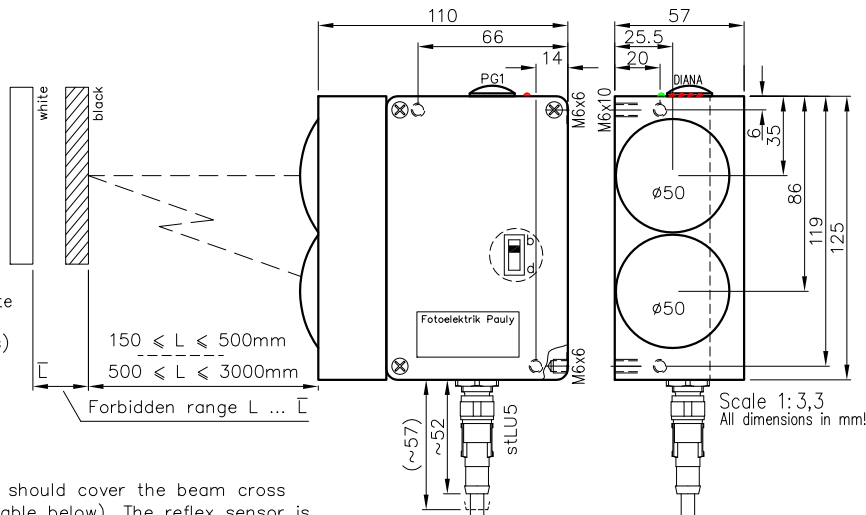


## Adjustable Diffuse-Reflective Sensor with active Background Response Suppression,

### Type ET103/3000

L/mm	⌈/mm	∅/mm
150-500	505	20
200-800	808	30
250-1000	1010	35
300-1500	1530	55
400-2000	2080	70
500-3000	3400	95

L: Working range on black  
 ⌈: "forbidden" distance on white  
 ∅: Light beam dia.  
 (only approximate values)



#### Hints:

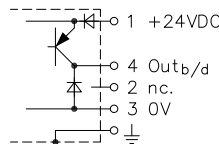
The surface to be detected should cover the beam cross section  $\emptyset$  completely (see table below). The reflex sensor is adjusted by activating the screw located behind the PG1 cover. In a clockwise direction L becomes larger. The optimum setting is found by bringing a diffuse Reflective surface (paper) into the light path. Approximately in the center between the maximum desired detection distance L and the "forbidden" distance  $\lceil$  and then adjusting the reflex sensor so that it turns off just at this precise point. The "forbidden" distance  $\lceil$  are in general  $< L+5\%$ . Diffuse Reflective surfaces are themselves reliably recognizable under beam incidence angles which sharply deviate from  $90^\circ$ . On reflective surfaces the detection quality can be considerably impaired. However, reflective surfaces can still be recognized beyond the forbidden distance  $\lceil$ ; slightly tilting the detection helps. The ON ( $T_i$ ) and OFF delay ( $T_a$ ) is available on request. The delay time is increasable by adjusting the potentiometer in a clockwise direction. The potentiometer is located inside the housing. The adjustable time interval lies between 0 and approximately 3 seconds. Other time intervals are available on request: 1 second, 10 second and 20 second.

DIANA (Digital ANALoge Anzeige -digital analog indicator) indicates approximately 20-fold levels above the response threshold. It is not necessary that all DIANA LEDs light up in order for a proper function of the reflex sensor! Beyond the switching range (green off), the DIANA may show the level under the switching threshold.

#### Technical characteristics:

Housing	Al-Cast
Weight	approx. 1000g
Protection mode	IP65
Connection	4+1 pin Plug stLU5
Supply	24VDC/40mA without load
Output	pnp 60mA s.c.-prot., e2
Signal mode	bright-/darkswitching, selectable
Transmitter light	850...880nm, invisible
Steady light Resist.	>80kLx
Interference Suppress.	Force synchronization
Access time	<12ms/switch transition
Switching rate	40/s
Switch indicator	LED green
Level indicator	4x LED red (DIANA, i)
Ambient temperatur	-30...+65°C

#### Connecting diagram:

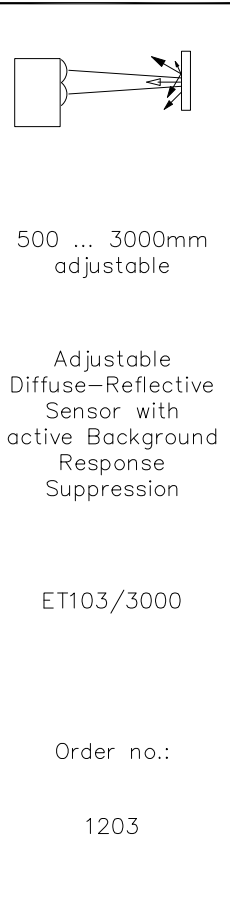


#### Features:

Connection	3+1 pin plug stH4
Output	3+1 wire no.-cable K4 nnp 60mA s.c.-prot., e3 Optocoupler 60V/50mA, e1 2xe2 or 2xe3 or antival. e4 or e5
Access time	"q": <2ms/switch transition
Switching rate	"q": 300/s
Time delay	0-3s, switching-on-off-delay, separately adjustable, z3
Heat protected transducer system, pl	If using cooling water flange, then milled wall, y

#### Accessories:

Diaphragms  
 Optical filters  
 Furnace window 02004/100\*03  
 Cooling water flange KW26  
 Heavy adjustment flange R26SH  
 Elbow tube adjustment AD26SS1 or AD26SS2



500 ... 3000mm adjustable

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Order no.: 1203