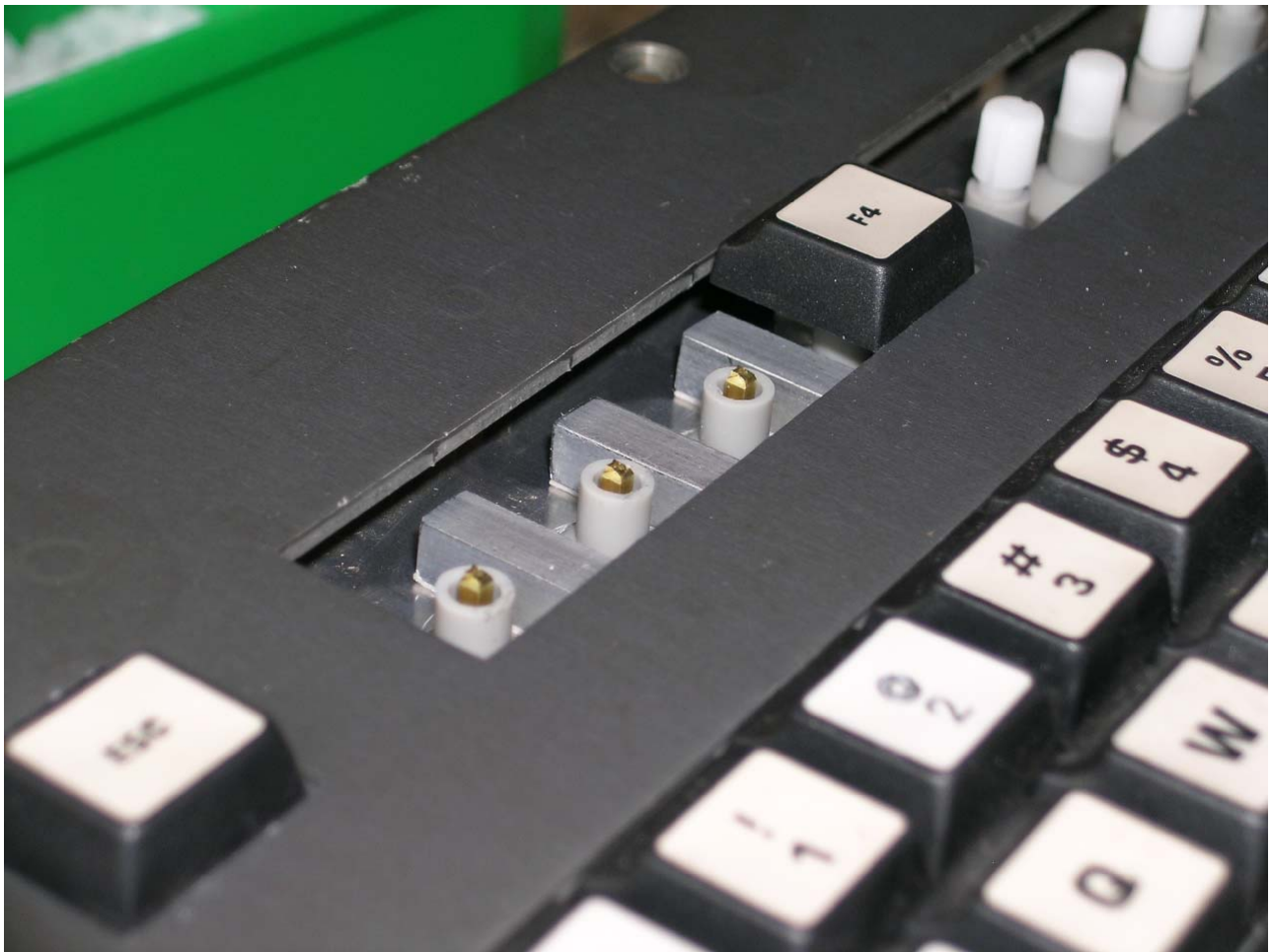
double keys, function keys F1... F12
mouse keys





22/06/2004

Ob der Eck 4 · D-78148 Gütenbach · Telefon (07723) 9186-0 · Telefax (07723)9186-30 [DNR10851.DOC](#)
WWW.RURGBH.DE INFO@RURGBH.DE

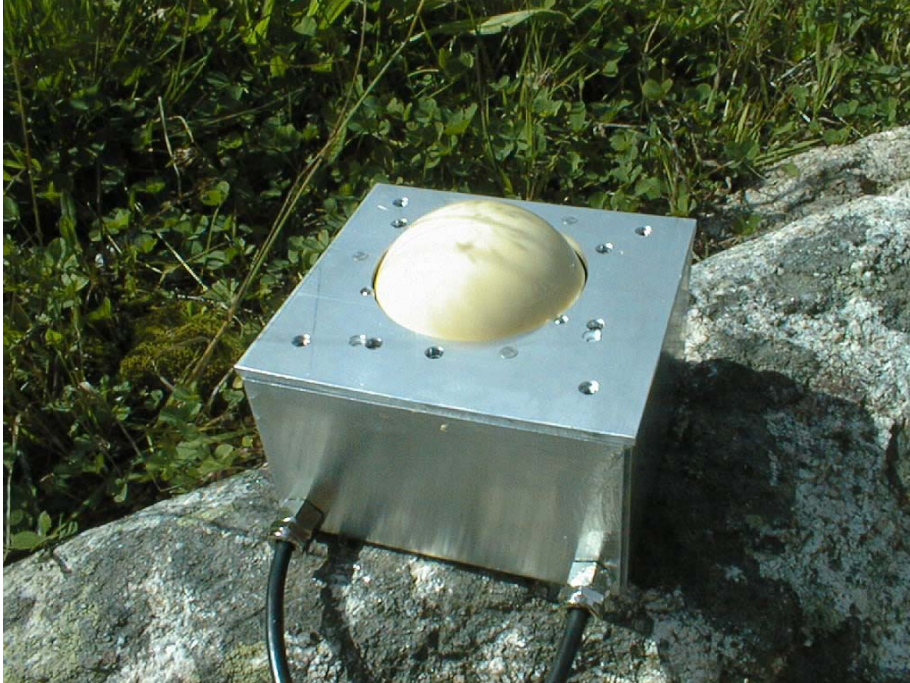


22/06/2004

Ob der Eck 4 · D-78148 Gütenbach · Telefon (07723) 9186-0 · Telefax (07723)9186-30 [DNR10851.DOC](#)
WWW.RURGBH.DE INFO@RURGBH.DE

Trackball
Trackball TR120

ball diameter > 60 mm
for rough environment
with sealed optical sensors



22/06/2004

Ob der Eck 4 · D-78148 Gütenbach · Telefon (07723) 9186-0 · Telefax (07723)9186-30 **DNR10851.DOC**

WWW.RURGBMH.DE INFO@RURGBMH.DE

Trackball TR123-3

improved replacement for TR120



22/06/2004

Ob der Eck 4 · D-78148 Gütenbach · Telefon (07723) 9186-0 · Telefax (07723)9186-30 [DNR10851.DOC](#)
WWW.RURGMBH.DE INFO@RURGMBH.DE

improved ball bearing for low tracking force

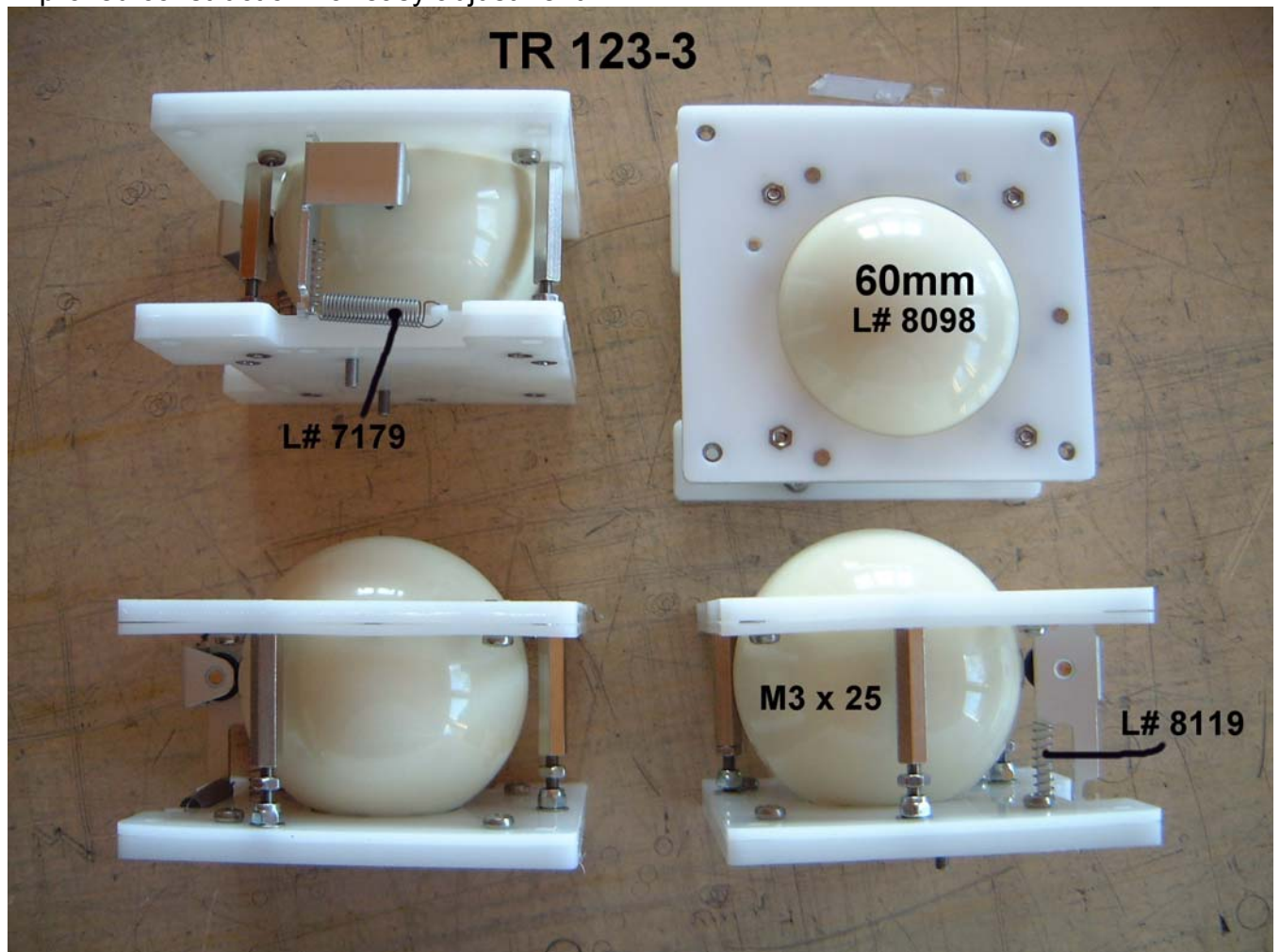


22/06/2004

Ob der Eck 4 · D-78148 Gütenbach · Telefon (07723) 9186-0 · Telefax (07723)9186-30 [DNR10851.DOC](#)

WWW.RURGMBH.DE INFO@RURGMBH.DE

improved construction for easy adjustment

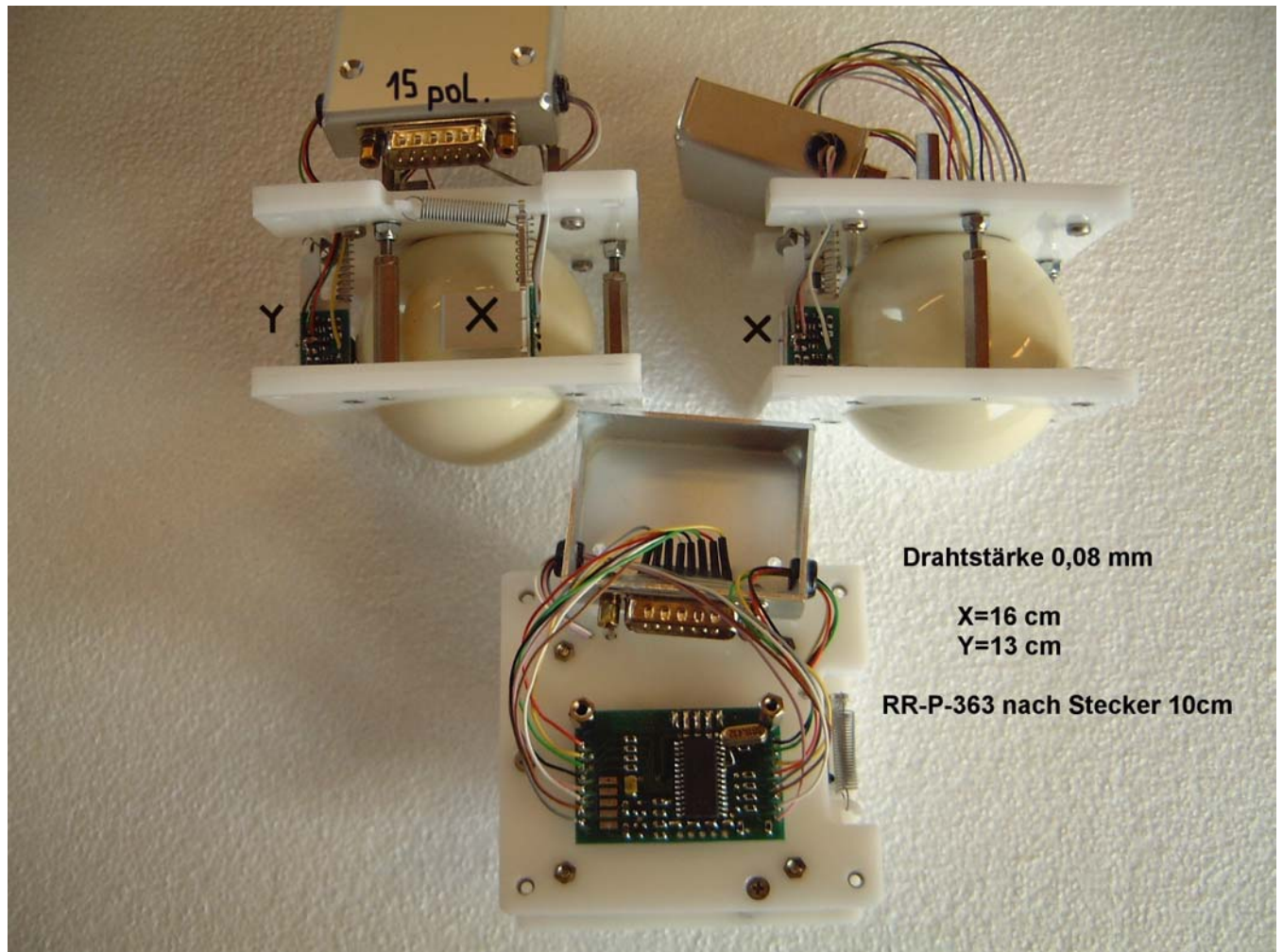


22/06/2004

Ob der Eck 4 · D-78148 Gütenbach · Telefon (07723) 9186-0 · Telefax (07723)9186-30 **DNR10851.DOC**

WWW.RURGBMH.DE INFO@RURGBMH.DE

sealed magnetic sensors, trackballcontroller for quadrature and PS/2 interface

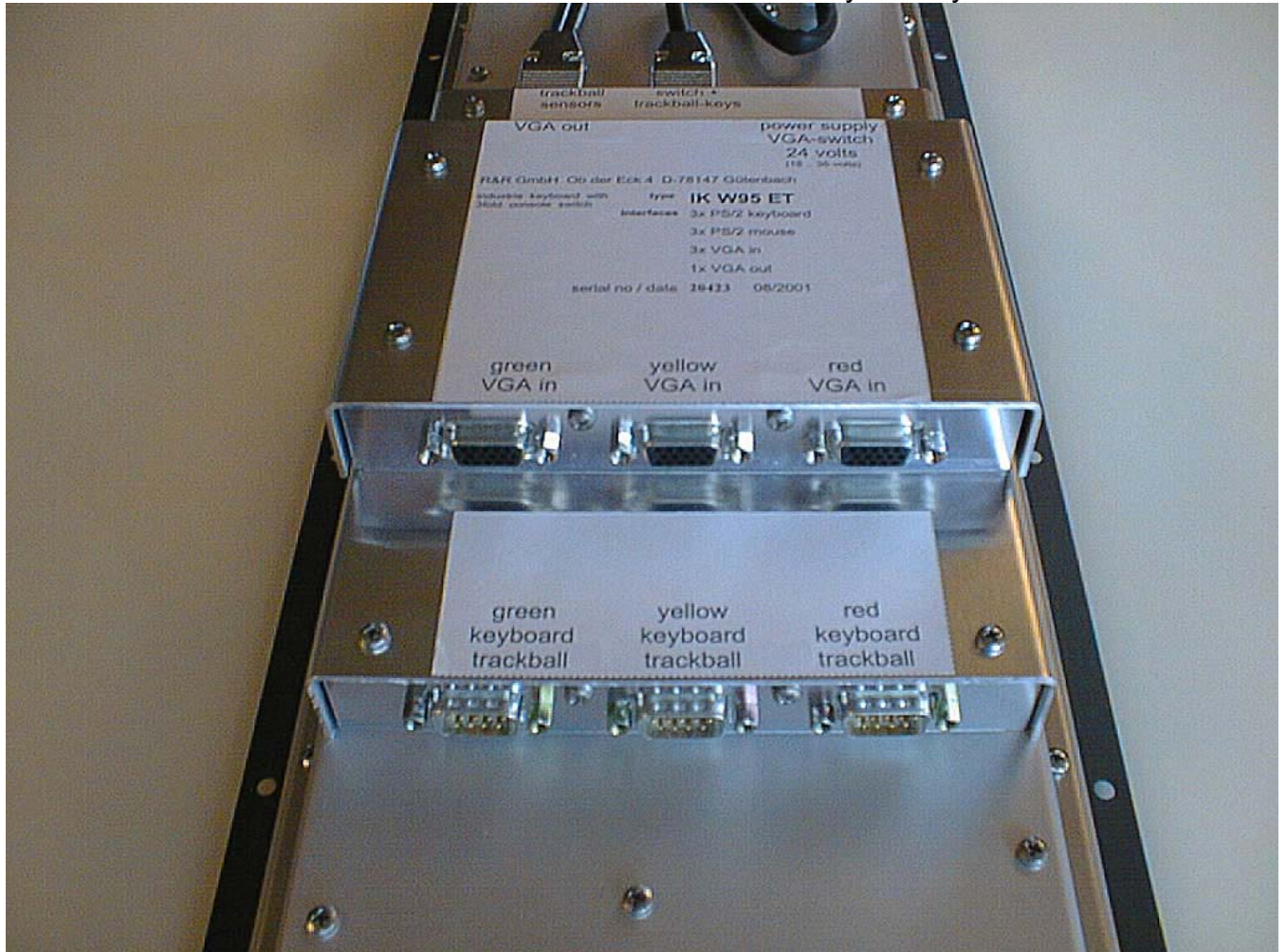


power supply

by interface

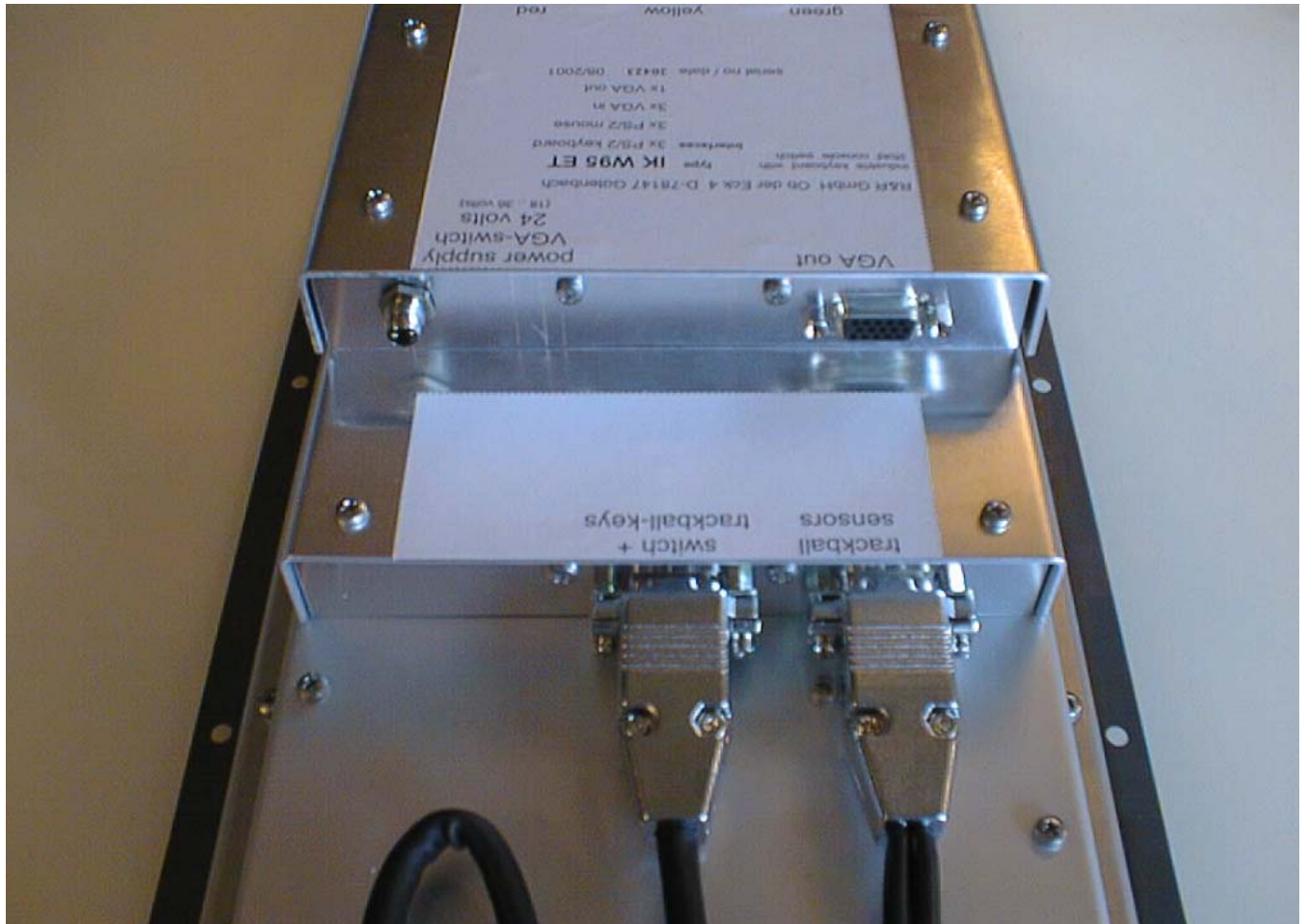
interface

3 channel keyboard each channel with
1 x VGA IN , 1x PS/2 Mouse 1 x PS2/keyboard
Each channel has his own controllers.
Each channel is independent bootable.
The channel is selected by the key switch.



22/06/2004

1 x VGA out



protection class

front side I P 6 5 in use, dust and waterproofed
back side I P 5 0

power supply VGA-switch

24 V DC

keyboard/trackball connectors

keyboard/mouse connector red 9 pin Sub-D male	
pin	signal
1	keyboard-clock
6	keyboard-data
2	ground ^{*1}
7	+5 volts ^{*2}
3	-
8	+5 volts ^{*2}
4	ground ^{*1}
9	mouse-data
5	mouse-clock

keyboard/mouse connector yellow 9 pin Sub-D male	
pin	signal
1	keyboard-clock
6	keyboard-data
2	ground ^{*1}
7	+5 volts ^{*2}
3	-
8	+5 volts ^{*2}
4	ground ^{*1}
9	mouse-data
5	mouse-clock

keyboard/mouse connector green 9 pin Sub-D male	
pin	signal
1	keyboard-clock
6	keyboard-data
2	ground ^{*1}
7	+5 volts ^{*2}
3	-
8	+5 volts ^{*2}
4	ground ^{*1}
9	mouse-data
5	mouse-clock

^{*1} all ground pins of all keyboard/mouse connectors are connected

^{*2} the +5 volts pin are connected, the +5 volts between the keyboard/mouse connectors are decoupled with diodes

all keyboard signals are isolated from the housing

red/yellow/green means the colour of the indicator LED on the top of the keyboard

switch and trackball keys 9 pin Sub-D female	
pin	signal
1	left trackball key
6	select green ^{*3}
2	middle trackball key
7	not used ^{*3}
3	right trackball key
8	select red ^{*3}
4	indicator led red
9	indicator led green
5	gnd

trackball sensors 9 pin Sub-D male	
pin	signal
1	gnd
6	gnd
2	y-axis signal A
7	x-axis signal A
3	y-axis signal B
8	x-axis signal B
4	+5 volts
9	+5 volts
5	gnd

^{*3} to select a channel (red or green) connect the pin "select-red" or "select green" to gnd
if no of these pins connected to gnd the yellow channel is selected.

video connectors

VGA in connector red 15 pins hi-dens Sub-D female	
pin	signal
1	red
2	green
3	blue
4	-
5	gnd
6	gnd-red
7	gnd-green
8	gnd-blue
9	-
10	gnd
11	gnd
12	-
13	h-synch
14	v-synch
15	-

VGA in connector yellow 15 pins hi-dens Sub-D female	
pin	signal
1	red
2	green
3	blue
4	-
5	gnd
6	gnd-red
7	gnd-green
8	gnd-blue
9	-
10	gnd
11	gnd
12	-
13	h-synch
14	v-synch
15	-

VGA in connector green 15 pins hi-dens Sub-D female	
pin	signal
1	red
2	green
3	blue
4	-
5	gnd
6	gnd-red
7	gnd-green
8	gnd-blue
9	-
10	gnd
11	gnd
12	-
13	h-synch
14	v-synch
15	-

VGA out connector 15 pins hi-dens Sub-D female	
pin	signal
1	red
2	green
3	blue
4	-
5	gnd
6	gnd-red
7	gnd-green
8	gnd-blue
9	-
10	gnd
11	gnd
12	-
13	h-synch
14	v-synch
15	-

power supply 4 pins M8x1 connector male	
pin	signal
1 (brown)	0 volts
2 (white)	0 volts
3 (blue)	+24 volts (18..36 volts)
4 (black)	+24 volts (18..36 volts)

all gnd-pins of all VGA-connectors are connected and isolated from the housing

red/yellow/green means the colour of the indicator-LED on the top of the keyboard

the power supply is isolated from the ground of the VGA-signals

22/06/2004

Ob der Eck 4 · D-78148 Gütenbach · Telefon (07723) 9186-0 · Telefax (07723)9186-30 **DNR10851.DOC**

WWW.RURGMBH.DE INFO@RURGMBH.DE

You can select the channel with the key switch.
The key can be plugged and pulled out in each position.

Channel-Nr.	key position	LED colour	VGA - channel	Keyboard / Mouse channel
1	left	green	green	green
2	middle	yellow	yellow	yellow
3	right	red	red	red

The LED is highlighted when the selected PC is on.
(5V Power supply of the keyboard interface).
The indicator LED is blinking if the selected PC is in power down state or not connected.

Customscode 8471 60 50 (keyboard)