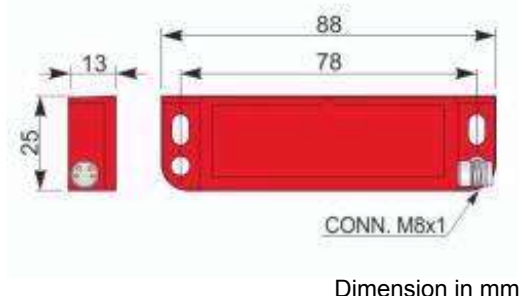




Part number: QMP000039 - Model: SMS88-P5 2NC H1 PR



TECHNICAL CHARACTERISTICS

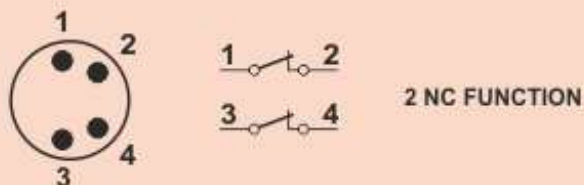
Rated operational voltage Ue:	24 Vac/dc
Rated operational current Ie:	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current ITh:	0.25A
Rated insulation voltage Ui:	60Vac / 75Vdc
Rated impulse withstand voltage Uimp:	1.5KV
Electrical endurance:	1 million of cycles
Assured operating distance Sao:	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance Sar:	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Housing material:	PBT +FV



Part number: QMP000039 - Model: SMS88-P5 2NC H1 PR

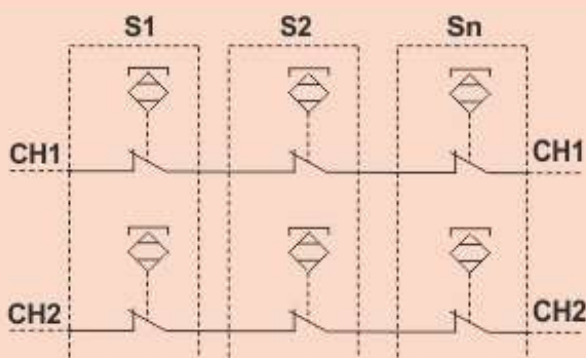
WIRING DIAGRAM

M8x1 CONNECTOR MODEL



INSTRUCTIONS FOR CORRECT INSTALLATION

CONNECTION OF MORE SENSORS TO SAFETY MODULE



It is possible to connect in series more safety magnetic sensors to the module **MS-ER MA R01**. The total resistance of the sensors and cables must not exceed the input resistance of the single channel of the safety module. With this technique you can realize circuits up to Category 3 according to ISO EN 13849-1.

S1, S2, ..., Sn = Safety magnetic sensors
CH1 = Input channel 1 of the Safety Module
CH2 = Input channel 2 of the Safety Module

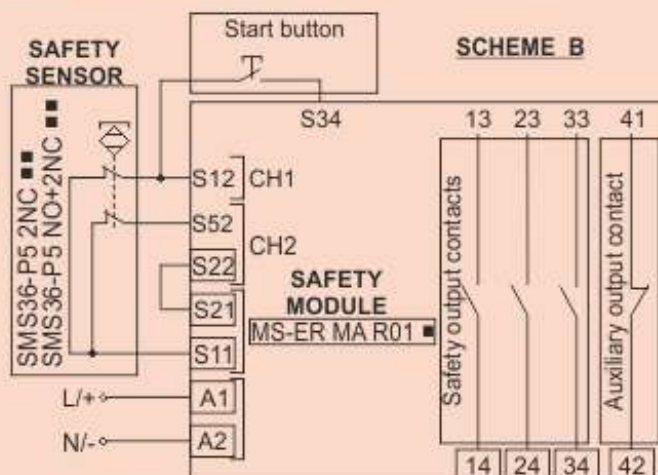
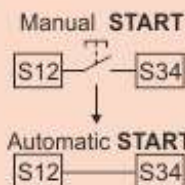
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



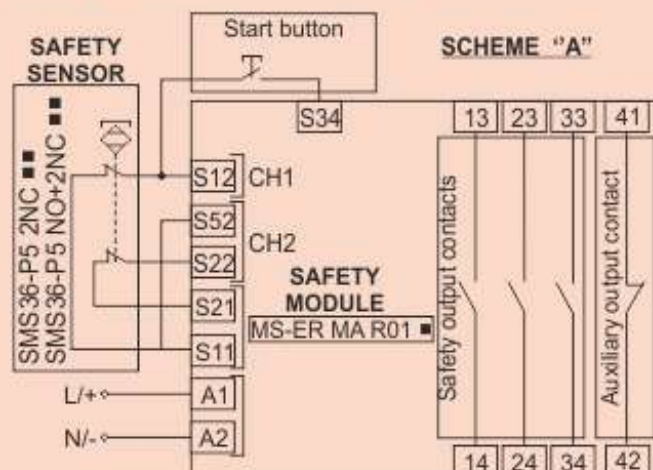
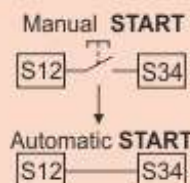
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

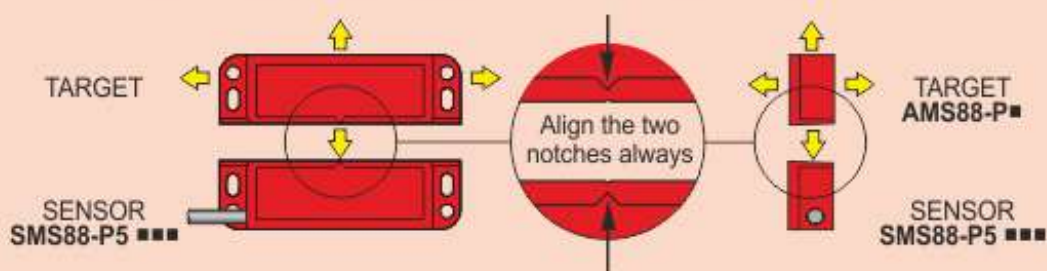
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



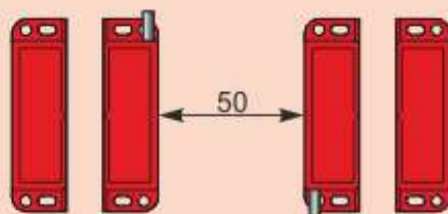
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

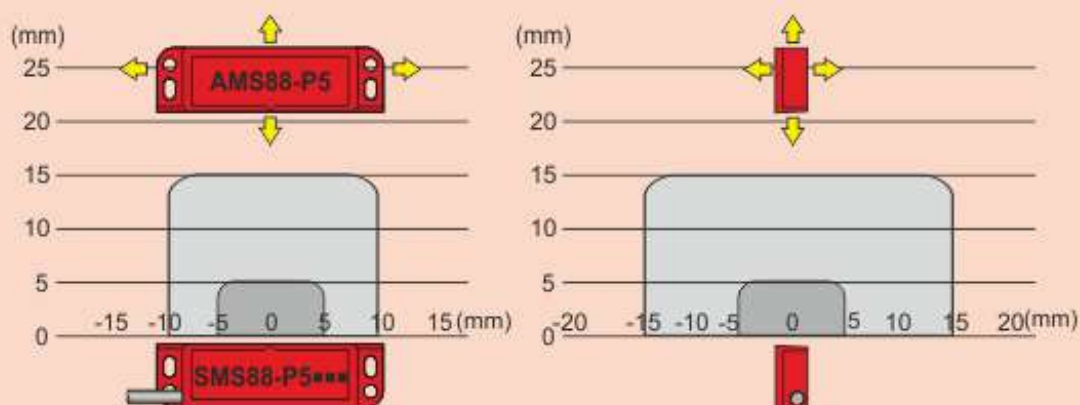


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

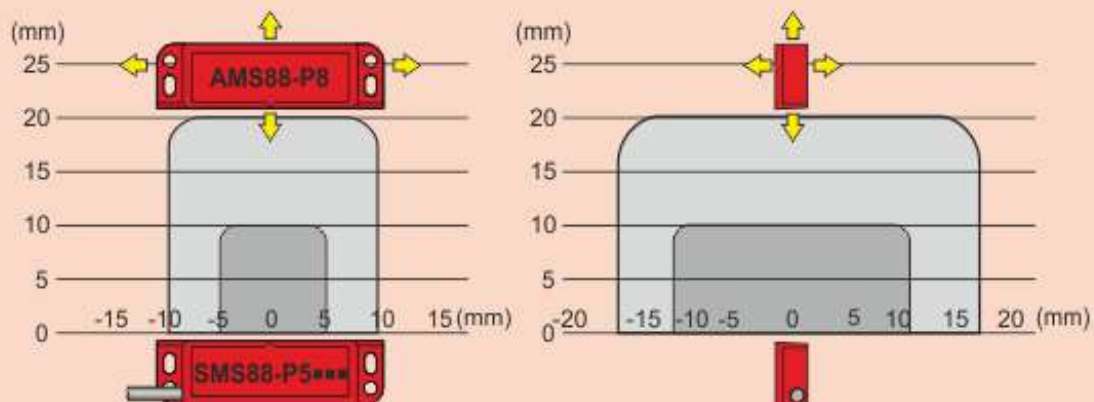


SWITHING DISTANCE

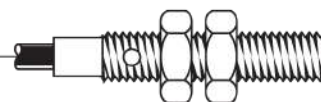


N.B. The drawing of the activation areas is indicative.

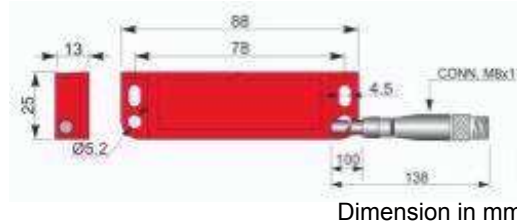
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000041 - Model: SMS88-P5 2NC H1C PR



TECHNICAL CHARACTERISTICS

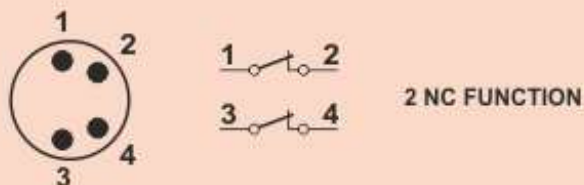
Rated operational voltage Ue:	24 Vac/dc
Rated operational current Ie:	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current ITh:	0.25A
Rated insulation voltage Ui:	60Vac / 75Vdc
Rated impulse withstand voltage Uimp:	1.5KV
Electrical endurance:	1 million of cycles
Assured operating distance Sao:	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance Sar:	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Housing material:	PBT +FV



Part number: QMP000041 - Model: SMS88-P5 2NC H1C PR

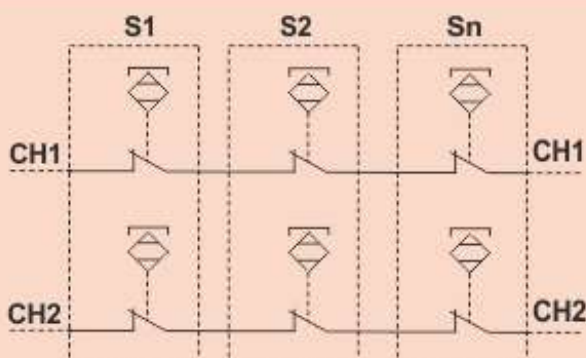
WIRING DIAGRAM

M8x1 CONNECTOR MODEL



INSTRUCTIONS FOR CORRECT INSTALLATION

CONNECTION OF MORE SENSORS TO SAFETY MODULE



It is possible to connect in series more safety magnetic sensors to the module **MS-ER MA R01**. The total resistance of the sensors and cables must not exceed the input resistance of the single channel of the safety module. With this technique you can realize circuits up to Category 3 according to ISO EN 13849-1.

S1, S2, ..., Sn = Safety magnetic sensors
CH1 = Input channel 1 of the Safety Module
CH2 = Input channel 2 of the Safety Module

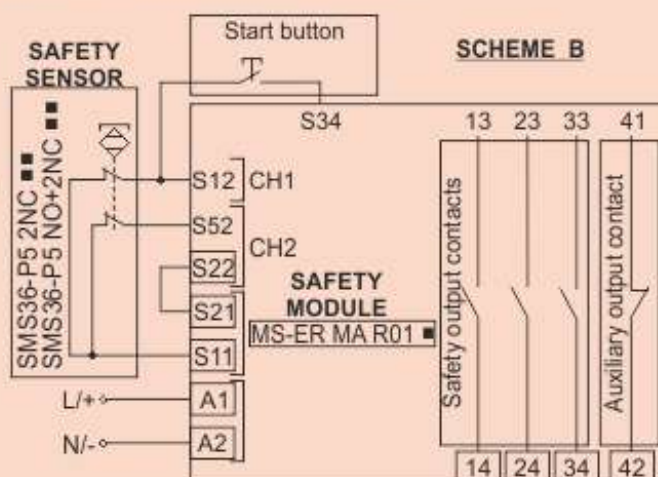
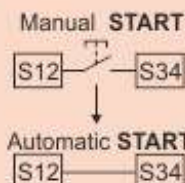
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



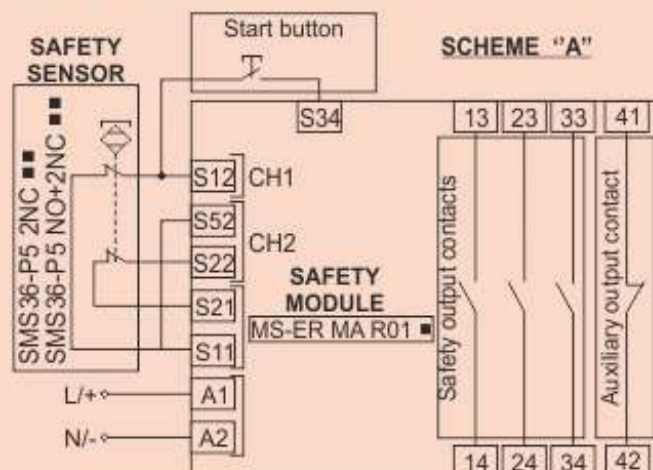
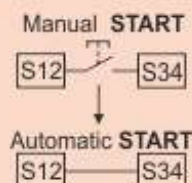
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

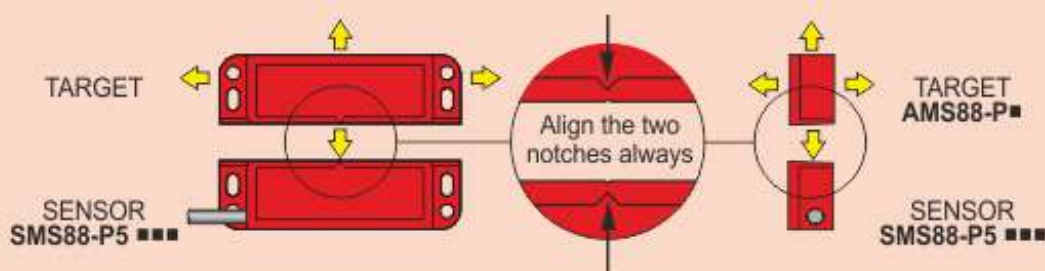
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



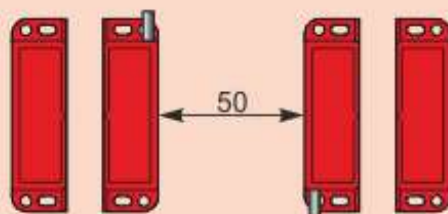
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

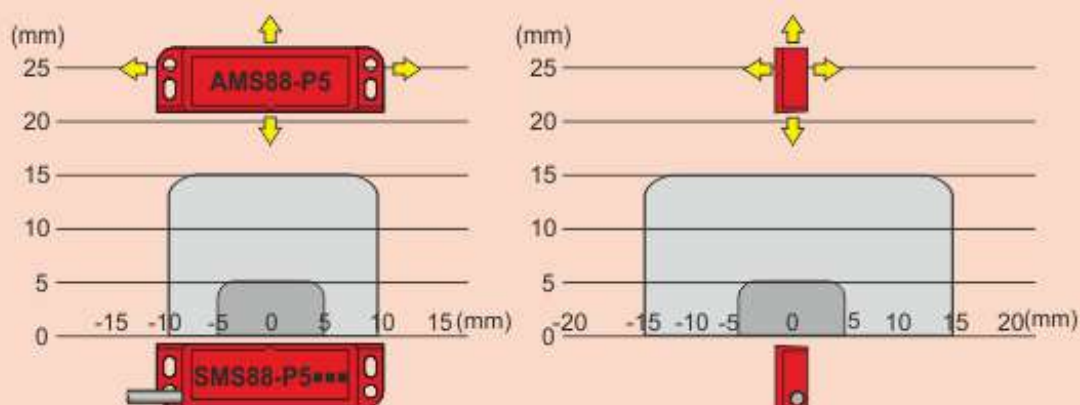


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

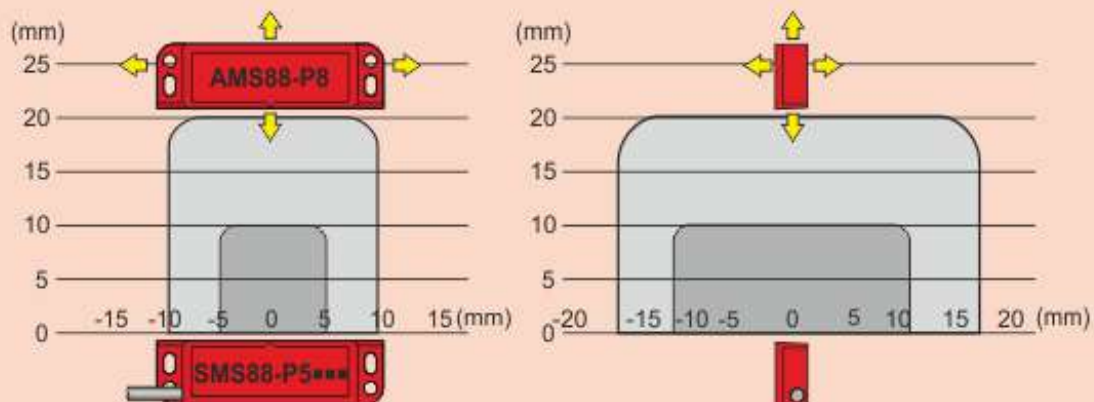


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

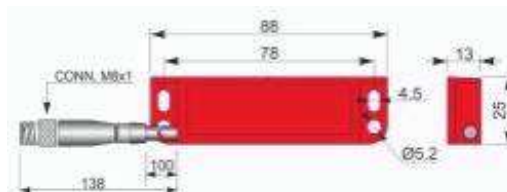
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000042 - Model: SMS88-P5 2NC H1C PL



Dimension in mm

TECHNICAL CHARACTERISTICS

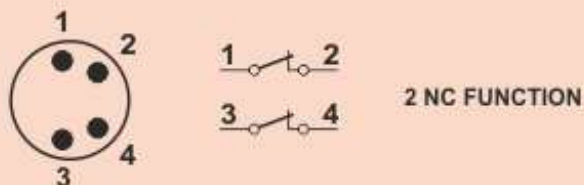
Rated operational voltage Ue:	24 Vac/dc
Rated operational current Ie:	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current ITh:	0.25A
Rated insulation voltage Ui:	60Vac / 75Vdc
Rated impulse withstand voltage Uimp:	1.5KV
Electrical endurance:	1 million of cycles
Assured operating distance Sao:	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance Sar:	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Housing material:	PBT +FV



Part number: QMP000042 - Model: SMS88-P5 2NC H1C PL

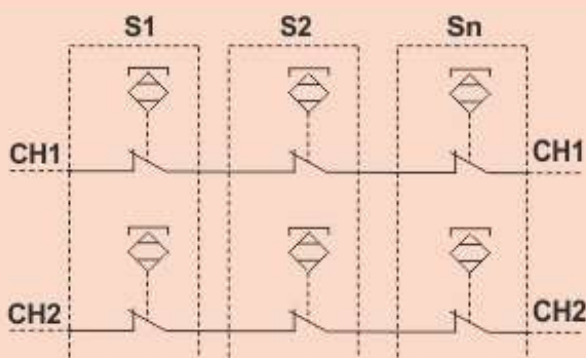
WIRING DIAGRAM

M8x1 CONNECTOR MODEL



INSTRUCTIONS FOR CORRECT INSTALLATION

CONNECTION OF MORE SENSORS TO SAFETY MODULE



It is possible to connect in series more safety magnetic sensors to the module **MS-ER MA R01**. The total resistance of the sensors and cables must not exceed the input resistance of the single channel of the safety module. With this technique you can realize circuits up to Category 3 according to ISO EN 13849-1.

S1, S2, ..., Sn = Safety magnetic sensors
CH1 = Input channel 1 of the Safety Module
CH2 = Input channel 2 of the Safety Module

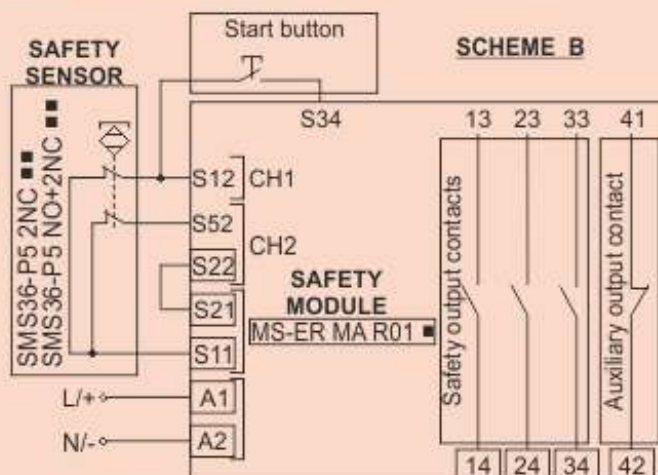
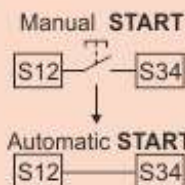
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



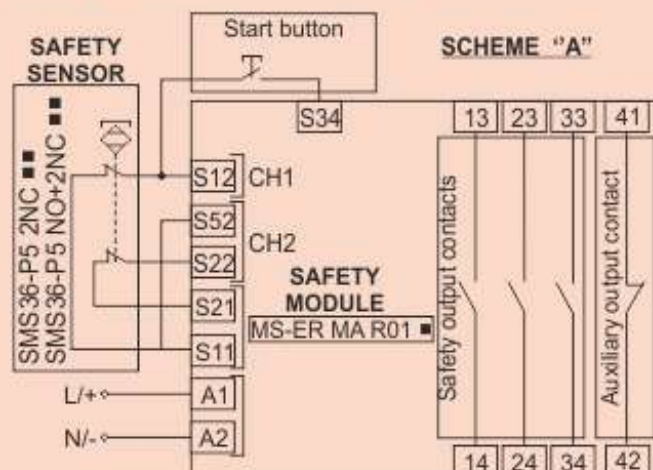
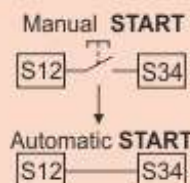
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

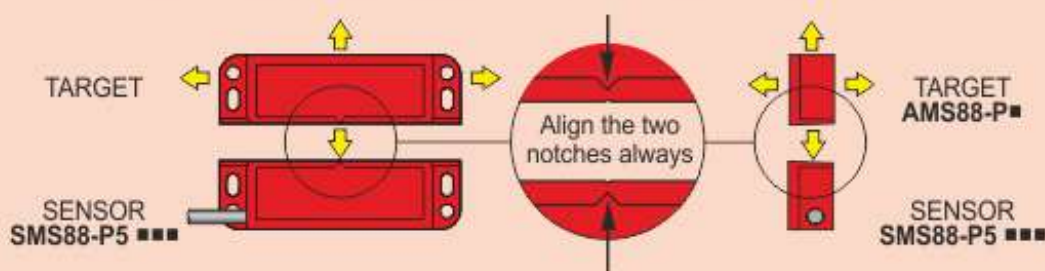
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



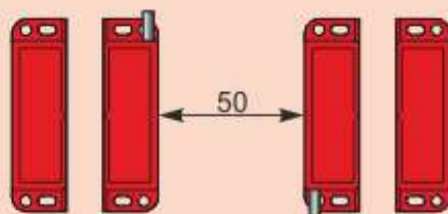
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

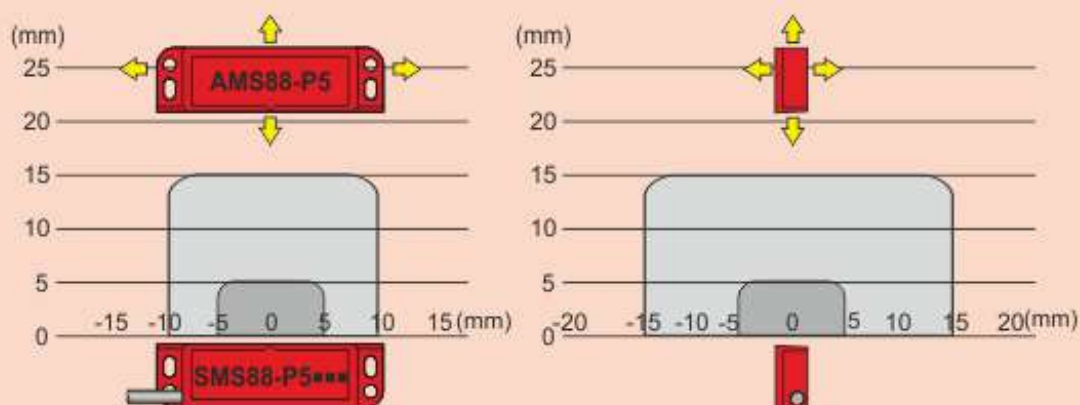


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

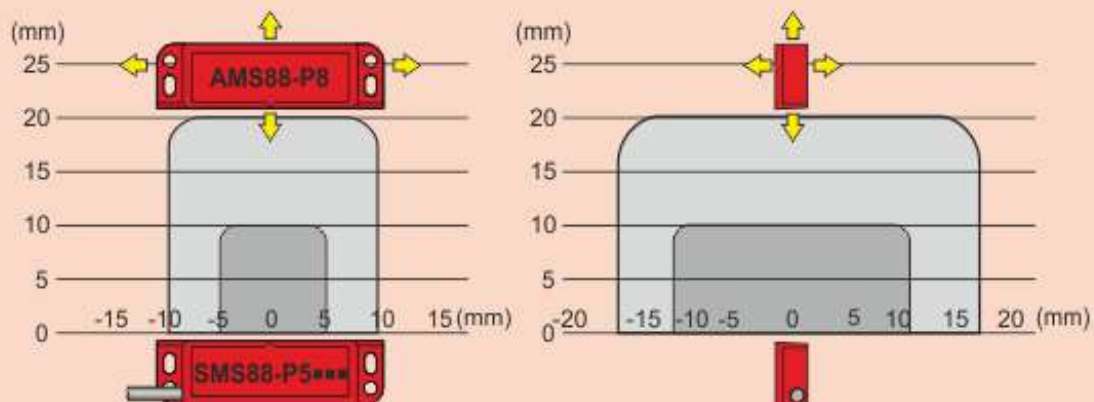


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

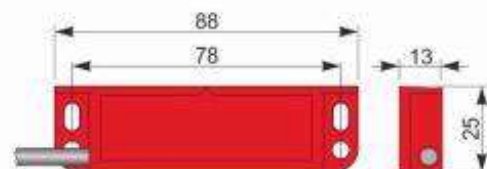
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000037 - Model: SMS88-P5 2NC CL LC5



Dimension in mm

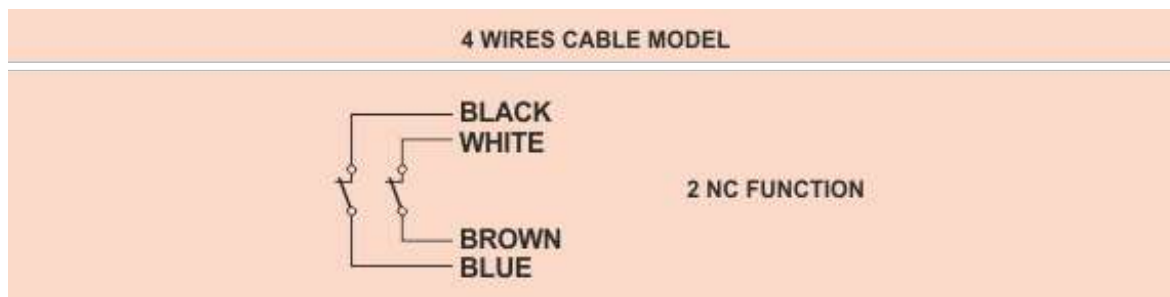
TECHNICAL CHARACTERISTICS

Rated operational voltage U_e :	24 Vac/dc
Rated operational current I_e :	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current I_{Th} :	0.25A
Rated insulation voltage U_i :	120Vac
Rated impulse withstand voltage U_{imp} :	6KV
Electrical endurance:	1 million of cycles
Assured operating distance S_{ao} :	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance S_{ar} :	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Cable type:	PVC 4x0.25mm ²
Housing material:	PBT +FV
Weight:	50g

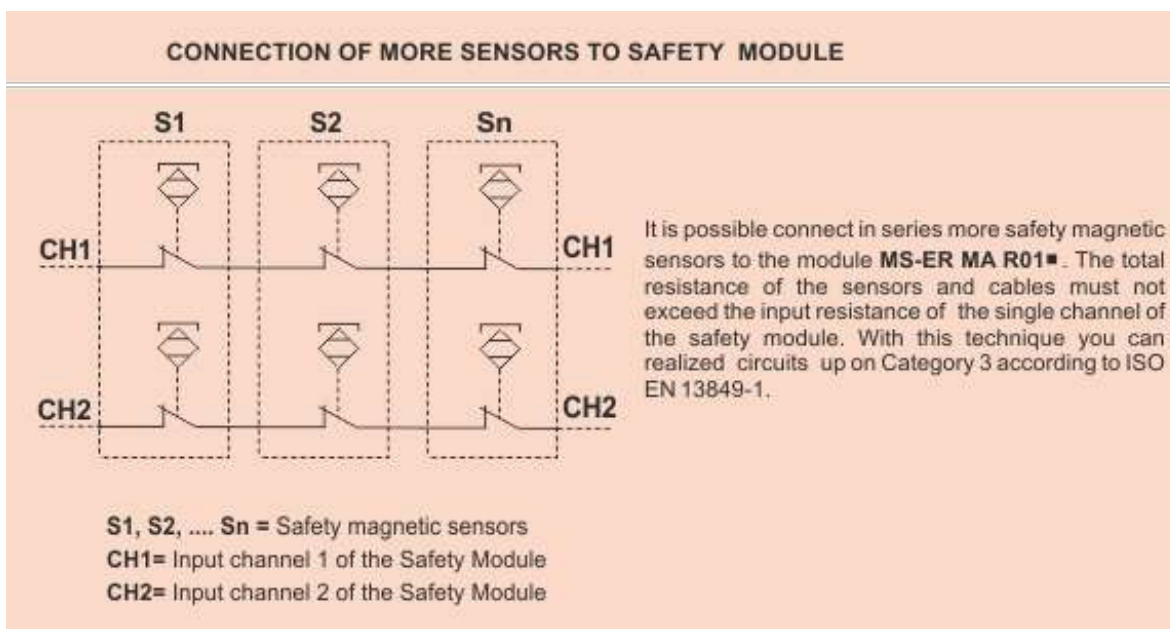


Part number: QMP000037 - Model: SMS88-P5 2NC CL LC5

WIRING DIAGRAM



INSTRUCTIONS FOR CORRECT INSTALLATION



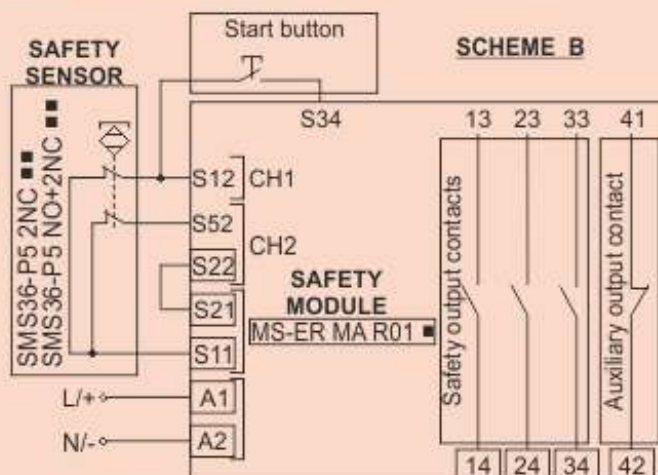
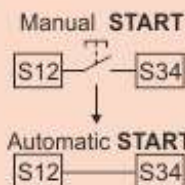
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



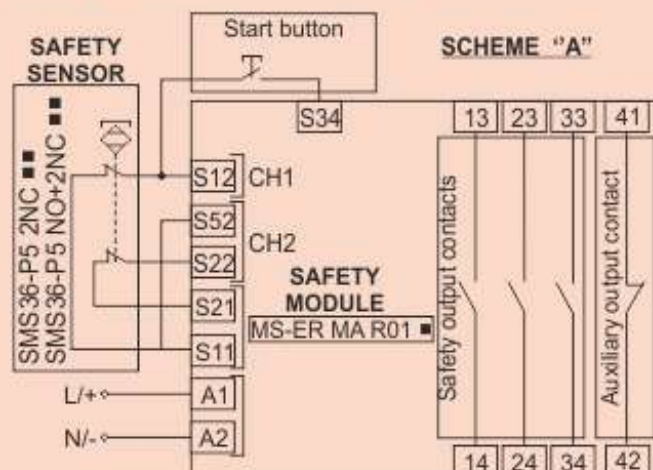
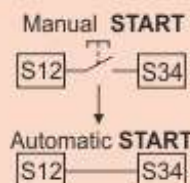
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

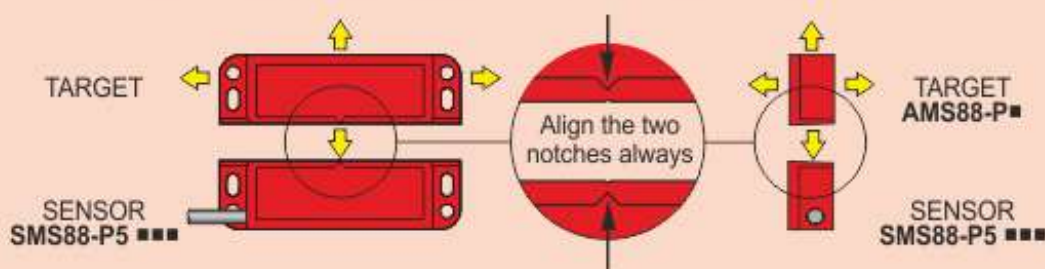
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



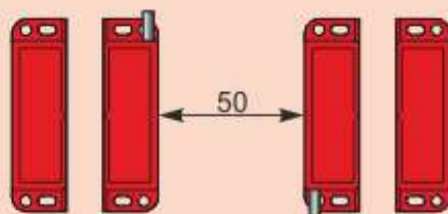
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

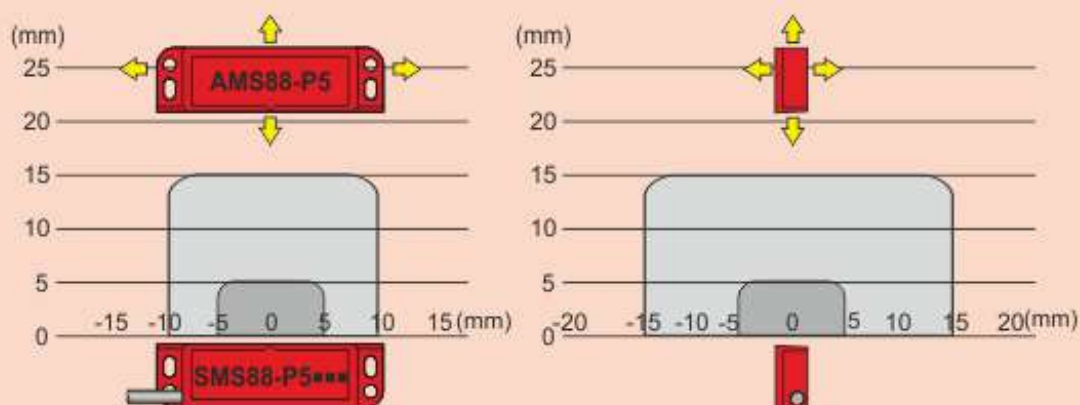


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

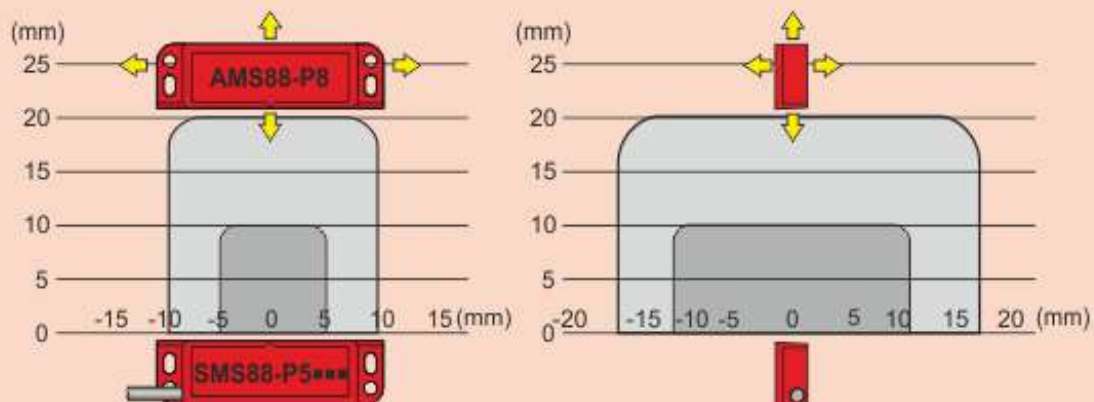


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

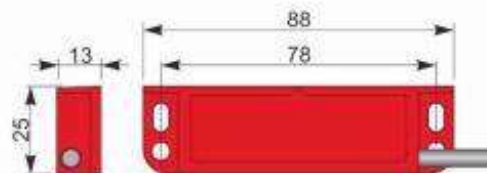
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000033 - Model: SMS88-P5 2NC CR



Dimension in mm

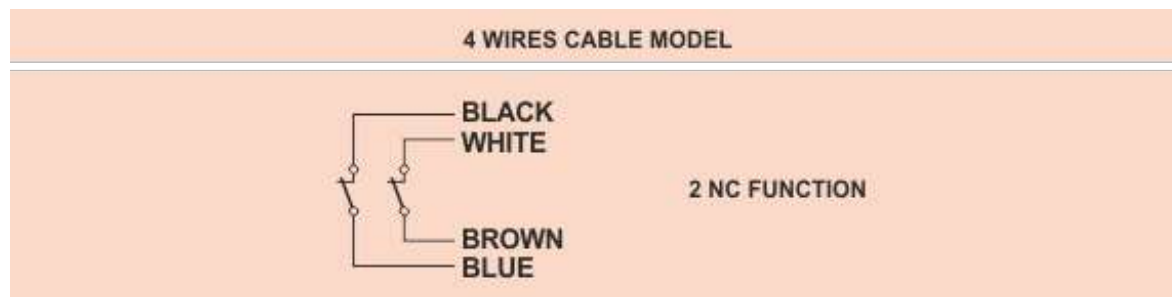
TECHNICAL CHARACTERISTICS

Rated operational voltage U_e :	24 Vac/dc
Rated operational current I_e :	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current I_{Th} :	0.25A
Rated insulation voltage U_i :	120Vac
Rated impulse withstand voltage U_{imp} :	6KV
Electrical endurance:	1 million of cycles
Assured operating distance S_{ao} :	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance S_{ar} :	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Cable type:	PVC 4x0.25mm ²
Housing material:	PBT +FV
Weight:	50g

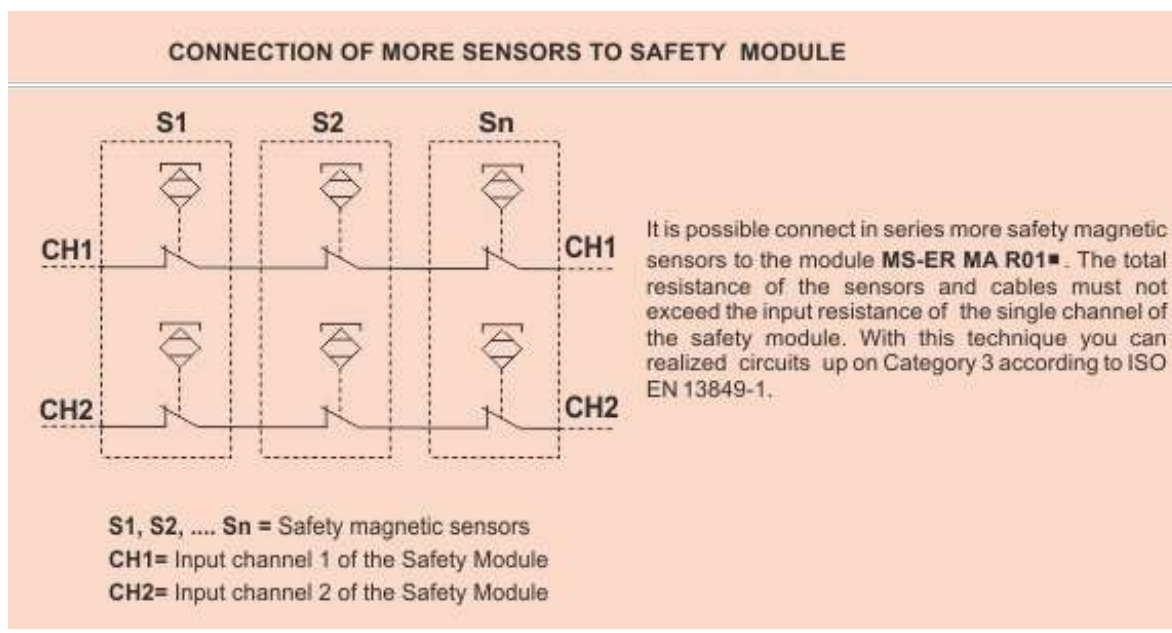


Part number: QMP000033 - Model: SMS88-P5 2NC CR

WIRING DIAGRAM



INSTRUCTIONS FOR CORRECT INSTALLATION



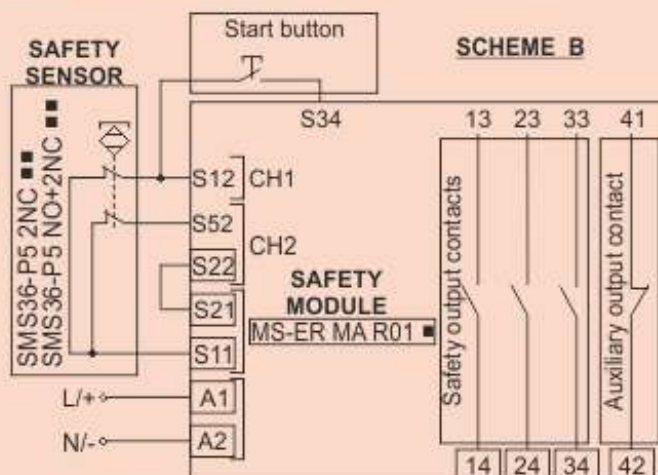
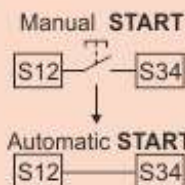
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



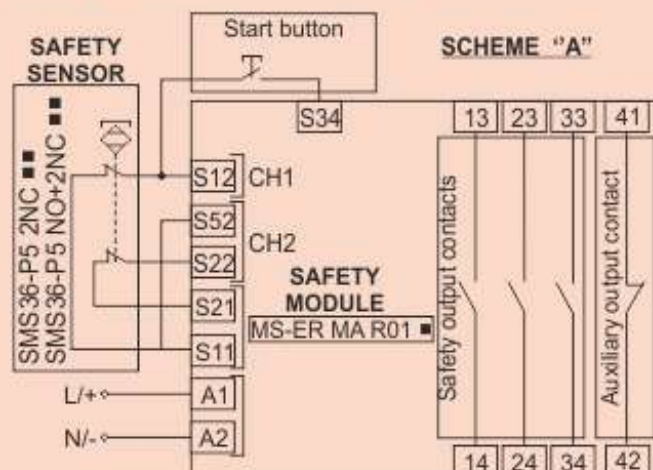
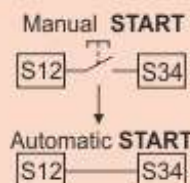
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

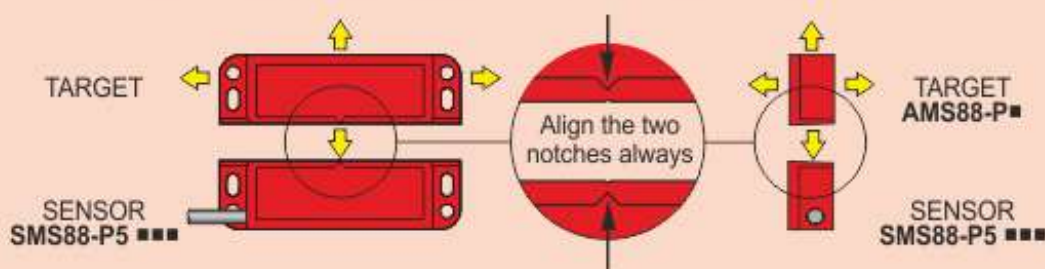
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



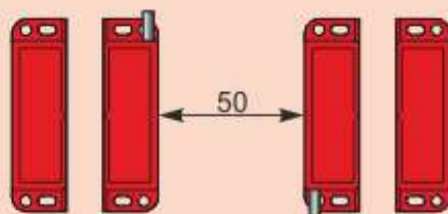
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

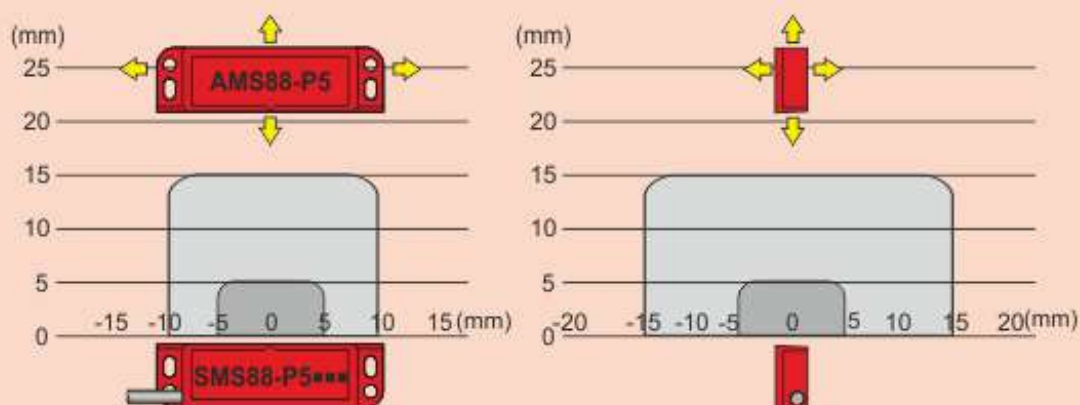


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

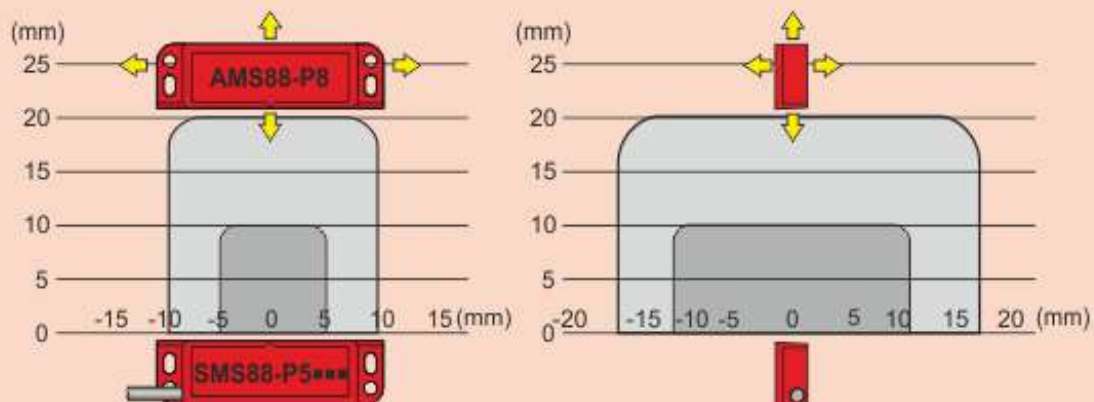


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

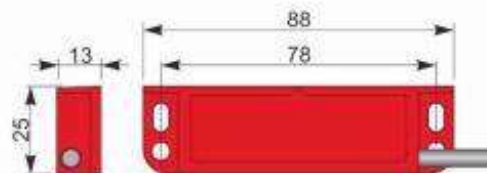
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000035 - Model: SMS88-P5 2NC CR LC10



Dimension in mm

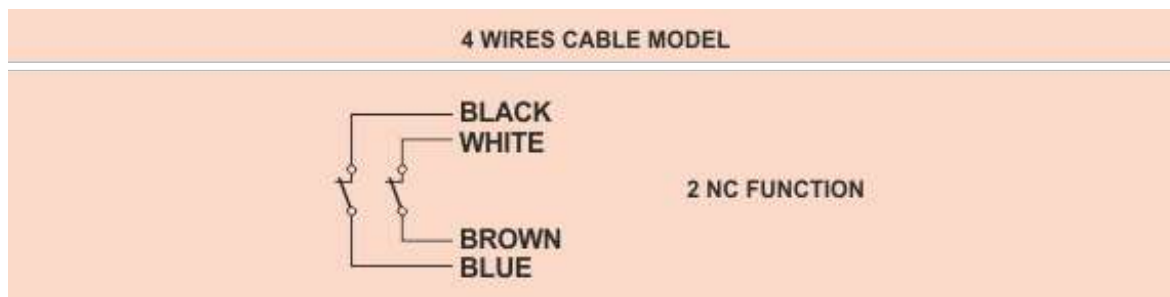
TECHNICAL CHARACTERISTICS

Rated operational voltage U_e :	24 Vac/dc
Rated operational current I_e :	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current I_{Th} :	0.25A
Rated insulation voltage U_i :	120Vac
Rated impulse withstand voltage U_{imp} :	6KV
Electrical endurance:	1 million of cycles
Assured operating distance S_{ao} :	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance S_{ar} :	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Cable type:	PVC 4x0.25mm ²
Housing material:	PBT +FV
Weight:	50g

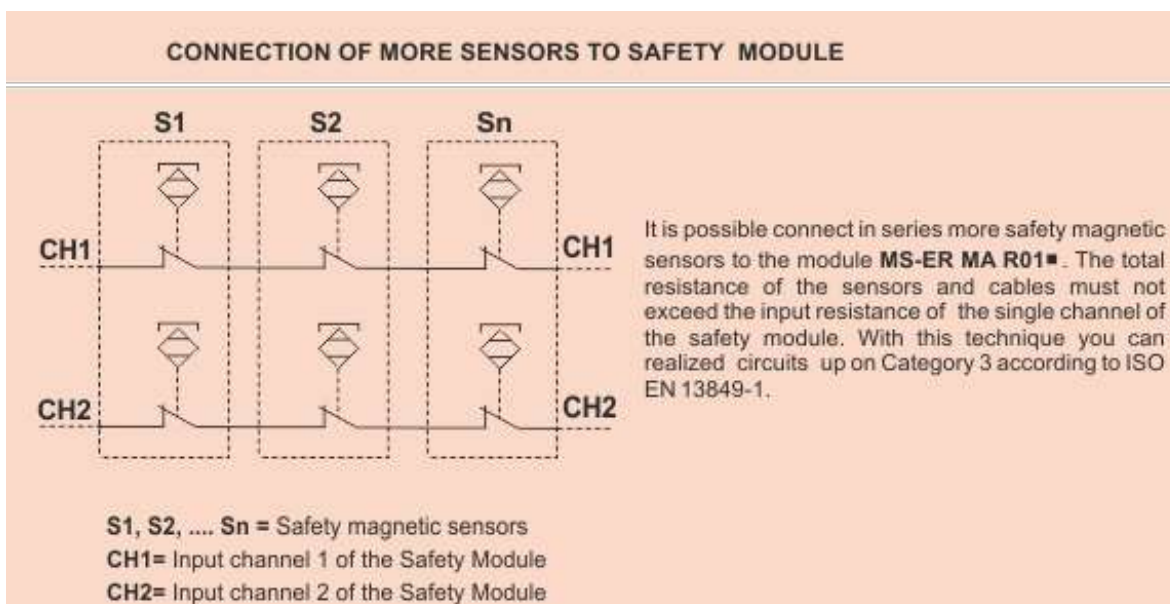


Part number: QMP000035 - Model: SMS88-P5 2NC CR LC10

WIRING DIAGRAM



INSTRUCTIONS FOR CORRECT INSTALLATION



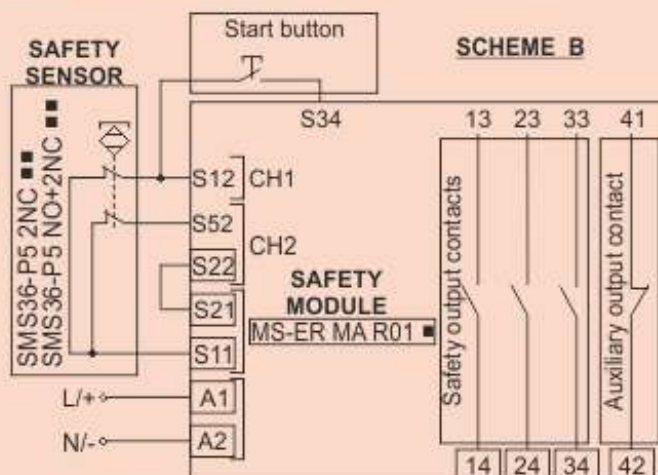
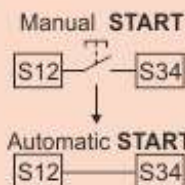
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



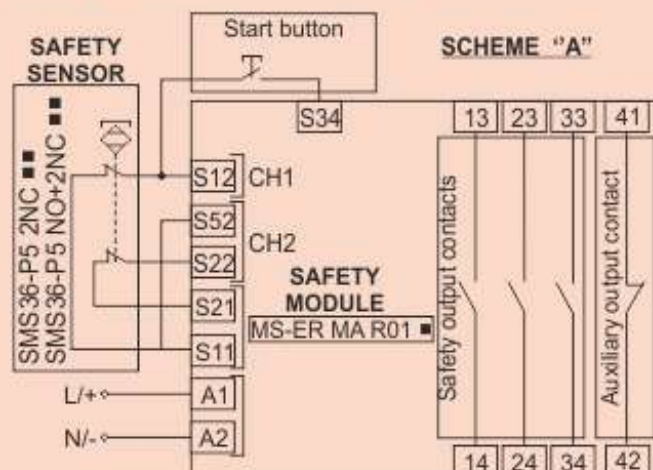
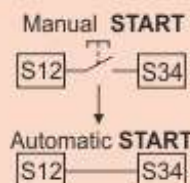
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

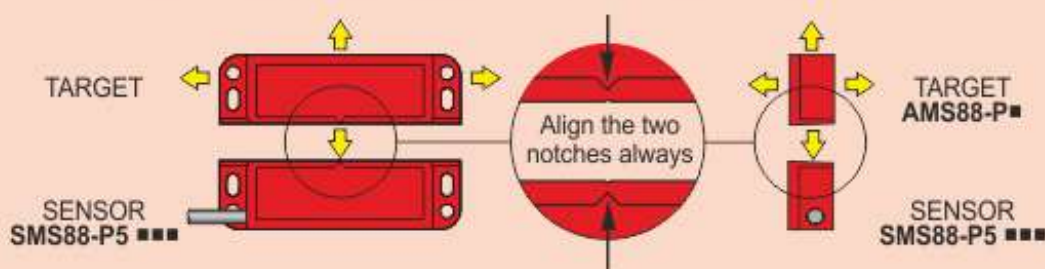
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



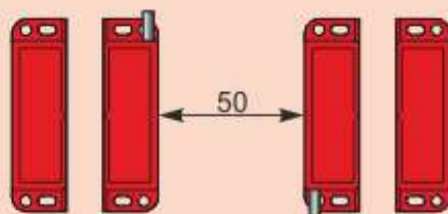
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

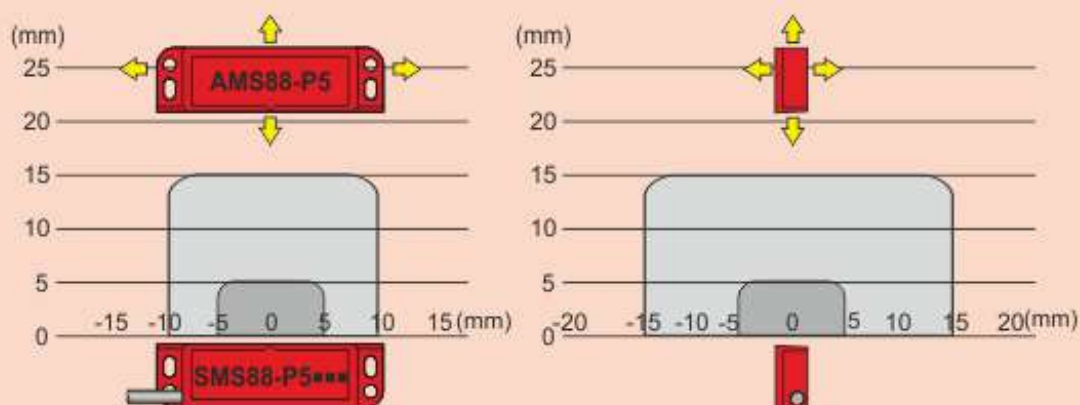


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

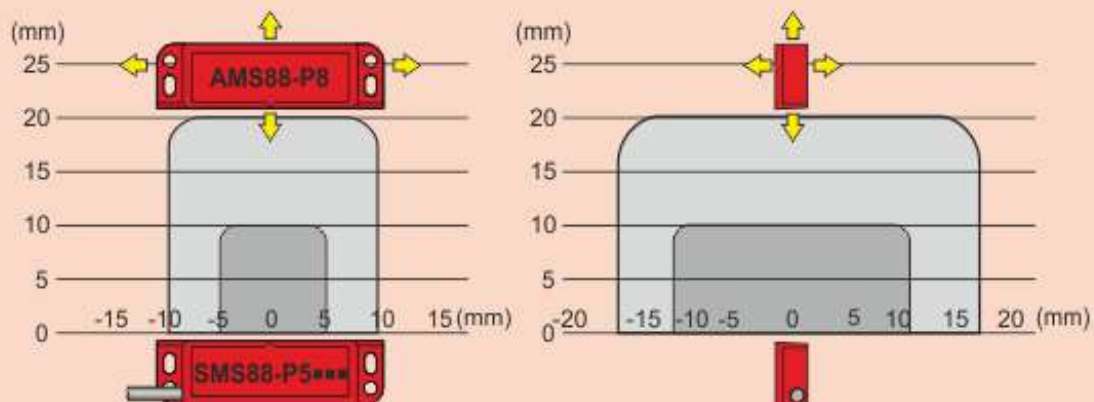


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

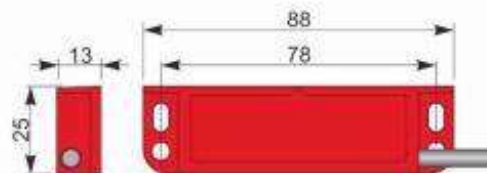
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000034 - Model: SMS88-P5 2NC CR LC5



Dimension in mm

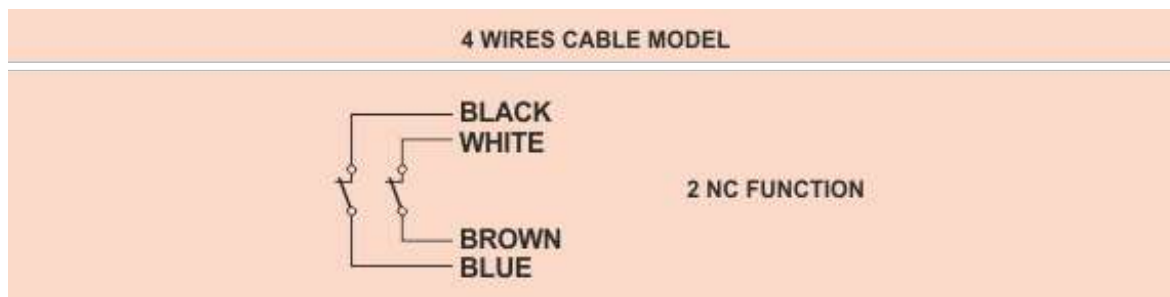
TECHNICAL CHARACTERISTICS

Rated operational voltage U_e :	24 Vac/dc
Rated operational current I_e :	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current I_{Th} :	0.25A
Rated insulation voltage U_i :	120Vac
Rated impulse withstand voltage U_{imp} :	6KV
Electrical endurance:	1 million of cycles
Assured operating distance S_{ao} :	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance S_{ar} :	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Cable type:	PVC 4x0.25mm ²
Housing material:	PBT +FV
Weight:	50g

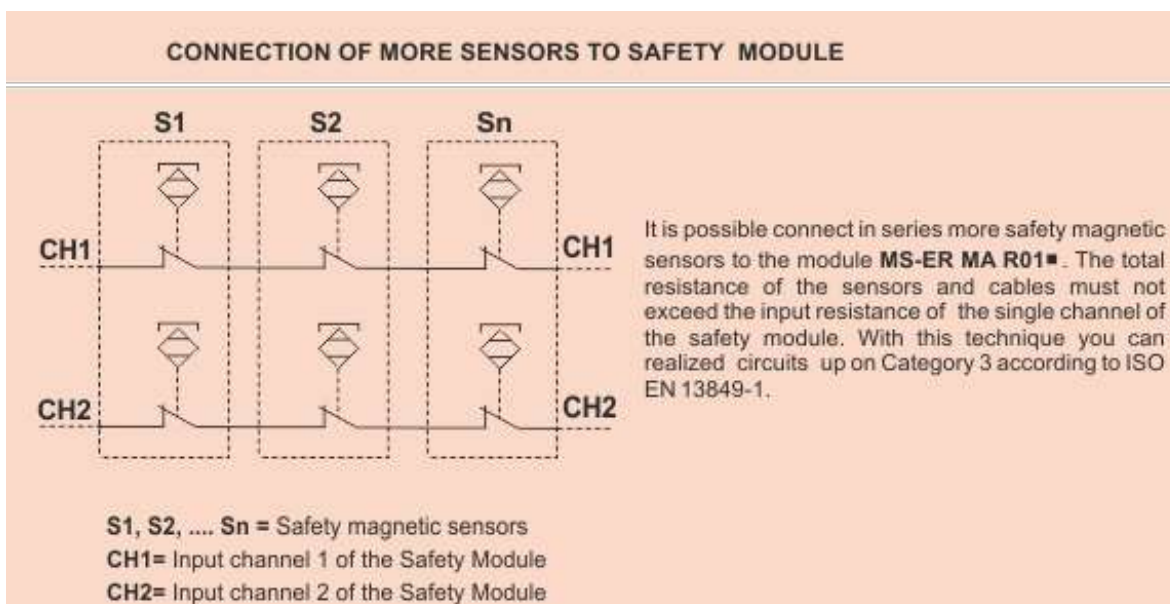


Part number: QMP000034 - Model: SMS88-P5 2NC CR LC5

WIRING DIAGRAM



INSTRUCTIONS FOR CORRECT INSTALLATION



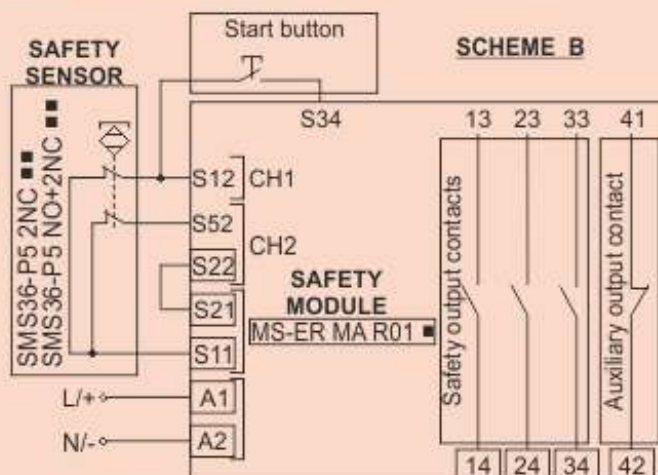
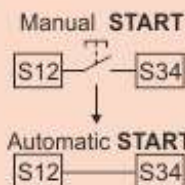
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



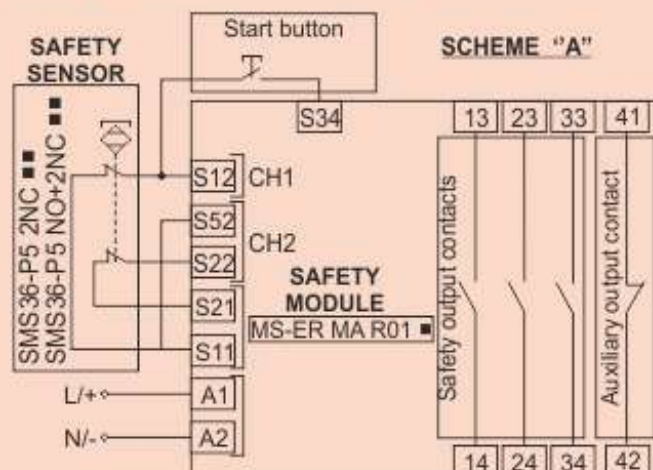
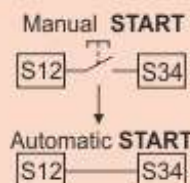
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

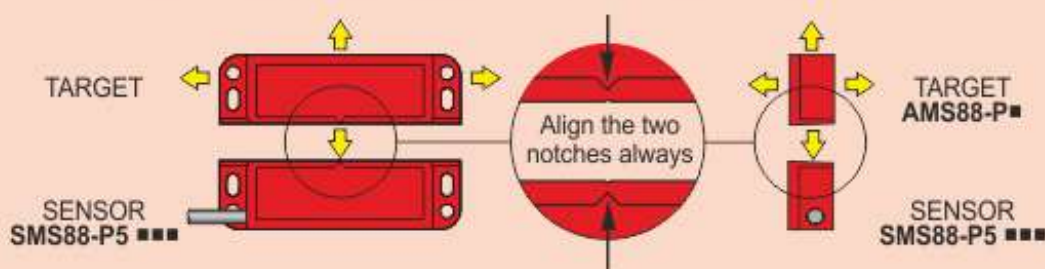
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



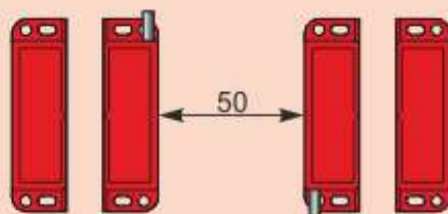
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

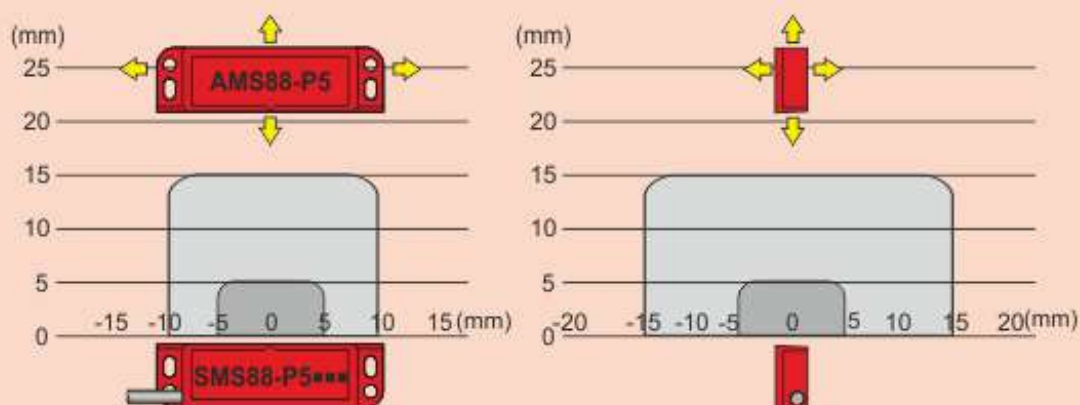


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

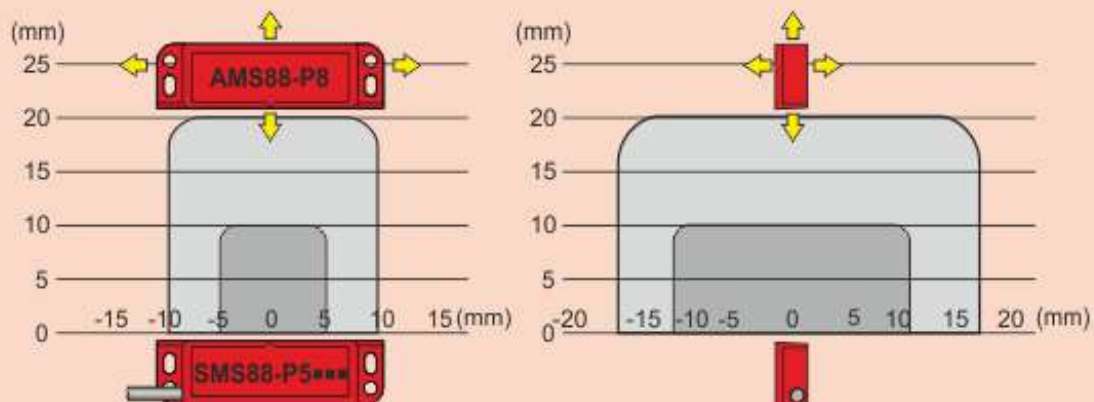


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

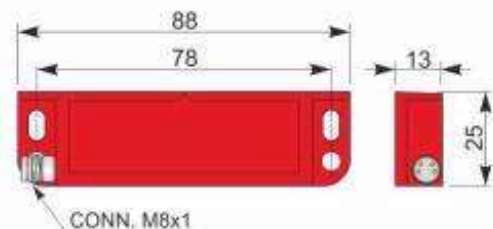
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000040 - Model: SMS88-P5 2NC H1 PL



Dimension in mm

TECHNICAL CHARACTERISTICS

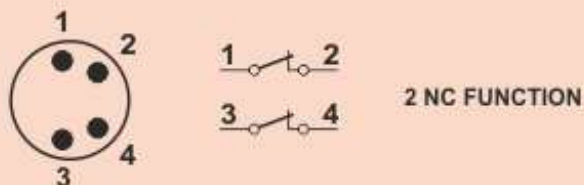
Rated operational voltage Ue:	24 Vac/dc
Rated operational current Ie:	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current ITh:	0.25A
Rated insulation voltage Ui:	60Vac / 75Vdc
Rated impulse withstand voltage Uimp:	1.5KV
Electrical endurance:	1 million of cycles
Assured operating distance Sao:	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance Sar:	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Housing material:	PBT +FV
Weight:	50g



Part number: QMP000040 - Model: SMS88-P5 2NC H1 PL

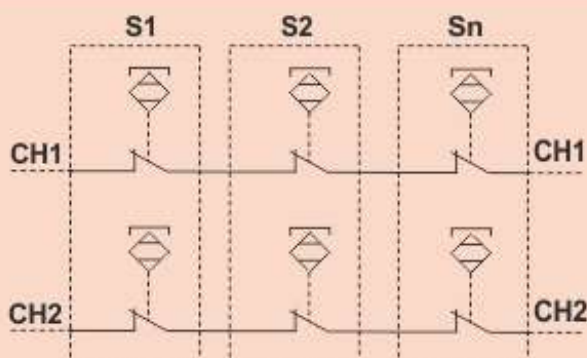
WIRING DIAGRAM

M8x1 CONNECTOR MODEL



INSTRUCTIONS FOR CORRECT INSTALLATION

CONNECTION OF MORE SENSORS TO SAFETY MODULE



It is possible to connect in series more safety magnetic sensors to the module **MS-ER MA R01**. The total resistance of the sensors and cables must not exceed the input resistance of the single channel of the safety module. With this technique you can realize circuits up to Category 3 according to ISO EN 13849-1.

S1, S2, ..., Sn = Safety magnetic sensors
CH1 = Input channel 1 of the Safety Module
CH2 = Input channel 2 of the Safety Module

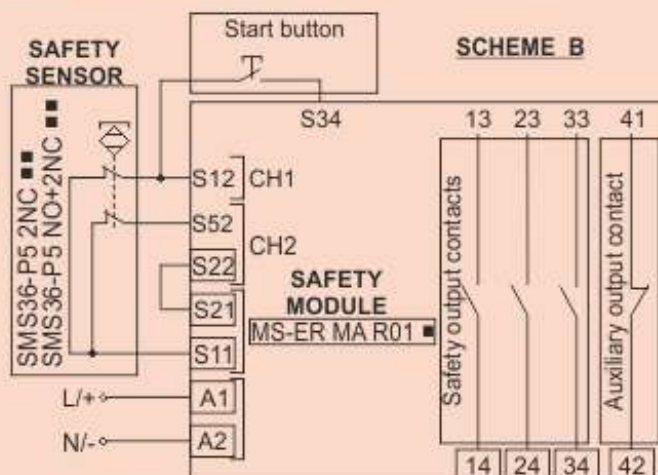
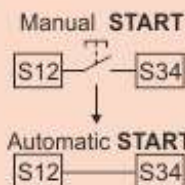
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



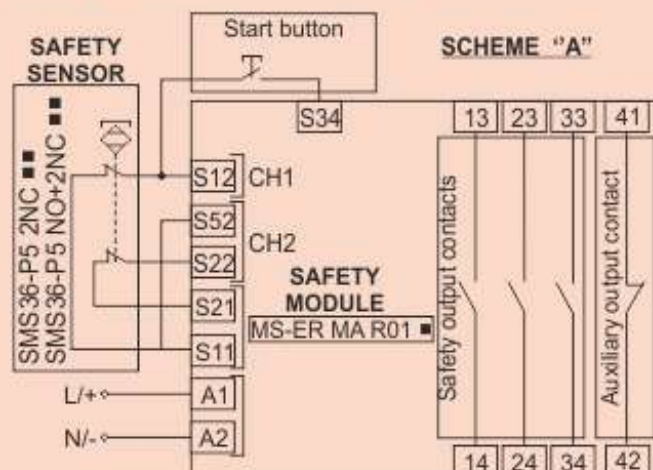
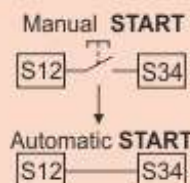
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

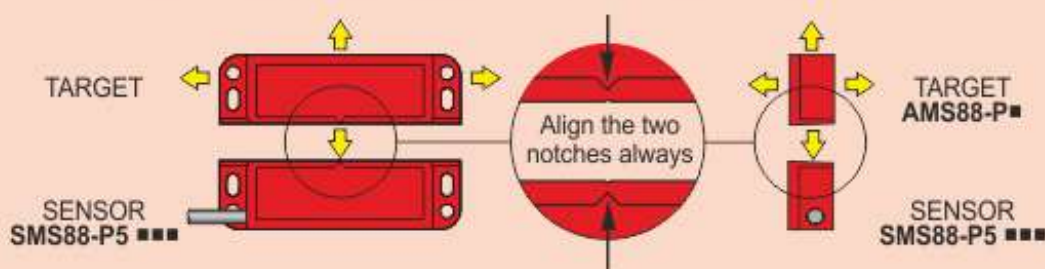
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



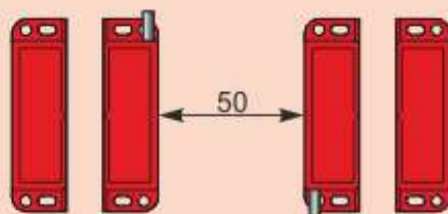
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

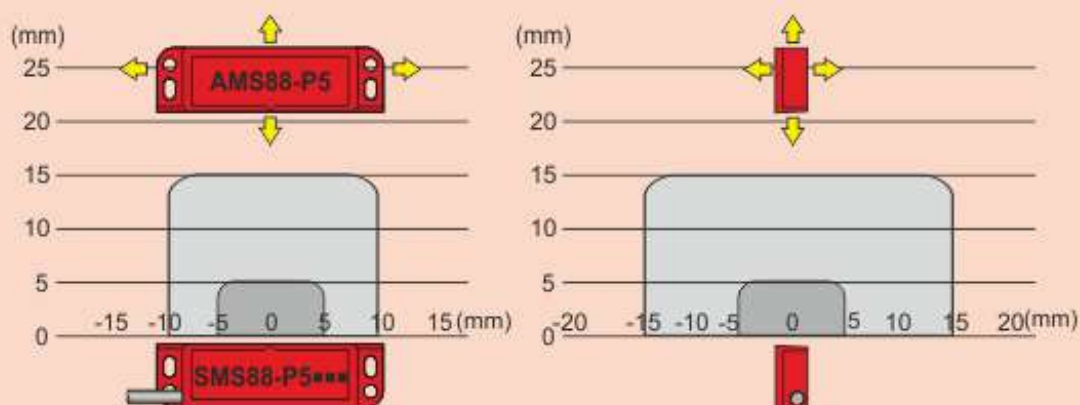


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

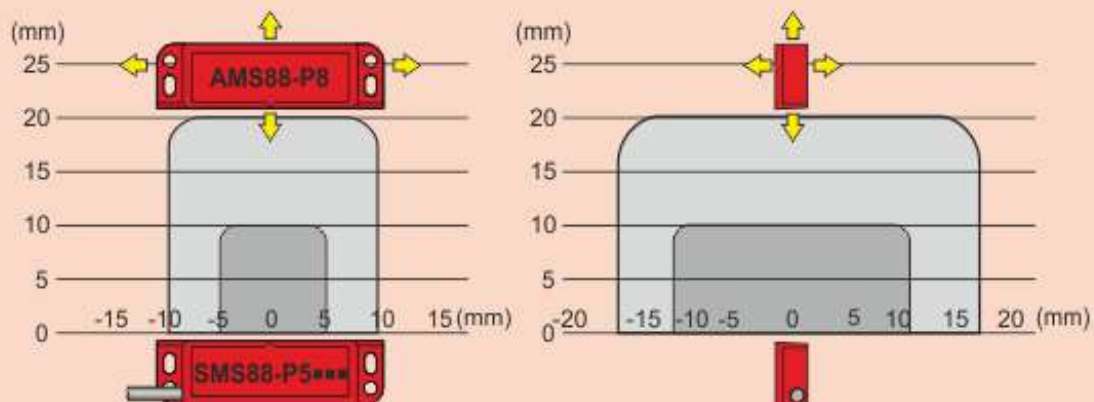


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

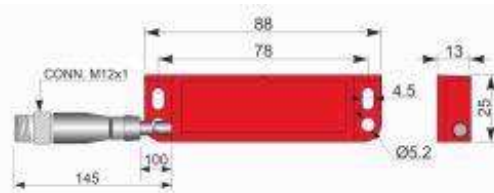
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000044 - Model: SMS88-P5 2NC HC PL



Dimension in mm

TECHNICAL CHARACTERISTICS

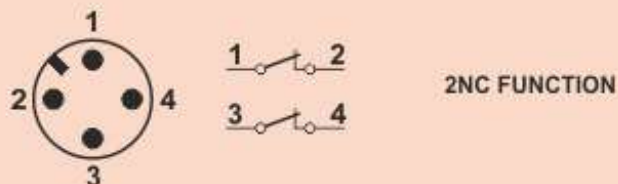
Rated operational voltage Ue:	24 Vac/dc
Rated operational current Ie:	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current ITh:	0.25A
Rated insulation voltage Ui:	120Vac
Rated impulse withstand voltage Uimp:	1.5KV
Electrical endurance:	1 million of cycles
Assured operating distance Sao:	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance Sar:	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Housing material:	PBT +FV
Weight:	50g



Part number: QMP000044 - Model: SMS88-P5 2NC HC PL

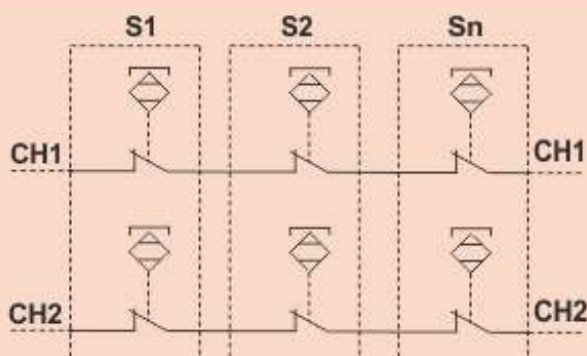
WIRING DIAGRAM

M12x1 CONNECTOR MODEL



INSTRUCTIONS FOR CORRECT INSTALLATION

CONNECTION OF MORE SENSORS TO SAFETY MODULE



It is possible to connect in series more safety magnetic sensors to the module **MS-ER MA R01**. The total resistance of the sensors and cables must not exceed the input resistance of the single channel of the safety module. With this technique you can realize circuits up to Category 3 according to ISO EN 13849-1.

S1, S2, ..., Sn = Safety magnetic sensors
CH1 = Input channel 1 of the Safety Module
CH2 = Input channel 2 of the Safety Module

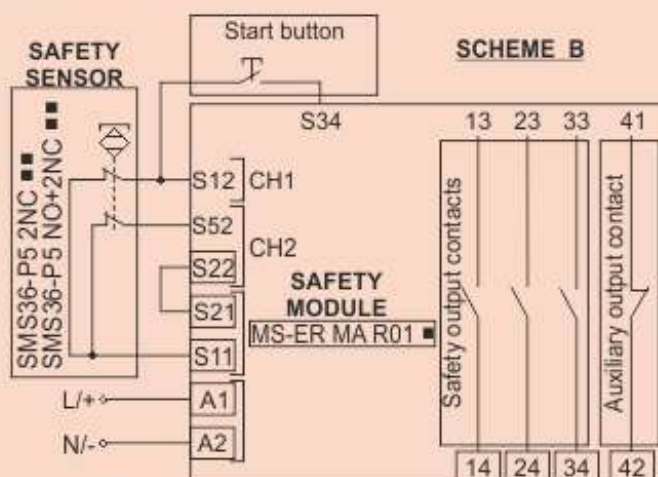
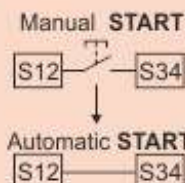
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



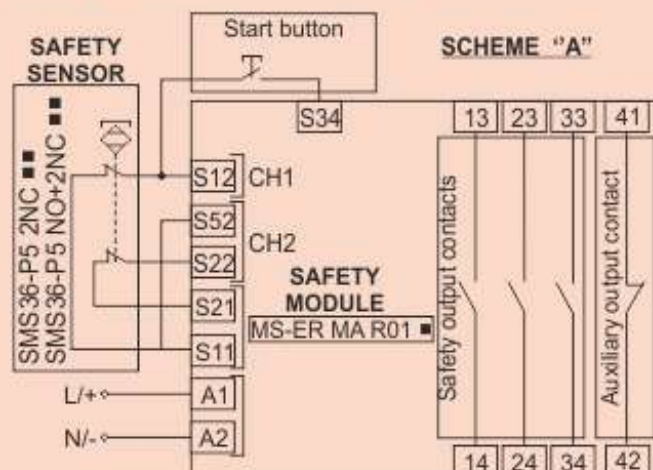
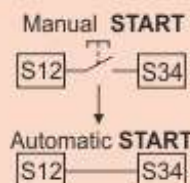
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Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

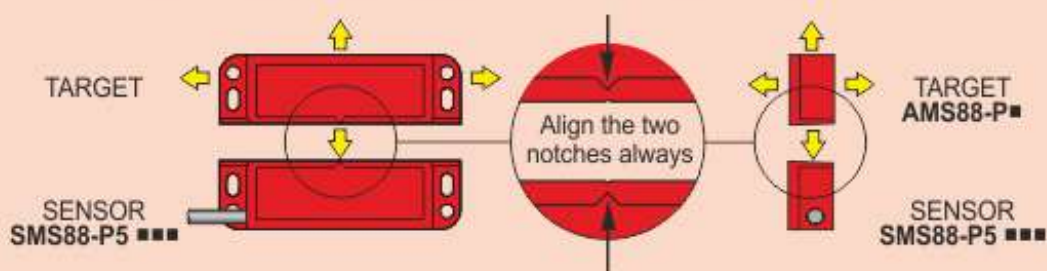
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



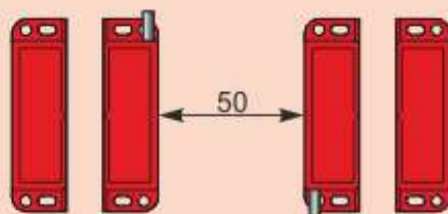
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

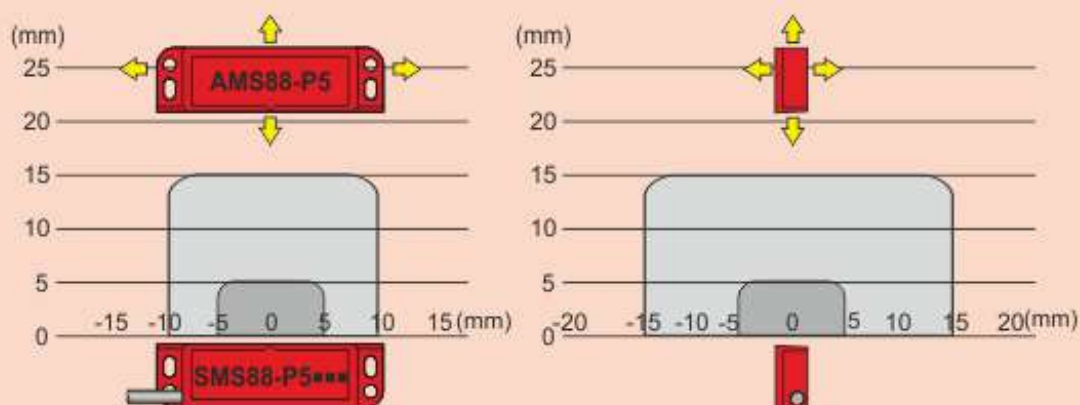


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

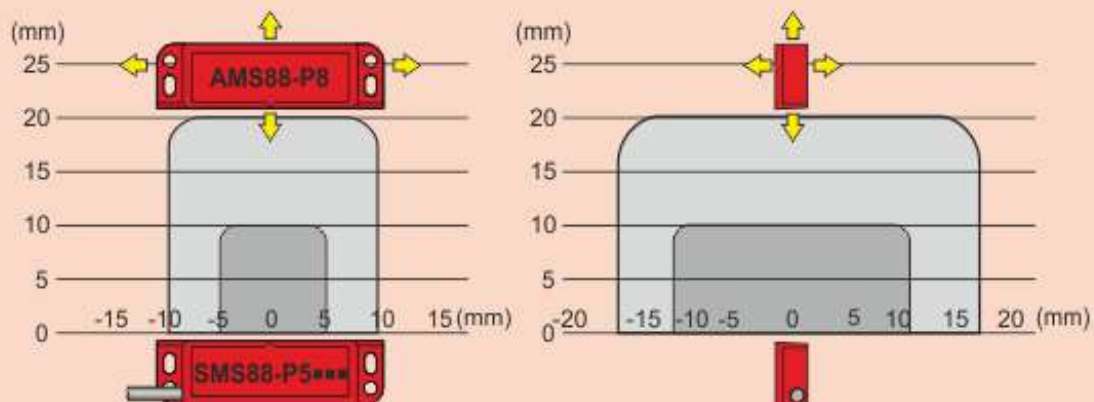


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

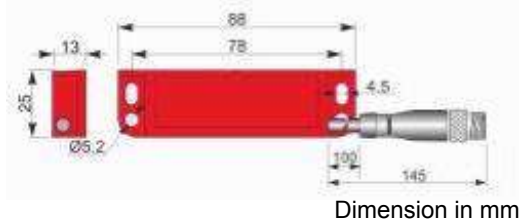
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000043 - Model: SMS88-P5 2NC HC PR



TECHNICAL CHARACTERISTICS

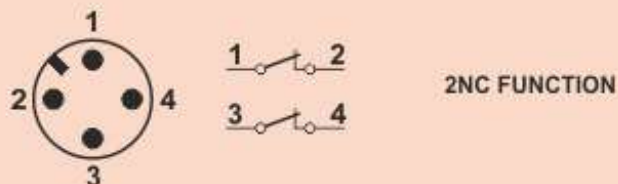
Rated operational voltage Ue:	24 Vac/dc
Rated operational current Ie:	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current ITh:	0.25A
Rated insulation voltage Ui:	120Vac
Rated impulse withstand voltage Uimp:	1.5KV
Electrical endurance:	1 million of cycles
Assured operating distance Sao:	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance Sar:	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Housing material:	PBT +FV
Weight:	50g



Part number: QMP000043 - Model: SMS88-P5 2NC HC PR

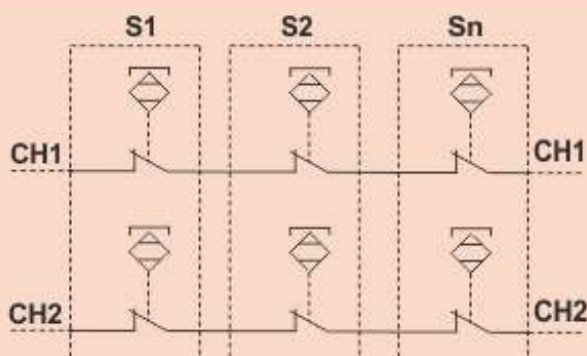
WIRING DIAGRAM

M12x1 CONNECTOR MODEL



INSTRUCTIONS FOR CORRECT INSTALLATION

CONNECTION OF MORE SENSORS TO SAFETY MODULE



It is possible to connect in series more safety magnetic sensors to the module **MS-ER MA R01**. The total resistance of the sensors and cables must not exceed the input resistance of the single channel of the safety module. With this technique you can realize circuits up to Category 3 according to ISO EN 13849-1.

S1, S2, ..., Sn = Safety magnetic sensors
CH1 = Input channel 1 of the Safety Module
CH2 = Input channel 2 of the Safety Module

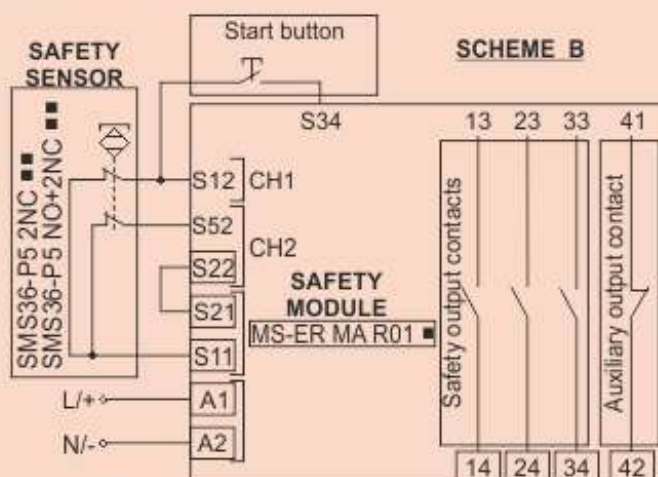
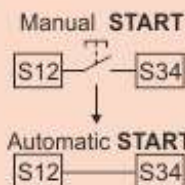
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



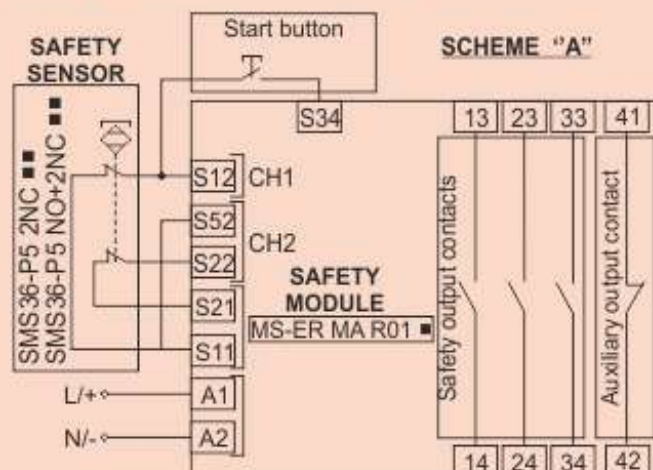
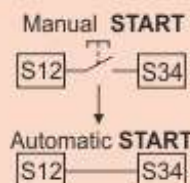
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

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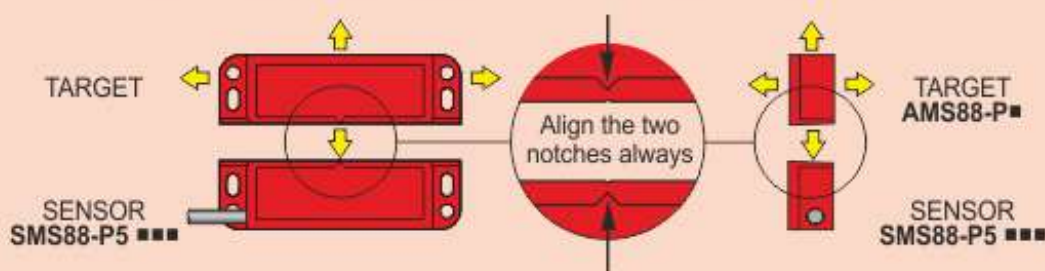
SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

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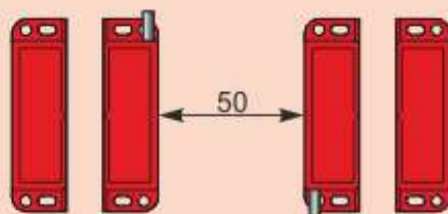
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

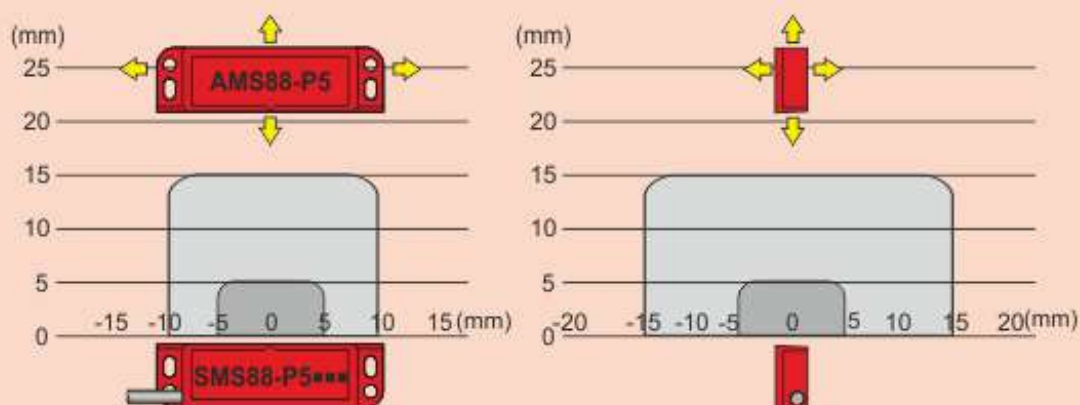


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

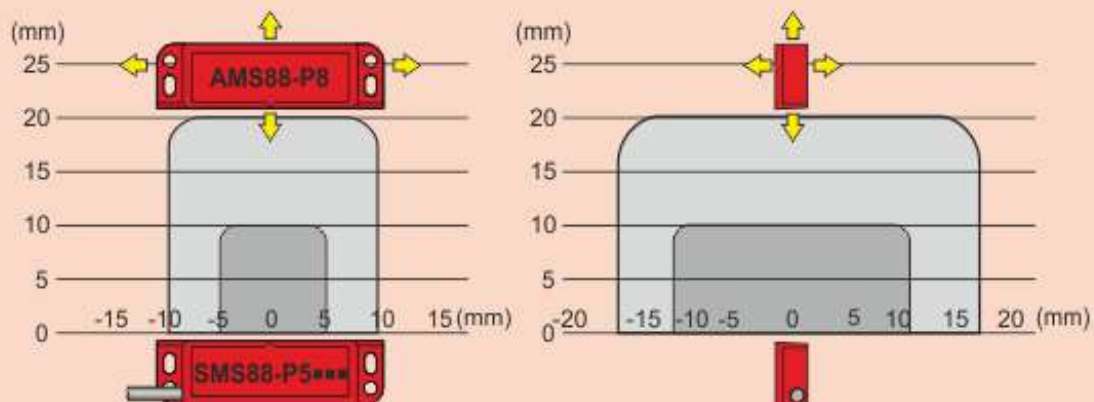


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

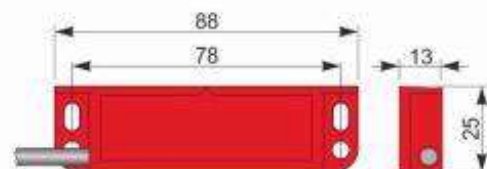
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000038 - Model: SMS88-P5 2NC CL LC10



Dimension in mm

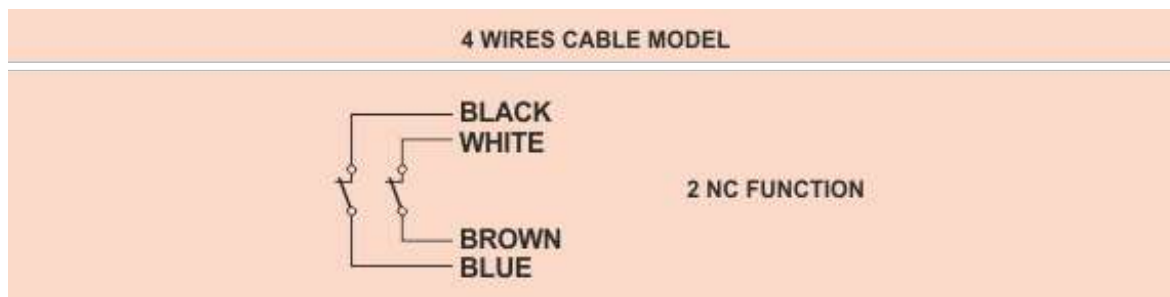
TECHNICAL CHARACTERISTICS

Rated operational voltage U_e :	24 Vac/dc
Rated operational current I_e :	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current I_{Th} :	0.25A
Rated insulation voltage U_i :	120Vac
Rated impulse withstand voltage U_{imp} :	6KV
Electrical endurance:	1 million of cycles
Assured operating distance S_{ao} :	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance S_{ar} :	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Cable type:	PVC 4x0.25mm ²
Housing material:	PBT +FV
Weight:	50g

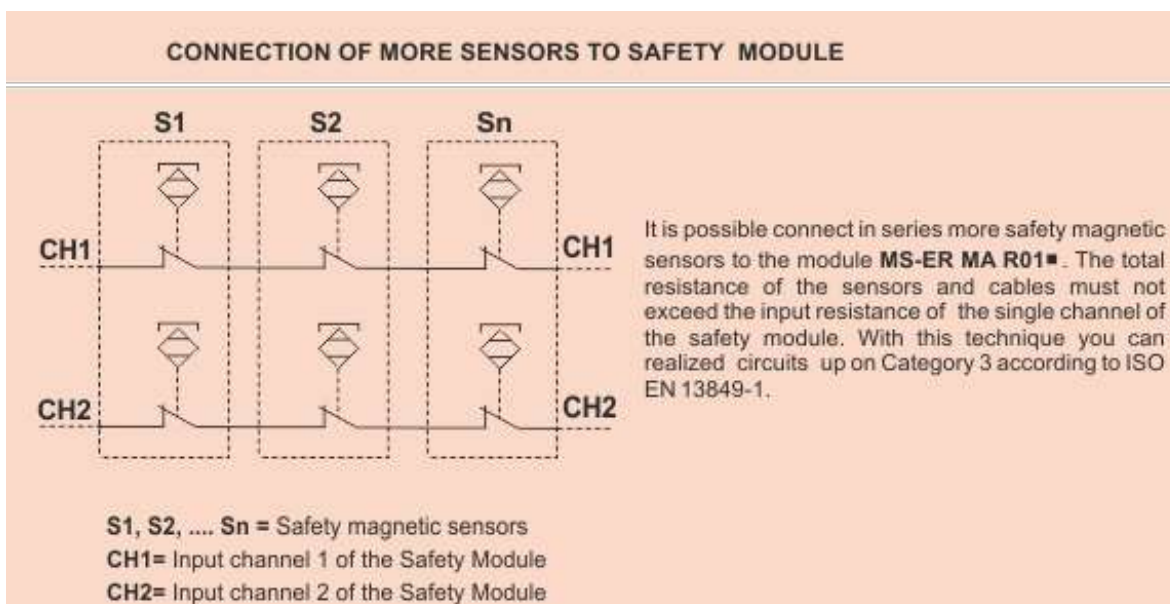


Part number: QMP000038 - Model: SMS88-P5 2NC CL LC10

WIRING DIAGRAM



INSTRUCTIONS FOR CORRECT INSTALLATION



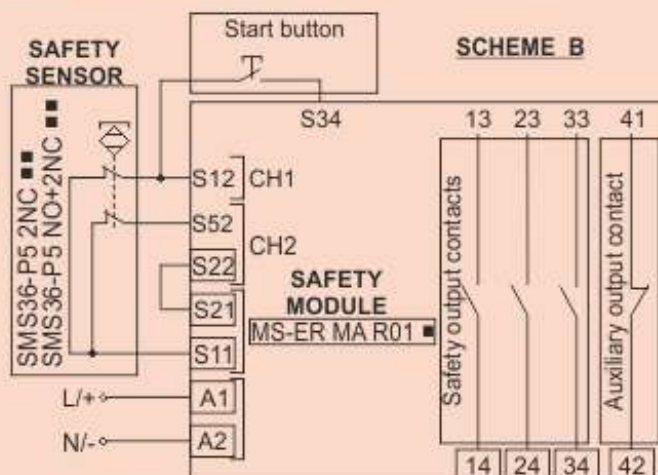
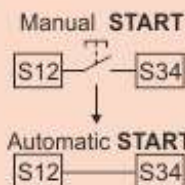
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



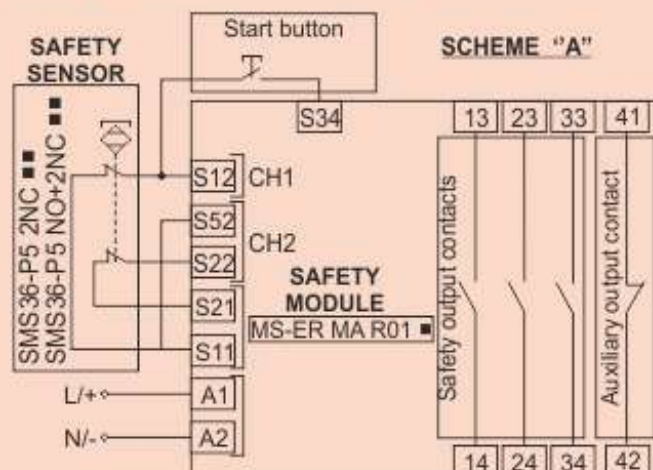
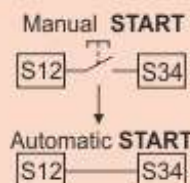
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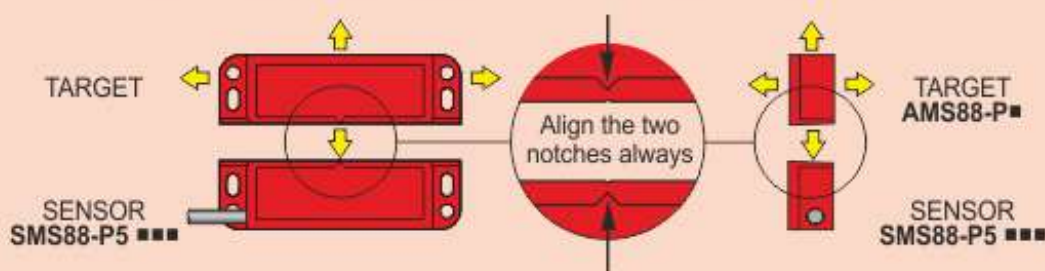
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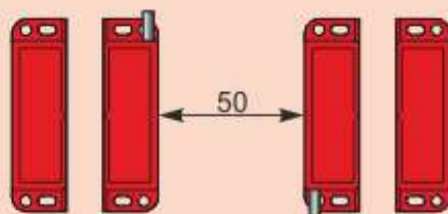
ACTUATING DIRECTIONS

The possible actuating directions are indicated of the arrows.

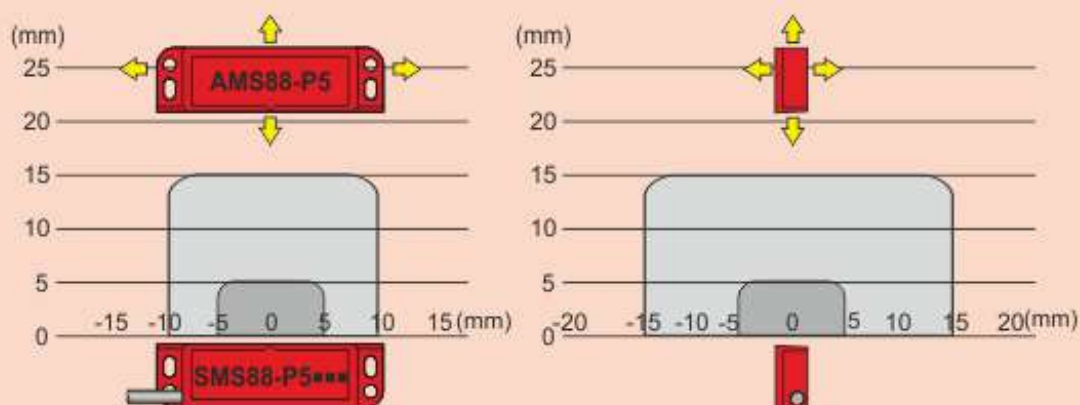


N.B. The minimum distance between **sensor-actuator** systems must be at least 50mm.

MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

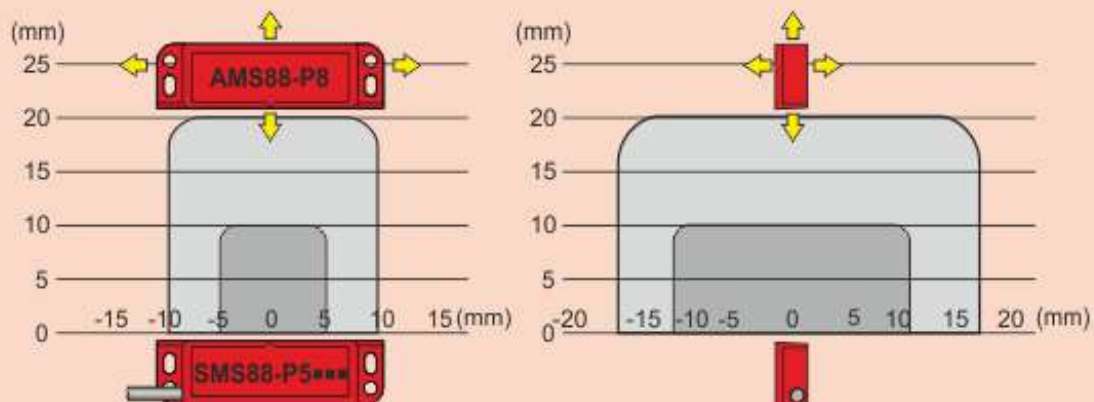


SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.

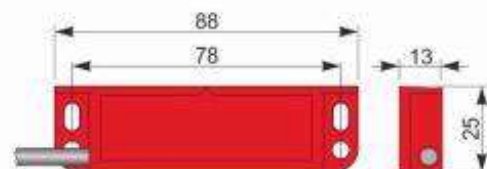
SWITHING DISTANCE



N.B. The drawing of the activation areas is indicative.



Part number: QMP000038 - Model: SMS88-P5 2NC CL LC10



Dimension in mm

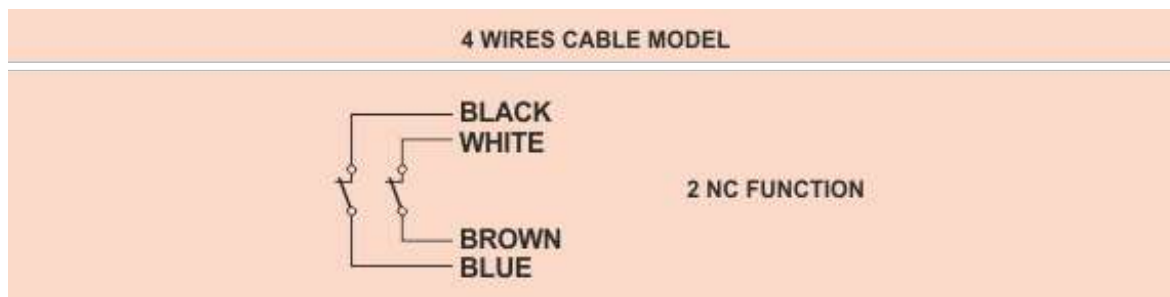
TECHNICAL CHARACTERISTICS

Rated operational voltage U_e :	24 Vac/dc
Rated operational current I_e :	0.25A
Max switching load:	6W (resistive load)
Function:	2NC (with magnetic actuator present)
Thermal current I_{Th} :	0.25A
Rated insulation voltage U_i :	120Vac
Rated impulse withstand voltage U_{imp} :	6KV
Electrical endurance:	1 million of cycles
Assured operating distance S_{ao} :	5 mm with target AMS88-P5 and 8 mm with target AMS88-P8
Assured release distance S_{ar} :	15 mm with target AMS88-P5 and 20 mm with target AMS88-P8
Repeat accuracy:	< 10%
Switching distance:	200Hz
Response time:	
SIL level (SIL CL):	up to SIL3 according to IEC 62061 e EN 62061
Performance level (PL):	up to PL e according to EN ISO 13849-1
Safety category:	up to 4 according to EN ISO 13849-1
B10d for each channel:	400.000 cycles (full load: DC12, 24V, 0.25A) e 20.000.000 of cycles (with AECO safety Module)
Conformig to the standard:	EN 60947-1, IEC 60947-1, EN 60947-5-1, IEC 60947-5-1, EN 60947-5-2, IEC 60947-5-2, EN 60947-5-3 , IE
Conforms to the directives:	2006/42/EC - Machinery Directive and 2014/30/EU - Electromagnetic Compatibility Directive
Temperature limits:	-25 ÷ +80°C
Protection degree:	IP67
Pollution degree:	3
Schock resistance:	30gn -11ms according to IEC 60068-2-27 and EN 60068-2-27
Vibrations resistance:	10gn-(10 ... 150Hz) according to IEC 60068-2-6 and EN 60068-2-6
Cable type:	PVC 4x0.25mm ²
Housing material:	PBT +FV
Weight:	50g

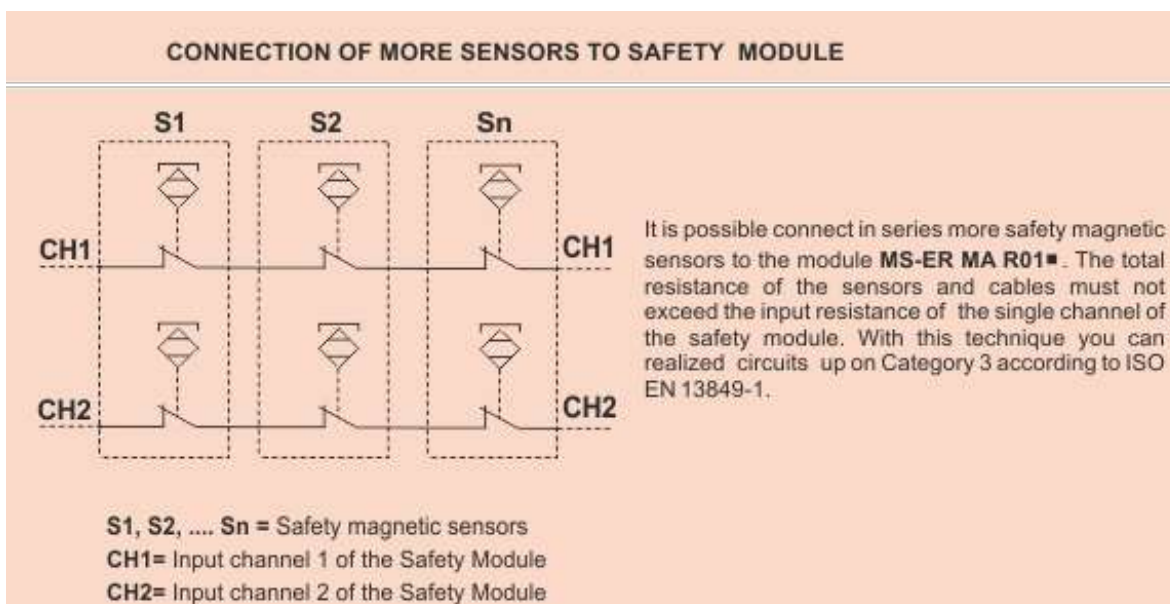


Part number: QMP000038 - Model: SMS88-P5 2NC CL LC10

WIRING DIAGRAM



INSTRUCTIONS FOR CORRECT INSTALLATION



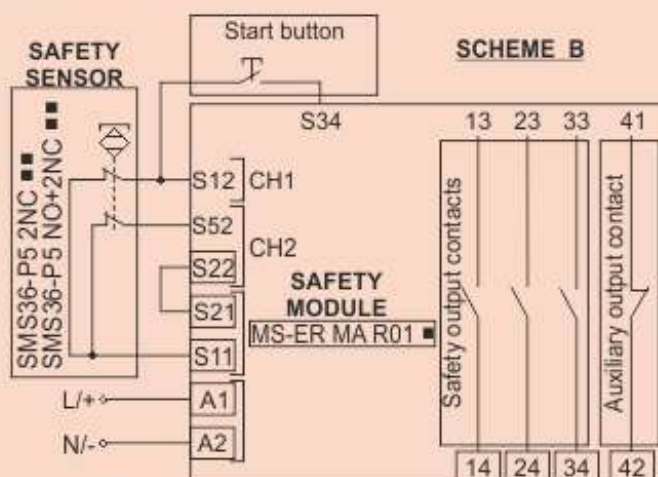
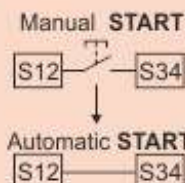
APPLICATIVE CONFIGURATION WITH AECO SAFETY MODULE MS-ER MA R01 ■ SERIES

2 CHANNELS CONFIGURATION WITH MANUAL START

Use models SMS36-P5 2NC ■■ or SMS36-P5 NO+2NC ■■ only

SAFETY PARAMETER
Integrity Level: **SIL3**
Performance Level: **PLe**
Category: **4**

N.B. To realize a circuit with automatic start to replace the button with a jumper between terminals S12 and S34.



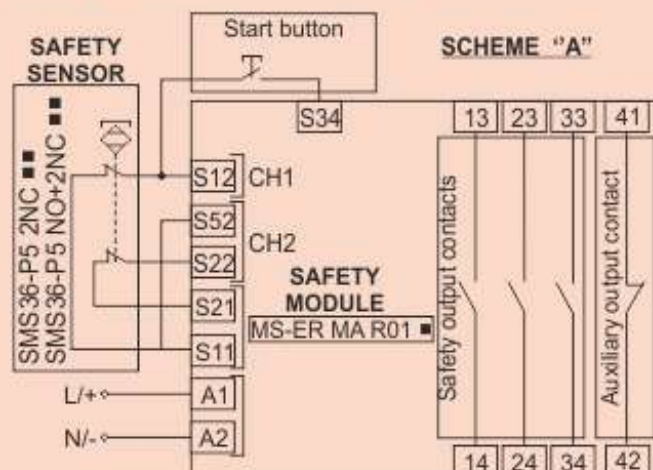
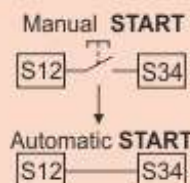
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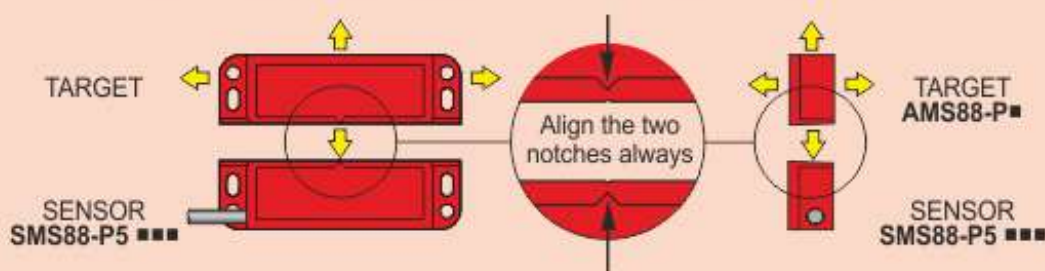
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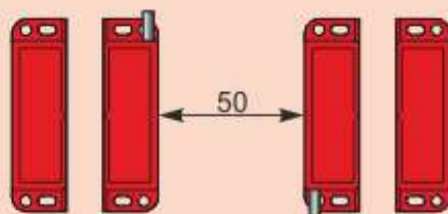
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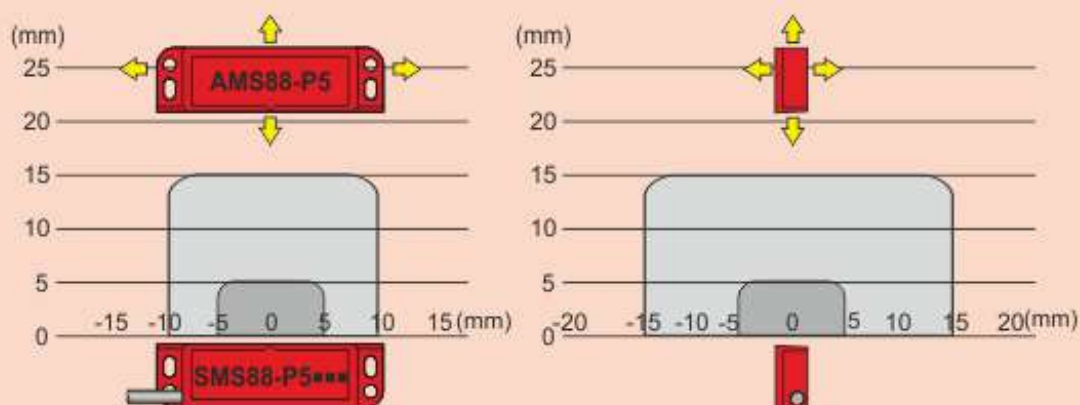


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MULTIPLE SENSOR-ACTUATOR SYSTEMS ASSEMBLY

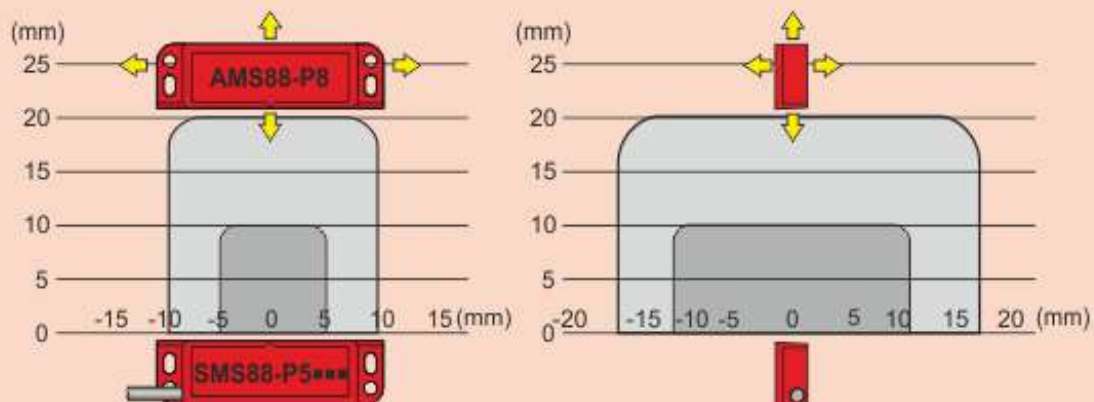


SWITHING DISTANCE



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SWITHING DISTANCE



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