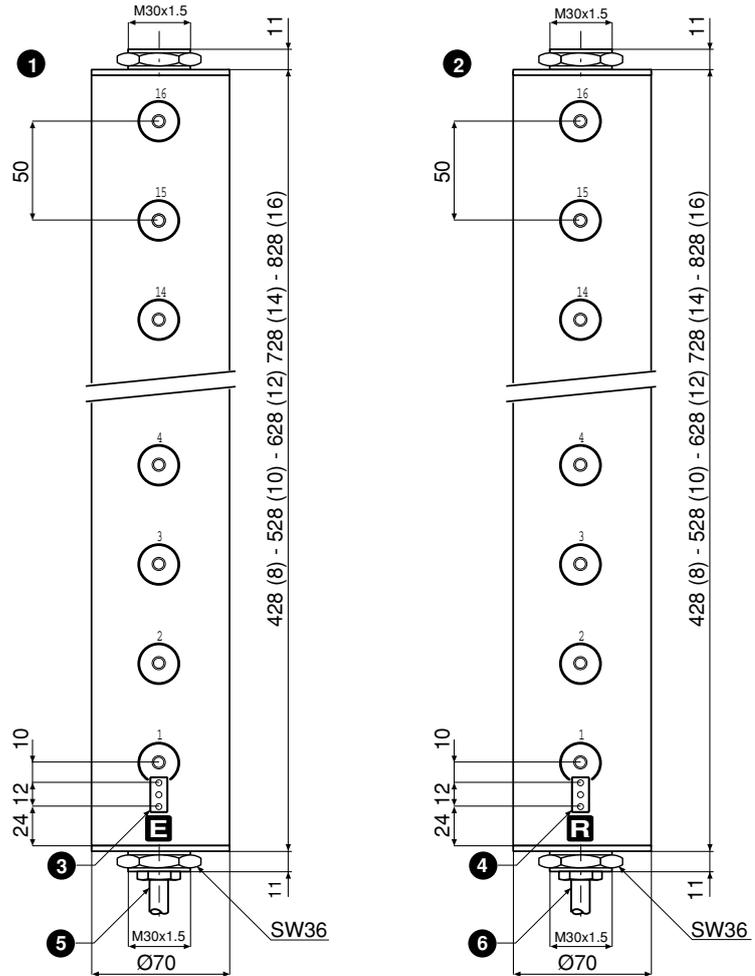


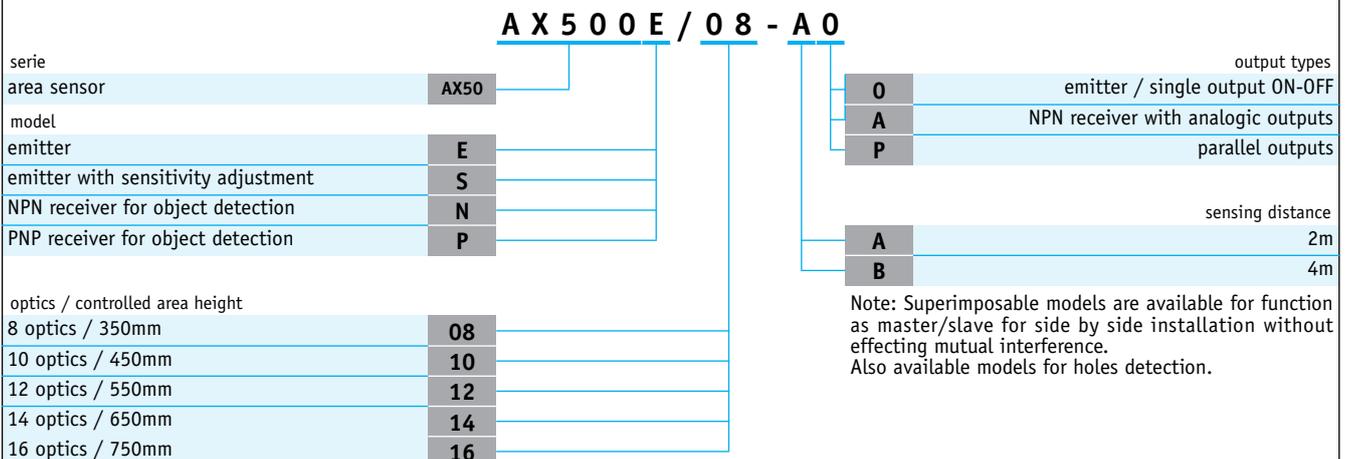

3.1
SERIE AX500

Area sensors with parallel/analogic outputs 12-24DC

- ◆ Controlled area height 350-750mm (from 8 up to 16 optics)
- ◆ Sensing range 2 or 4m
- ◆ 50mm resolution
- ◆ Single output, single-parallel, single-analogic outputs (4-20mA, 0-10V)
- ◆ Exclusive housing (patented)
- ◆ Very quick fixing by M30 standard connection
- ◆ M12 stControlled by microcontrollerandard connector
- ◆ Cable exit for models with analogic outputs
- ◆ 3 indicator LEDs on both units
- ◆ Test input for lens dirt
- ◆ Check input for correct operation
- ◆ Alarm output
- ◆ IP65 protection degree
- ◆ Complete protection against electrical damage


DIMENSIONAL DRAWING

Key

- | | |
|--|--|
| <ul style="list-style-type: none"> 1 Emitter 2 Receiver 3 LEDs on emitter: green (supply), red (alarm sync.), yellow (area state) 4 LEDs on receiver: green (supply), red (alignment), yellow (OR outputs) | <ul style="list-style-type: none"> 5 Cable 7x0,25mm², Ø5,4mm, PVC, 5m 6 Cable 25 (7 single output)x0,25mm², Ø9,7mm, PVC, 5m (DIN47100 colours) <p>Receiver with analogic outputs:
Cable 7x0,25mm²+ 2x0,22mm² shielded, Ø7,5mm, PVC, 5m</p> |
|--|--|

ORDERING SYSTEM




Operation and diagnostic test by microcontroller

Test input

for correct operation, lens dirt and alarm output

3 LEDs indicators on both units

Detection from 350mm up to 750mm area height and sensing range up to 2m

AX500 serie generates a grid from 8 up to 16 beams with 50mm of resolution to measure heights and position of object, by micro-controller.

Area sensor with parallel or analogic outputs

A new M.D. area sensor with parallel or analogic outputs (to current and voltage) for heights and positions control. New AX500 serie is available with 8 up to 16 optics with independent outputs (or analogic output).

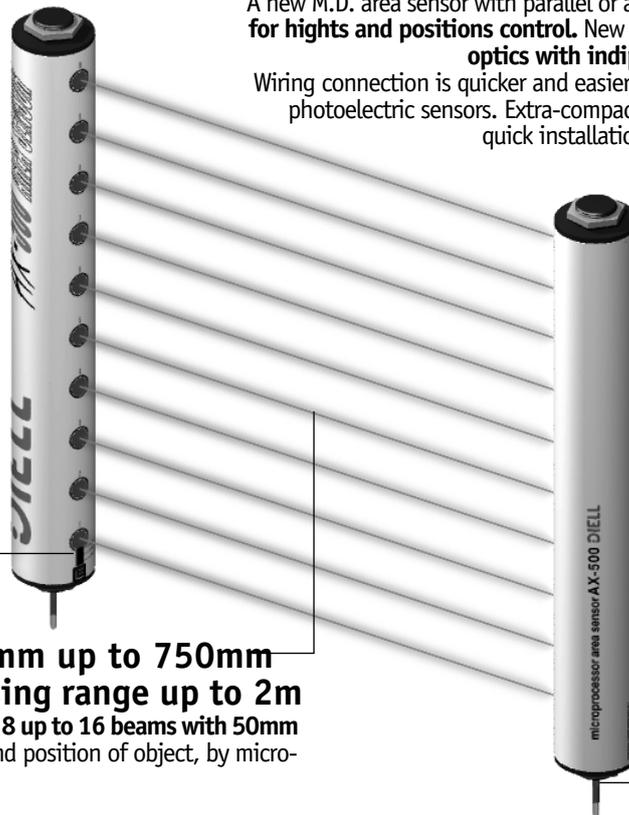
Wiring connection is quicker and easier than the typical installation with several photoelectric sensors. Extra-compact barrel housing (patented) grants a very quick installation and fixing (M30 standard connection).

Input for output state selection (NO/

Parallel or analogic

Exclusive M30 standard connection

easy mounting like a simple photoelectric sensor.



3.1

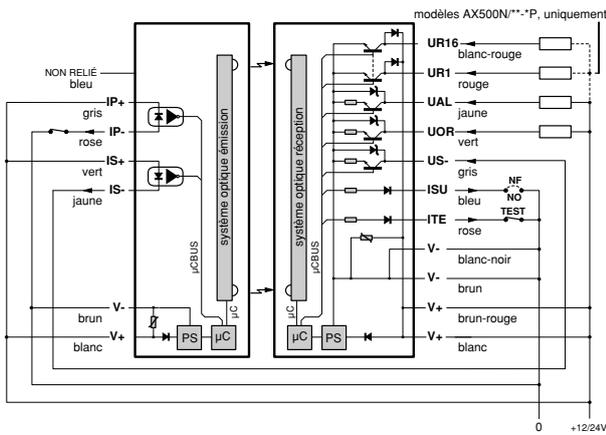
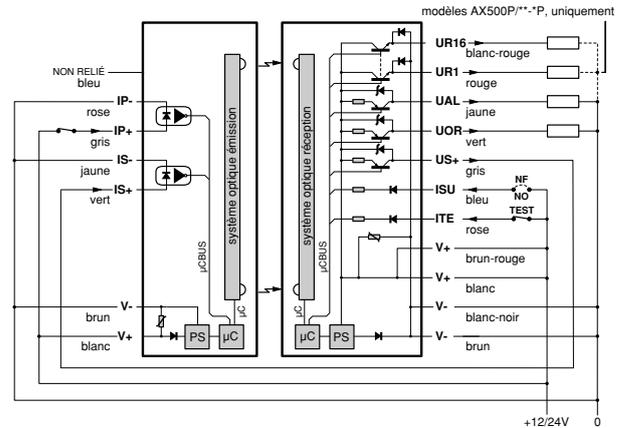
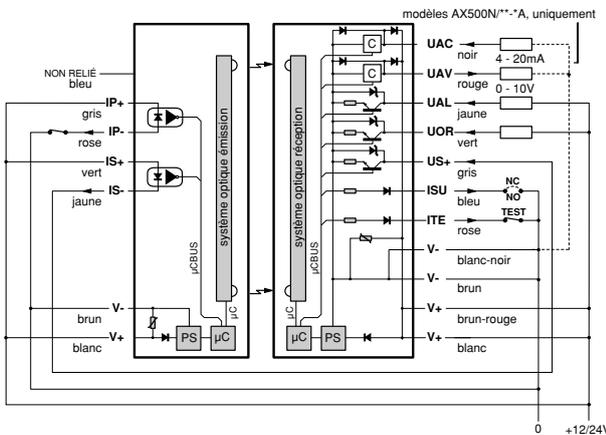
SPECIFICATIONS					
Model	AX500*/08-**	AX500*/10-**	AX500*/12-**	AX500*/14-**	AX500*/16-**
Nominal sensing distance S_n	2m-4m				
Resolution	50mm				
Controlled area height	350mm	450mm	550mm	650mm	750mm
Minimum detectable object	Ø55mm, min. Ø holes 25mm (for Z models)				
Emission	infrared (880nm) modulated				
Differential travel	≤10%				
Operating voltage	12-24Vdc (standard) - 15-24Vdc (with analogic outputs)				
Ripple	≤10%				
No-load supply current	50mA (receiver) - 100mA (receiver with analogic outputs) - 100mA (emitter)				
Load current	100mA (UOR single output, UAL alarm), 60mA (parallel outputs)				
Leakage current	≤10µA (UOR single output, UAL alarm), ≤100µA (parallel outputs)				
Voltage drop	1,2Vmax. (UOR single output, UAL alarm at 100mA), 1,8Vmax. (parallel outputs at 100mA)				
Output type	NPN or PNP, NO / NC selectable				
Analogic outputs	0-10V(in voltage); 4-20mA (in current)				
Excess gain	2 (at the maximum distance)				
Angular displacement	3° (emitter) - 6° (receiver) at the maximum distance				
Response time	2,6ms	2,8ms	3ms	3,2ms	3,4ms
Time delay before availability	500ms				
Supply electrical protections	polarity reversal, transient				
Output electrical protections	short circuit (autoreset)				
Temperature range	0...+50°C (without freeze)				
Temperature drift	10% Sr				
Interference to external light	1500 lux (incandescent lamp), 4500 lux (sunlight)				
Protection degree (DIN 40 050)	IEC IP65				
Emitter's LED indicators	green (supply), red (alarm sync.), yellow (area state)				
Receiver's LED indicators	green (supply), red (alignment), yellow (output state)				
Housing material	PMMA				
Weight (approx.)	1800g (emitter); 2000g (receiver)				

DIAGNOSTICS

LED	State	Operation	Check
GREEN receiver SUPPLY	stable on unstable on off	Supply is present and stable Supply is present but not stable No supply or voltage lower than 8Vdc	- Supply Supply
RED receiver ALIGNMENT	full on light on off blinking on	No alignment Partial alignment or short signal Correct alignment and sufficient signal Receiver does not function correctly or output short circuit	Alignment * Alignment * - Wiring or failure
YELLOW receiver OUTPUT	on off	Output in ON state Output in OFF state	- -
GREEN emitter SUPPLY	stable on unstable on off	Supply is present and stable Supply is present but not stable No supply or voltage lower than 8Vdc	- Supply Supply
RED emitter SYNC. ALARM	off on	Synchronism property received Synchronism is not received or emitted	- Wiring or failure
YELLOW emitter AREA STATE	on off	Engaged area or uncorrect alignment Free area or correct alignment	Alignment * -

* by free area

3.1

WIRING DIAGRAMS
NPN output

PNP output

NPN ANALOGIC output

INPUTS AND OUTPUTS

INPUTS	
ISU	input for NO-NC output state selection
ITE	test input (when off it inhibits the emitter by forcing the receiver to switch)
IS+ IS-	synchronism input
IP+ IP-	test input for dirty lens (when off it reduces the emission by 20% and brings the receiver to switch when lenses are dirty)
V+ V-	supply
OUTPUTS	
UR1 - UR16	parallel outputs
UOR	single output
UAL	alarm output (normally ON->OFF in case of internal malfunction or signal reduction)
US	synchronism output
UAC	analogic output 4-20mA
UAV	analogic output 0-10V(50mA max.)

OUTPUTS COLOURS

1) UR1	red
2) UR2	black
3) UR3	purple
4) UR4	grey-pink
5) UR5	red-blu
6) UR6	white-green
7) UR7	brown-green
8) UR8	white-yellow
9) UR9	yellow-brown
10) UR10	white-grey
11) UR11	grey-brown
12) UR12	white-pink
13) UR13	pink-brown
14) UR14	white-blue
15) UR15	brown-blue
16) UR16	white-red