Fortress
Interlocks

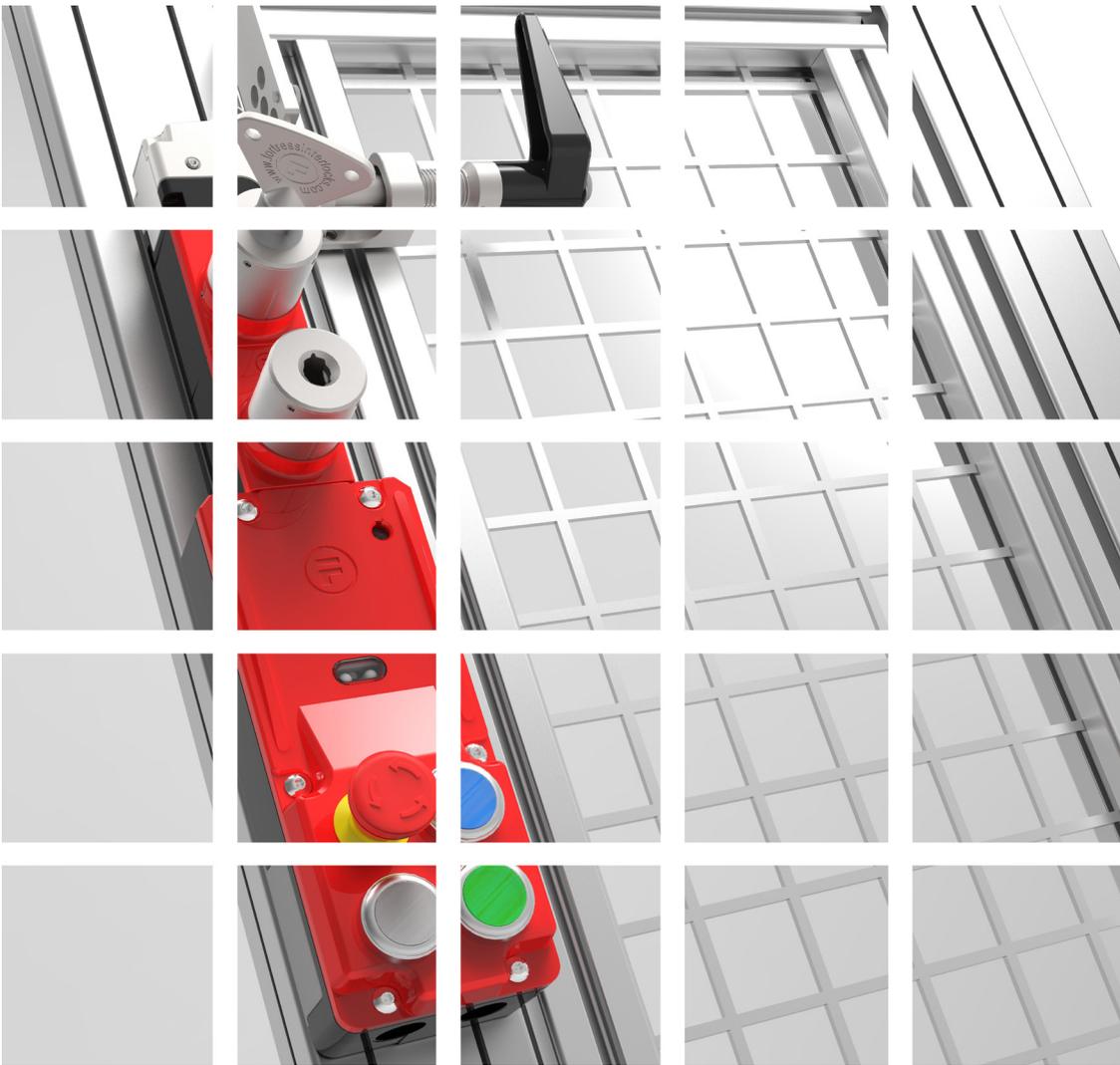## am Gard pro

**Modular Safety Gate Switches
for Machine Guarding Applications**

amGardpro
Part Number Configurator

Step 1: Choose the Actuator

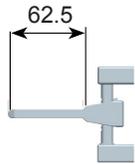| For use with 'M' Heads	For use with 'T' Heads	For use with 'I' Heads

Actuators

proAM Handle

Part No.	Description
MA	AM Handle

Turning motion holds door closed. Ideal for non locking set ups (i.e. proSTOP devices)

Part No.	Description
MI	AM Handle with Internal Release

Turning motion holds door closed. Internal handle allows user to open door from inside (pushIR may be required depending on application)

proAT Tongue

62.5

Part No.	Description
TA	AT Tongue

High strength and ease of opening makes this the most popular actuator in the amGardpro range.

53.5

Part No.	Description
TK	Short AT Tongue (allows padlocks through the tongue to work as a lock out tag out, but reduces over travel).

Allows padlocks through the tongue to work as a lock out tag out, but reduces over-travel

proSlidebar Options

Part No.	Description
TN	Slidebar without a spring

Sliding motion holds door closed. With no return spring unit remains in the position it is left in

Part No.	Description
TS	Slidebar with a return spring

Sliding motion holds door closed. Return spring pulls the slidebar open, preventing clashes with the head (but requires the slidebar to be held forward whilst locking)

Part No.	Description
TI	Slidebar with Internal handle but no return spring

Sliding motion holds door closed. Same as a TN but IR knob allows door to be opened (but not closed) from the inside when main unit is unlocked

Part No.	Description
TM	Slidebar with Internal handle c/w TK Short Tongue

Sliding motion holds door closed. Short TK tongue allows padlock through tongue to act as a lock out. Additional lock out space at rear of slidebar

Part No.	Description
TG	Slidebar with Internal handle for GM

Sliding motion holds door closed. Short TK tongue allows padlock through tongue to act as a lock out. No additional lock out space at rear of slidebar

Part No.	Description
TF	Slidebar with Internal handle c/w spacer behind the knob

Same as a TN but IR knob allows door to be opened and closed from the inside when main unit is locked

proHandle Options

Part No.	Description
EN	proHandle, no Internal Release

Handle motion holds door closed, but no method to open door from inside

Part No.	Description
EH	proHandle (the red internal release handle only works with units with no locking (i.e. stops) or in conjunction with a pushIR unit).

The red internal release handle only works with units with no locking (i.e. Stops) or in conjunction with a pushIR unit

proRelease IR Handle

Part No.	Description
EI	proIR Handle to allow emergency release (only to be used with I6 or I7 head).

Handle motion holds door closed. Red handle overrides all locking mechanisms and opens safety contacts to allow escape release
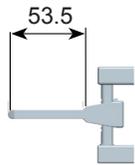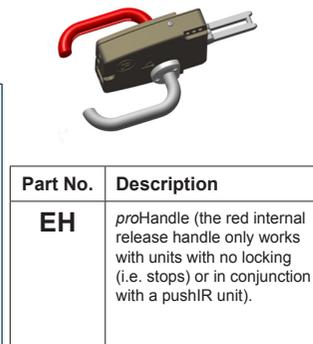
NO Actuator Required

X

Part No.	Description
NO	No Actuator required

Select this when you wish to specify head direction (Handing) but are not purchasing an actuator

pro i "If no Actuator is required go to Step 3, where you can select a Head or Cap (C6)"

pro i MI, TI, TM, TG, TF and EH work well with a pushIR unit (see step 4)
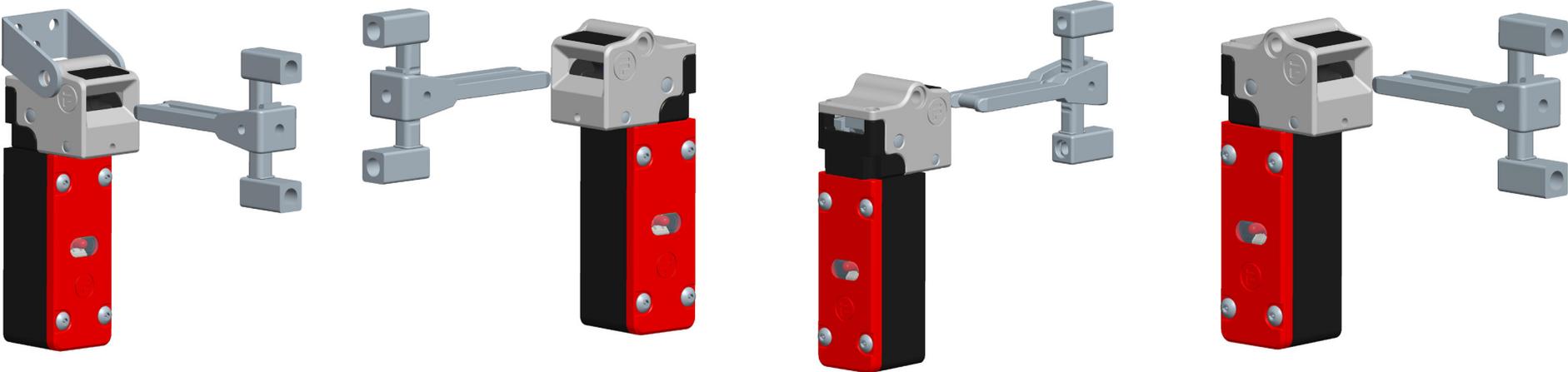
Part No.	Handing Description
1	Front Facing

Part No.	Handing Description
2	Left Hand

Part No.	Handing Description
3	Rear Facing

Part No.	Handing Description
4	Right Hand

pro i

Even if you have not chosen an actuator from Step 1 you can still choose handing for the head module

pro i

If you chosen an El Actuator from Step 1, Front Facing,1 and Rear Facing, 3 Handing Opions are not allowed

Step 3: Choose the Head Module

am Gard *pro*

<div style="vertical-align: sidebar">Head Modules</div>

*pro*Cap Options

Part No.	Description
C6	To terminate assemblies without heads

Terminates assemblies without heads

If a head module is not required, leave the part number blank and continue to Step 4

*pro*AM Head Options

For use with actuators:
MA
MI

Part No.	Description
M6	proAM Head

Turning motion holds door closed. Ideal for non locking set ups (i.e. *pro*STOP devices)

For use with actuators:
MA
MI

Part No.	Description
M7	proAM Head c/w Drop Down Lockout

M6 head with drop down lockout. This lockout features slides into place every time actuator is removed. Ideal for applications where lockout is to be used on every entry

For use with actuators:
MA
MI

Part No.	Description
M8	proAM Head c/w Lock-Out Clip

M6 head with drop down clip. Ideal for applications where lockout is not to be used on every entry

*pro*AT Head Options

For use with actuators:
TA   TS
TK   TM
TI   TG
TN   TF
EH   EN

Part No.	Description
T6	proAT Head

High strength and ease of opening makes this the most popular head in the amgard *pro* range

For use with actuators:
TA   TS
TK   TM
TI   TG
TN   TF
EH   EN

Part No.	Description
T7	proAT Head c/w Drop Down Lockout

T6 head with drop down lockout. This lockout features slides into place every time actuator is removed. Ideal for applications where lockout is to be used on every entry

For use with actuators:
TA   TS
TK   TM
TI   TG
TN   TF
EH   EN

Part No.	Description
T8	proAT Head c/w ATL Lock-Out Clip

T6 head with drop down clip. Ideal for applications where lockout is not to be used on every entry

*pro*Release IR Handle Options

For use with actuators:
EI

Part No.	Description
I6	proIR Head (only works in conjunction with EI handle)

Handle motion holds door closed. Red handle overrides all locking mechanisms and opens safety contacts to allow escape release

For use with actuators:
EI

Part No.	Description
I7	proIR Head c/w drop down lockout (only works in conjunction with EI handle)

I6 head with drop down lockout. This lockout features slides into place every time actuator is removed. Ideal for applications where lockout is to be used on ever entry
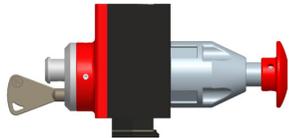

Ensure the head module you have selected works with the actuator you have selected in Step 1

am Gard *pro*
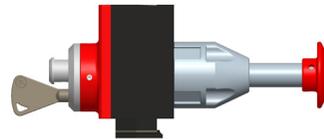
A PushIR will allow emergency exit even if unit is locked by keys and or solenoid. A PushIR is **not** needed if a EI Handle and I Head have already been specified. (note, a pull reset (R6, R7, R8 & R9) reduces the safety of the system).
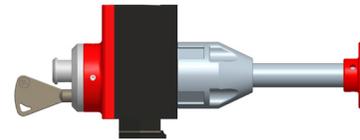
Part No.	Push IR Description
R1	Key Reset (up to 40mm panel thickness)

Same as RW but key reset to ensure all incidents are reported

Part No.	Push IR Description
R2	Key Reset (up to 60mm panel thickness)

Same as RX but key reset to ensure all incidents are reported
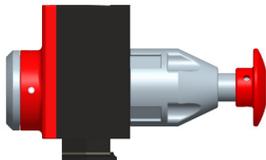
Part No.	Push IR Description
R3	Key Reset (up to 80mm panel thickness)

Same as RY but key reset to ensure all incidents are reported

Part No.	Push IR Description
R4	Key Reset (variable length - for panel thickness over 80mm and up to 1m)

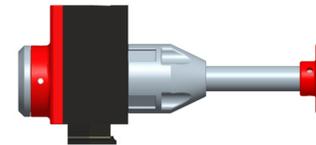Same as RZ but key reset to ensure all incidents are reported

Part No.	Push IR Description
R6	Pull Reset (up to 40mm panel thickness)

Same as RW but pull reset allows door to be relocked from the inside (requires careful risk assessment to ensure this is acceptable)
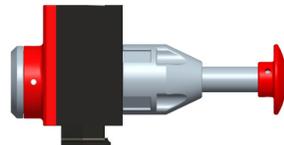
Part No.	Push IR Description
R7	Pull Reset (up to 60mm panel thickness)

Same as RX but pull reset allows door to be relocked from the inside (requires careful risk assessment to ensure this is acceptable)

Part No.	Push IR Description
R8	Pull Reset (up to 80mm panel thickness)

Same as RY but pull reset allows door to be relocked from the inside (requires careful risk assessment to ensure this is acceptable)
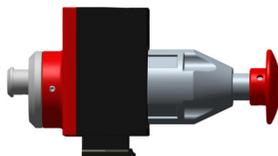
Part No.	Push IR Description
R9	Pull Reset (variable length for panel thickness over 80mm and up to 1m)

Same as RZ but pull reset allows door to be relocked from the inside (requires careful risk assessment to ensure this is acceptable)

pro i

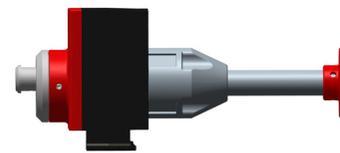**If a Push IR is not required leave part number blank and go to Step 5**

Part No.	Push IR Description
RW	Front Reset no key (up to 40mm panel thickness)

Overrides all locking mechanisms and opens safety contacts to allow escape release. Simple push reset allows quick restart. Suitable for panels upto 40mm thick

Part No.	Push IR Description
RX	Front Reset no key (up to 60mm panel thickness)

Overrides all locking mechanisms and opens safety contacts to allow escape release. Simple push reset allows quick restart. Suitable for panels upto 60mm thick

Part No.	Push IR Description
RY	Front Reset no key (up to 80mm panel thickness)

Overrides all locking mechanisms and opens safety contacts to allow escape release. Simple push reset allows quick restart. Suitable for panels upto 80mm thick

Part No.	Push IR Description
RZ	Front Reset no key (variable length for panel thickness over 80mm up to 1m)

Overrides all locking mechanisms and open safety contacts to allow escape release. SImple push reset allows quick restart. Suitable for panels upto 300mm thick

Part #

E	K		

Adaptors

CLIN & MLIN

CLIS & MLIS

CLIL & MLIL

or

If you've selected an I6/I7 then select a releasing lock.	If you've selected a pushIR adaptor then select a releasing lock.

pro i

If an Extracted Key Adaptor is not required leave part number blank and go to Step 6

Description	Part No.
Standard Lock	**L**
Releasing Lock (must be used if a PushIR or EI Handle and Head used).	**R**

Description	Information		Part No.
Standard Lock no dusctcover	Removed key ensures door cannot be locked until operator returns from cell with the key. Extracted version will not open door until key is removed	CLIN	**1**
Standard Lock with dustcover	Same as EK_1 but with dustcover for dusty environments	CLIS	**2**
Standard Lock with padlockable dustcover	Same as EK_3 but pad lockable dustcover allows lockout feature	CLIL	**3**
Masterable Lock no dustcover	Same as EK_1 but master lock allows a single key to override all locks (master key must be carefully controlled on site)	MLIN	**6**
Masterable Lock with dustcover	Same as EK_2 but master lock allows a single key to override all locks (master key must be carefully controlled on site)	MLIS	**7**
Masterable Lock with padlockable dustcover	Same as EK_3 but master lock allows a single key to override all locks (master key must be carefully controlled on site)	MLIL	**8**

Adaptors

Part #

S	K			

Description	Part No.
Standard Lock	**L**
Releasing Lock (must be used if a PushIR or EI Handle and Head used).	**R**

Description	Information		Part No.
Standard Lock no dusctcover	Removed key ensures door cannot be locked until operator returns from cell with the key	CLIN	**1**
Standard Lock with dustcover	Same as SK_1 but with dustcover for dusty environments	CLIS	**2**
Standard Lock with padlockable dustcover	Same as SK_3 but pad lockable dustcover allows lockout feature	CLIL	**3**
Masterable Lock no dustcover	Same as SK_1 but master lock allows a single key to override all locks (master key must be carefully controlled on site)	MLIN	**6**
Masterable Lock with dustcover	Same as SK_2 but master lock allows a single key to override all locks (master key must be carefully controlled on site)	MLIS	**7**
Masterable Lock with padlockable dustcover	Same as SK_3 but master lock allows a single key to override all locks (master key mst be carefully controlled on site)	MLIL	**8**

Description	Part No.
No. of Safety Lock Adaptors required	**1 - 9**

CLIN & MLIN

CLIS & MLIS

CLIL & MLIL

or
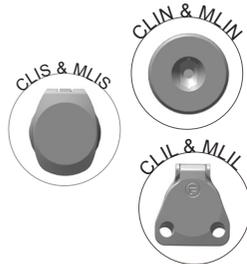
If you've selected an I6/I7 then select a releasing lock.

If you've selected a pushIR adaptor then select a releasing lock.

pro i — If a Safety Key Adaptor is not required leave part number blank and go to Step 7

pro i — Total Extracted, Safety & Access Locks in one configuration is Max 9

Adaptors

Part #

A	K			

Description	Part No.
Standard Lock	L
Releasing Lock (must be used if a PushIR or EI Handle and Head used).	R
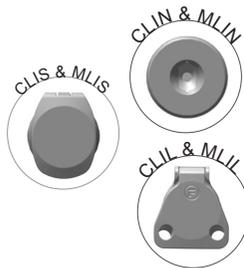
Description	Information		Part No.
Standard Lock no dusctcover	Ensures door cannot be opened without access key. Access key could be held by authorised individuals (e.g. maintenance) or it could have been released by a seperate unit	CLIN	1
Standard Lock with dustcover	Same as AK_1 but with dustcover for dusty environments	CLIS	2
Standard Lock with padlockable dustcover	Same as AK_3 but pad lockable dustcover allows lockout feature	CLIL	3
Masterable Lock no dustcover	Same as AK_1 but master lock allows a single key to override all locks (master key must be carefully controlled on site)	MLIN	6
Masterable Lock with dustcover	Same as AK_2 but master lock allows a single key to override all locks (master key must be carefully controlled on site)	MLIS	7
Masterable Lock with padlockable dustcover	Same as AK_3 but master lock allows a single key to override all locks (master key must be carefully controlled on site)	MLIL	8

Description	Part No.
No. of Access Lock Adaptors required	1 - 9

CLIN & MLIN

CLIS & MLIS

CLIL & MLIL

or

If you've selected an I6/I7 then select a releasing lock.

If you've selected a pushIR adaptor then select a releasing lock.

pro i
If an Access Key Adaptor is not required leave part number blank and go to Step 8

pro i
Total Extracted, Safety & Access Locks in one configuration is Max 9

Electrical Switching / Locking

*pro*Lok Body

SL

SE

*pro*Lok+ Body

LL

LE

*pro*Stop Body

*pro*StopEX/UX Body
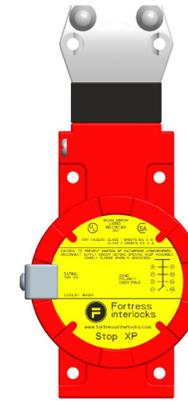
*pro*Stop Foot

Part No.	Description	Information
SL	Short Lok Body	Solenoid controlled safety switch. Holds door locked until signal sent to unlock. No provision for control buttons
SR	Short Lok Body - Releasing (must be used if a pushIR or EI handle and head used).	Same as SL but allows pushIR or EI handle to override it
SE	Short Lok Body - Integrated Escape Release	Same as SL but it's integrated escape release button overrides locking mechanism and opens safety contacts (Does not work with key adaptors, EI or pushIR)

or

If you've selected an I6/I7 then select a releasing lock.	If you've selected a pushIR adaptor then select a releasing lock.

Part No.	Description	Information
LL	Long Lok Body	Solenoid controlled safety switch. Holds door locked until signal sent to unlock. With space for control buttons
LR	Long Lok Body - Releasing (must be used if a pushIR or EI handle and head used).	Same as LL but allows pushIR or EI handle to override it
LE	Long Lok Body - Integrated Escape Release	Same as LL but it's integrated escape release button overrides locking mechanism and opens safety contacts (Does not work with key adaptors, EI or pushIR)

Part No.	Description	Information
ST	Stop Body	Safety switch

Part No.	Description	Information
EX	EU Explosion Stop Body	Safety switches suitable for explosive environments with EU certification
UX	US Explosion Stop Body	Safety switches suitable for explosive environments with US certification

Part No.	Description	Information
FT	To Terminate non-switch configurations	Terminates non-switch configurations (not suitable for units with pushIR or EI handle)

pro i

If an Electrical Switching / Locking Body is not required leave part number blank and continue to Step 10

Part #

Voltage Options	Part No.
No Voltage (eg Foot)	**0**
110v	**1**
230v	**2**
24v	**4**
100v	**5**
115v	**6**
48v	**7**
Asi	**8**
110v Solenoid / 24v Control (LOK only)	**S**
110v Control / 24v Solenoid (LOK only)	**C**

Override Options	Part No.
Stop/EXP/UXP	**0**
PTU - Key Override	**1**
PTU - Knob Override	**2**
PTU - Screwdriver Override	**3**
PTL (24v, 110v & ASi only)	**6**

Other PCB Options	*pro*Body Types	Part No.
Std & Sourcing	ALL	**1**
Std & Sinking	ST Only	**2**
Std & Sourcing (3 x NC)	ST Only	**3**
Std & Sourcing (Y&G LEDS)	SL, SR, LL & LR Only	**4**
Un-Monitored Sol & Sourcing	SL, SR, LL & LR Only	**6**
Un-Monitored Sol & Sourcing (Y&G LEDS)	SL, SR, LL & LR Only	**7**
Individual Safety Control for Sol & Actuator	SL, SR, LL, LR, SE & LE Only	**8**

pro 1

This is ordered by 99% of our customers

Option Pods

Separate Option Pod

Top Left | Top Right
Bottom Left | Bottom Right

pro i

If you order just one or two push buttons we will retain the order but position them top left and top right
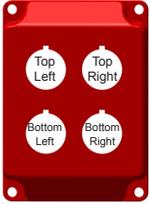
proLok+ Body with 2 hole postions

Top Left | Top Right

proLok+ Body with 4 hole positions

Top Left | Top Right
Bottom Left | Bottom Right

| | | Top Left | Top Right | Bottom Left | Bottom Right | |
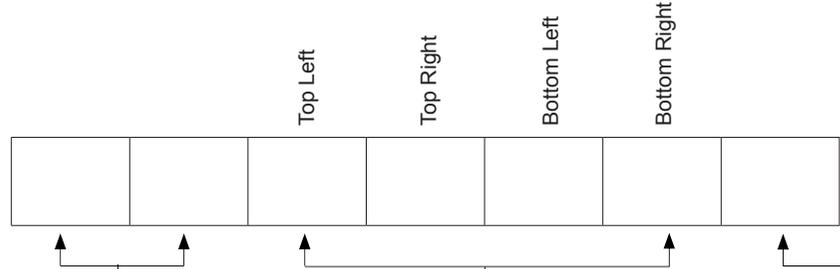
Select Unit	Part No.	
Stand alone Pod with No holes on top of pod case (stand alone unit)	B	0
Pod with one hole on top of pod case for fitting to *pro*Stop Body	B	1
Pod with two holes on top of pod case for fitting to *pro*LOK Body	B	2
*pro*Lok+ Body switch information	L	0

Part No.	Pushbuttton / Lamp Options - 24v only
0	Blank
1	Red Lamp
2	Yellow Lamp
3	Green Lamp
6	Blue Lamp
7	White Lamp
E	E-Stop (twist reset)
H	E-Stop (with additional monitoring contacts, twist reset)
P	E-Stop (pull reset)
U	E-Stop (illuminated twist reset)
L*	Latching selector switch (illuminated)
M*	Momentary selector switch (illuminated)
A*	Latching key switch (90 degree)
R	Red illuminated push button non latching
Y	Yellow illuminated push button non latching
G	Green illuminated push button non latching
B	Blue illuminated push button non latching
W	White illuminated push button non latching
K	Black non illuminated push button non latching

Part No.	Sensors - 24v only
N	No additional switch required
C	Coded Magnet - Left Hand (see step 2 for handing)
D	Coded Magnet - Right Hand (see step 2 for handing)
S	RFID - Left Hand (see step 2 for handing)
T	RFID - Right Hand (see step 2 for handing)

pro i

L, M & A Options can only be fitted in top right or bottom left positions

pro i

If an Option Pod or Long Lok Body is not required leave part number blank and continue to Step 11

Option Pods

Part #

B	K		

> **pro i**
> Removal of the key operates a set of safety rated switches. Common uses are: request machine stop, enable teach mode and prevent inadvertent re-start

Select Unit	Part No.
Stand alone Pod with No holes on top of pod case (stand alone unit)	0
Pod with one hole on top of pod case for fitting to *pro*Stop Body	1
Pod with two holes on top of pod case for fitting to *pro*LOK Body	2

Description		Part No.
CLIN	Standard Lock no dustcover	1
CLIS	Standard Lock with dustcover	2
CLIL	Standard Lock with padlockable dustcover	3
MLIN	Masterable Lock no dustcover	6
MLIS	Masterable Lock with dustcover	7
MLIL	Masterable Lock with padlockable dustcover	8

CLIN & MLIN

CLIS & MLIS

CLIL & MLIL

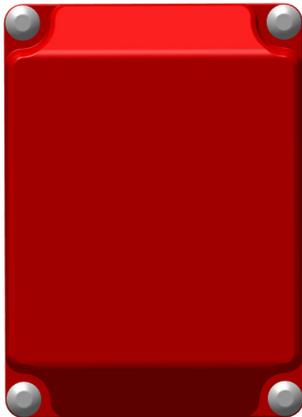> **pro i**
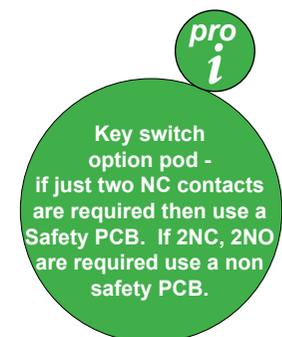> If a Key Switch Option Pod is not required leave part number blank and continue to Step 12

Option Pods

If you require e-stops, push buttons, lamps, coded magnet switch or keyswitch option pods to be ASi enabled you must select one of the options below.

Part No.	Description	Control	Safety	Examples
BA1	ASi Option pod with Control only PCB	1	0	Option pod with illuminated red, green & yellow pushbuttons.
BA2	ASi Option pod with Safety only PCB	0	1	Option pod with e-stop or coded magnet.
BA3	ASi Option pod with 1 Safety and 1 Control PCB	1	1	Option pod with e-stop and red, green & yellow pushbuttons or Option pod with coded magnet and red, green & yellow pushbuttons.
BA4	ASi Option pod with 2 Safety only PCB	0	2	Option pod with e-stop and coded magnet.
BA5	ASi Option pod with 1 Control and 2 Safety PCB	1	2	Option pod with e-stop and coded magnet and pushbuttons or Option pod wih e-stop and keyswitch pod.
BA6	ASi Option pod with 3 Safety only PCB	0	3	Option pod with e-stop, coded magnet, keyswitch pod and pushbuttons.
BA7	ASi Option pod with 1 Control and 3 Safety PCB	1	3	Option pod with e-stop, coded magnet, keyswitch and pushbuttons.

pro
i

Key switch option pod - if just two NC contacts are required then use a Safety PCB. If 2NC, 2NO are required use a non safety PCB.

Step 13: Quick Disconnect Connector Options

Quick Disconnect Connector Options

D1
- No. Pins: 5
- Max Voltage: 300v
- Connector: M12

Pin	Colour
1	Brown
2	White
3	Blue
4	Black
5	Grey

D2
- No. Pins: 12
- Max Voltage: 300v
- Connector: UN2

Pin	Colour
1	Orange
2	Blue
3	White/Black
4	Red/Black
5	Green/Black
6	Orange/Black
7	Blue/Black
8	Black/White
9	Green/Yellow
10	Red
11	White
12	Black

D3
- No. Pins: 8
- Max Voltage: 60v
- Connector: M12

Pin	Colour
1	White
2	Brown
3	Green
4	Yellow
5	Grey
6	Pink
7	Blue
8	Red

D6
- No. Pins: 14
- Max Voltage: 30v
- Connector: M16

Pin	Colour
A	Brown
C	Red/Blue
E	Black
G	Pink
J	Green
L	Blue
M	Orange
N	Grey/Brown
O	Violet
P	Red
R	White
S	Grey
T	Yellow
U	Tan

D7
- No. Pins: 10
- Max Voltage: 60v
- Connector: M12

Pin	Colour
1	White
2	Brown
3	Green
4	Yellow
5	Grey
6	Pink
7	Blue
8	Red
9	Orange
10	Tan

D8
- No. Pins: 12
- Max Voltage: 60v
- Connector: M12

Pin	Colour
1	White
2	Brown
3	Green
4	Yellow
5	Grey
6	Pink
7	Blue
8	Red
9	Orange
10	Tan
11	Black
12	Violet

D9
- No. Pins: 12
- Max Voltage: 300v
- Connector: M23

Pin	Colour
1	Brown
2	Brown/White
3	Blue
4	White
5	Green
6	Yellow
7	Grey
8	Pink
9	Red
10	Black
11	Violet
12	Green/Yellow

E3
- No. Pins: 10
- Max Voltage: 300v
- Connector: UN2

Pin	Colour
1	Orange
2	Blue
3	White/Black
4	Red/Black
5	Green/Black
6	Orange/Black
7	Red
8	Green/Yellow
9	Black
10	White

E4
- No. Pins: 19
- Max Voltage: 300v
- Connector: UN2

Pin	Colour
1	Violet
2	Red
3	Grey
4	Red/Blue
5	Blue
6	Green
7	Brown
8	White/Green
9	White/Yellow
10	White/Grey
11	Black
12	Green/Yellow
13	Yellow/Brown
14	Brown/White
15	White
16	Yellow
17	Pink
18	Grey/Brown
19	Grey/Pink

F2
- No. Pins: 19
- Max Voltage: 300v
- Connector: M23

Pin	Colour
1	Violet
2	Red
3	Grey
4	Red/Blue
5	Green
6	Blue
7	Grey/Pink
8	White/Green
9	White/Yellow
10	White/Grey
11	Black
12	Green/Yellow
13	Yellow/Brown
14	Brown/Green
15	White
16	Yellow
17	Pink
18	Grey/Brown
19	Brown

T Wiring						Left Hand QD		Right Hand QD	
T	#	#	#	#	#				

Contact Fortress engineering to be assigned T Wiring number

Image showing no connectors - 0 0
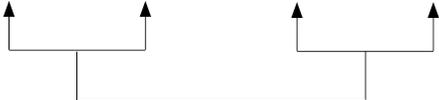
		No. Pins	Connector
0	0		
D	1	5	M12
D	2	12	UN2
D	3	8	M12
D	6	14	M16
D	7	10	M12
D	8	12	M12
D	9	12	M23
E	3	10	UN2
E	4	19	UN2
F	2	19	M23

Left Hand QD

Right Hand QD