



OPTOELECTRONIC SAFETY BARRIERS TYPE 4

Optoelectronic Safety Barrier for the protection of workers exposed to risks arising from the use of dangerous machines. Safety Barrier Admiral, with its two safe static outputs, can work without external control units with all the safety functions integrated inside the Emitter and the Receiver complying perfectly with the requirements of the European Standard EN 61496-1 and the International Standard IEC 61496-1-2.

Conforming to:

- 98/37/EEC "Machine Directive"
- 89/336/EEC "Electromagnetic Compatibility Directive"
- 73/23/EEC "Low Voltage Directive"
- EN 61496-1 and IEC 61496-1-2 "Electrosensitive protection devices"



Available Model: 4

- resolution 14 and 20 mm for finger detection
- resolution 30 and 40 mm for hand detection
- resolution 90 mm for the detection of a body in the controlled access area
- resolution 50 and 90 mm for the detection of the presence of a person's body in the hazardous area.

Technical Specifications:

- Selectable maximum scanning distance 6 m or 18 m
- Power supply 24 Vcc \pm 20%
- 2 Safety static outputs protected from shortcircuits and overloads
- Connection with M12, 5 poles connector
- Correct alignment and beam status indicator Led's
- Seven-segment display for signaling and functional diagnosis
- Cascade connection of two barriers
- Suppression of the optical interferences through the range's selection
- 3 fastening's modes: back slot, side slot or to the top and lower end
- Connection cable length between barriers and safety relay: 50 m
- Accessory deflector mirrors for the realization of perimeter protections along up to 4 sides

Ideal for the protection of:

- Presses
- Punching and dinking machines
- Cutters and shears
- Robotised areas
- Assembly lines
- Palletising syste



ADMIRAL 14 mm Finger Detection

Model	AD 151	AD 301	AD 451	AD 601	AD 751	AD 901	AD 1051	AD 1201	AD 1351	AD 1501	AD 1651	AD 1801
Protected height mm	160	310	460	610	760	910	1060	1210	1360	1510	1660	1810
Number of beams	15	30	45	60	75	90	105	120	135	150	165	180
Response time ms	6	7,5	9,5	11,5	13,5	15,5	17	19	21	23	25	27
Total barrier's height mm	261	411	561	711	861	1011	1161	1311	1461	1611	1761	1911
Safety category	4											
Resolution mm	14											
Maximum scanning range	6											
Safety outputs	2 PNP - 500 mA a 24 Vdc											
Signaling	Seven-segment display and Leds for barrier's status and and diagnostic											
Power supply Vdc	24 ± 20%											
Connections	M12, 5 poles connector											
Max. lenght of the connection cable m	50											
Operating temp. °C	0 ÷ 55											
Degree of protection	IP 65											
Fixing's modes	Back or side slot, top and lower end											
Cross section dimensions	35 x 45											



ADMIRAL 20 mm Finger Detection



Model	AD 152	AD 302	AD 452	AD 602	AD 752	AD 902	AD 1052	AD 1202	AD 1352	AD 1502	AD 1652	AD 1802
Protected height mm	160	310	460	610	760	910	1060	1210	1360	1510	1660	1810
Number of beams	15	30	45	60	75	90	105	120	135	150	165	180
Response time ms	6	7,5	9,5	11,5	13,5	15,5	17	19	21	23	25	27
Total barrier's height mm	261	411	561	711	861	1011	1161	1311	1461	1611	1761	1911
Safety category	4											
Resolution mm	20											
Maximum scanning range	6 - 18 selectable											
Safety outputs	2 PNP - 500 mA a 24 Vdc											
Signaling	Seven-segment display and Leds for barrier's status and and diagnostic											
Power supply Vdc	24 ± 20%											
Connections	M12, 5 poles connector											
Max. lenght of the connection cable m	50											
Operating temp. °C	0 ÷ 55											
Degree of protection	IP 65											
Fixing's modes	Back or side slot, top and lower end											
Cross section dimensions	35 x 45											



ADMIRAL 30 mm Hand Detection



Model	AD 153	AD 303	AD 453	AD 603	AD 753	AD 903	AD 1053	AD 1203	AD 1353	AD 1503	AD 1653	AD 1803
Protected height mm	160	310	460	610	760	910	1060	1210	1360	1510	1660	1810
Number of beams	8	16	24	32	40	48	56	64	72	80	88	96
Response time ms	6		7	8	9	10	11	12	13	14	15	16
Total barrier's height mm	261	411	561	711	861	1011	1161	1311	1461	1611	1761	1911
Safety category	4											
Resolution mm	30											
Maximum scanning range	6 - 18 selectable											
Safety outputs	2 PNP - 500 mA a 24 Vdc											
Signaling	Seven-segment display and Leds for barrier's status and and diagnostic											
Power supply Vdc	24 ± 20%											
Connections	M12, 5 poles connector											
Max. lenght of the connection cable m	50											
Operating temp. °C	0 ÷ 55											
Degree of protection	IP 65											
Fixing's modes	Back or side slot, top and lower end											
Cross section dimensions	35 x 45											



ADMIRAL 40 mm Hand Detection



Model	AD 304	AD 454	AD 604	AD 754	AD 904	AD 1054	AD 1204	AD 1354	AD 1504	AD 1654	AD 1804
Protected height mm	310	460	610	760	910	1060	1210	1360	1510	1660	1810
Number of beams	10	15	20	25	30	35	40	45	50	55	60
Response time ms	6			7	8		9		10	11	
Total barrier's height mm	411	561	711	861	1011	1161	1311	1461	1611	1761	1911
Safety category	4										
Resolution mm	40										
Maximum scanning range	6 - 18 selectable										
Safety outputs	2 PNP - 500 mA a 24 Vdc										
Signaling	Seven-segment display and Leds for barrier's status and and diagnostic										
Power supply Vdc	24 ± 20%										
Connections	M12, 5 poles connector										
Max. lenght of the connection cable m	50										
Operating temp. °C	0 ÷ 55										
Degree of protection	IP 65										
Fixing's modes	Back or side slot, top and lower end										
Cross section dimensions	35 x 45										



ADMIRAL 50 mm Detection of the presence of a person's body in the dangerous area



Model	AD 305	AD 455	AD 605	AD 755	AD 905	AD 1055	AD 1205	AD 1355	AD 1505	AD 1655	AD 1805
Protected height mm	310	460	610	760	910	1060	1210	1360	1510	1660	1810
Number of beams	8	12	16	20	24	28	32	36	40	44	48
Response time ms	6			7			8	8,5	9,5	9	10
Total barrier's height mm	411	561	711	861	1011	1161	1311	1461	1611	1761	1911
Safety category	4										
Resolution mm	50										
Maximum scanning range	6 - 18 selectable										
Safety outputs	2 PNP - 500 mA a 24 Vdc										
Signaling	Seven-segment display and Leds for barrier's status and and diagnostic										
Power supply Vdc	24 ± 20%										
Connections	M12, 5 poles connector										
Max. lenght of the connection cable m	50										
Operating temp. °C	0 ÷ 55										
Degree of protection	IP 65										
Fixing's modes	Back or side slot, top and lower end										
Cross section dimensions	35 x 45										



ADMIRAL 90 mm Detection of the body through access control



Model	AD 309	AD 459	AD 609	AD 759	AD 909	AD 1059	AD 1209	AD 1359	AD 1509	AD 1659	AD 1809
Protected height mm	310	460	610	760	910	1060	1210	1360	1510	1660	1810
Number of beams	5	7	9	11	13	15	17	19	21	23	25
Response time ms	6								6,5	7	
Total barrier's height mm	411	561	711	861	1011	1161	1311	1461	1611	1761	1911
Safety category	4										
Resolution mm	90										
Maximum scanning range	6 - 18 selectable										
Safety outputs	2 PNP - 500 mA a 24 Vdc										
Signaling	Seven-segment display and Leds for barrier's status and and diagnostic										
Power supply Vdc	24 ± 20%										
Connections	M12, 5 poles connector										
Max. lenght of the connection cable m	50										
Operating temp. °C	0 ÷ 55										
Degree of protection	IP 65										
Fixing's modes	Back or side slot, top and lower end										
Cross section dimensions	35 x 45										



SAFETY RELAY TYPE 4

Type 4 Safety Relay which, connected to the two safe static outputs of the barriers ADMIRAL, allows optional features like the manual restart and the final switching devices monitoring (FSD)

Conforming to:

- 98/37/EEC "Directive on Machines"
- 89/336/EEC "Electromagnetic Compatibility Directive"
- 73/23/EEC "Low Voltage Directive"
- EN 954-1 "Safety related parts of control systems"



Model	ADSR1
Ordering Code	1330900

Technical Specifications:

- Power supply 24 Vcc \pm 20%
- Selectable manual or automatic restart
- Monitored restart contact
- 2 NO outputs with safety relays using forced guide contacts
- Beams status and fault diagnosis indicator Led's
- Feedback input for the control of the machine's final switching devices (FSD)
- Box width 22,5 mm
- Provision for fastening to a bar according to Standard EN 50022-35
- Connections with terminal blocks

Model	ADSR1
Safety category	4
Safety barriers to be connected	1
Relays Safety outputs	2 NO contacts - 2A 250 Vac
Response time ms	\leq 20
FSD monitoring	1 NC input (20 mA - 24 Vcc)
Operation mode	Selectable manual or automatic
Connections	Terminal Blocks
Operating temperature °C	0 \div 55
Power supply Vcc	24 \pm 20%
Degree of protection (housing)	IP 20
Degree of protection (terminal blocks)	IP 2X
Mounting	Quick mounting on bar according standard EN 50022-35
Dimensions mm	22,5 x 100 x 115 (L x H x P)