



Position Limit switches

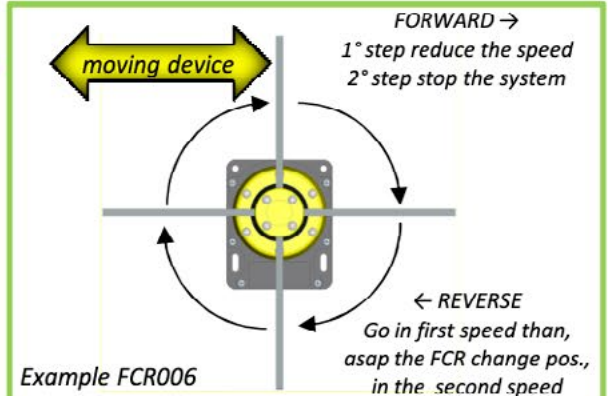
page 36 to 42

The position (rotary-angular) limit switch is used to control several handling system:

- sophisticated crane system:
the unit controls power operating system (ex. PLC) and allows the crane to slow-down and/or to stop running.
 - hoist:
the unit is used to stop the hoist running whenever it reaches a "limit" position
- Different combinations available for all standard system.
➤ Customization available on request.

How it works?

As an example, an FCR006 is typically used on a sophisticated crane system. Its function is to control the crane as it approaches operational limits in the following sequence:
With the crane moving forward the end position, the FCR006 controls the crane's speed reducing the speed (first step) then stopping the crane (second step) .
In this position the forward command is no longer enabled.
Only the reversing command is enabled for operation, in the first speed than in the second speed.



LIMIT SWITCHES



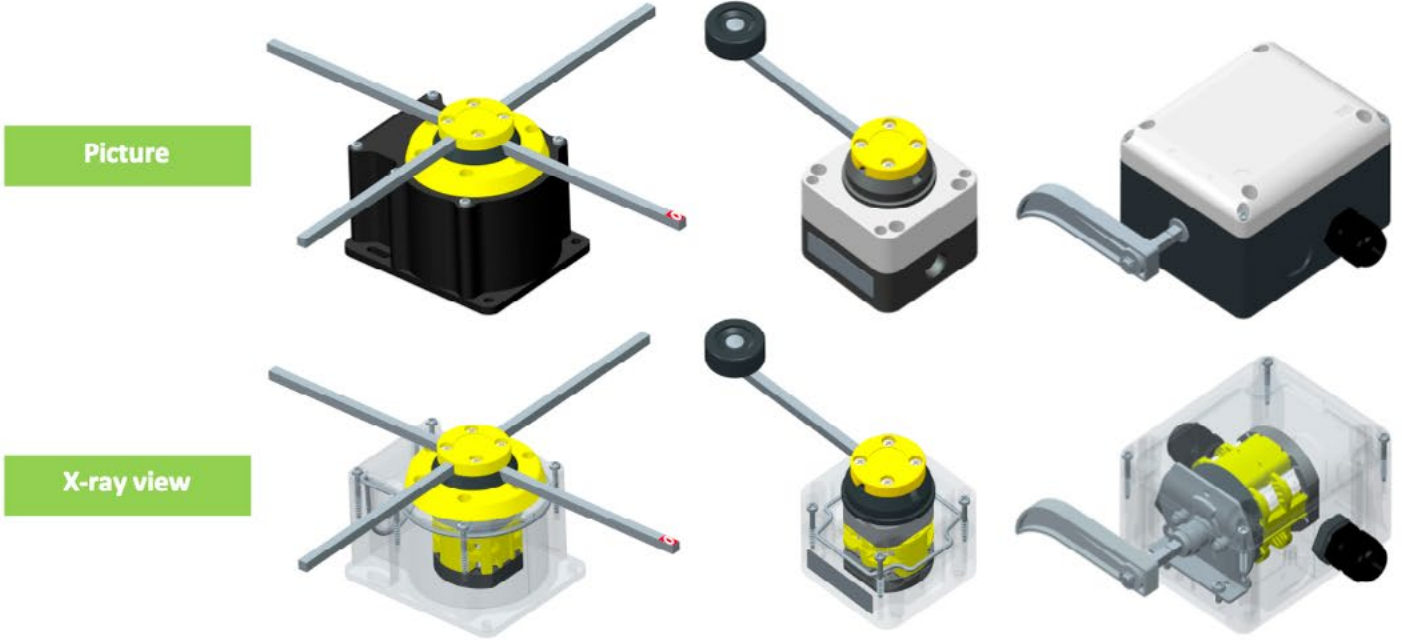
Picture shows a FCR working on a crane system

Picture shows a FCP working on a hoist





Line	FCR	FFH	FCP
Page	38	40	41



LIMIT SWITCHES

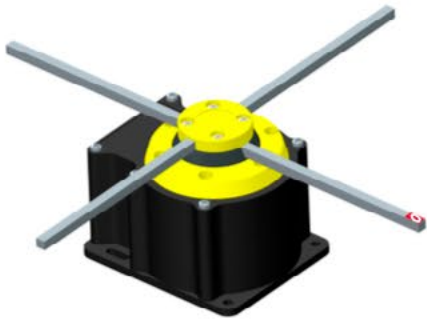
Characteristics

Standards	IEC/EN 60947/3	IEC/EN 60947/3	IEC/EN 60947/3, EN81-1	
Case	self extinguishing housing VO UL94	self extinguishing cover VO UL94	self extinguishing housing VO UL94	
Protection class IEC/EN 60529	IP65	IP65	IP65	
Cam switch	enclosed thermal current [Ithe]	16A	20A	40A
	rated insulation voltage [Ui]	690V	690V	690V
	product ID	P016 Giovenzana line	PX20 Giovenzana line	CX40 Giovenzana line
	contacts	double gap positive opening	double gap positive opening	double gap positive opening
	markings			
Cable entry	N° 1 dia. 22.5mm	1xM20 + 1xM16	M20 (max 8)	
Versions	- single or double speed motor configuration - 3,4 or 4 with mechanical stop positions	single speed motor configuration (other configuration on request)	two pole on-off switch (other configuration on request)	
Notes	fully adjustable aluminium rods □ 6x300mm with "0" indicator - reinforced mechanical stop	- fully adjustable metallic rods □ 6x120mm - reinforced mechanical stop - rubber covering wheel	- reinforced mechanical stop	

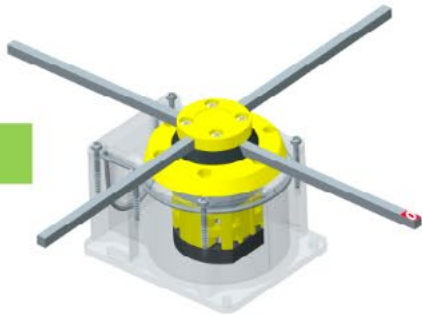


□ contact open
■ contact close

Picture



X-ray view



Versions

FCR001	single speed	<p>3 positions with mechanical interlock (•)</p>	<table border="1"> <tr><td>3-4</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>1-2</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>Cont. Pos.</td><td>-90°</td><td>0</td><td>+90°</td></tr> </table>	3-4	■	■	■	1-2	■	■	■	Cont. Pos.	-90°	0	+90°														
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FCR002	single speed	<p>3 positions with mechanical interlock (•)</p>	<table border="1"> <tr><td>7-8</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>5-6</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>3-4</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>1-2</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>Cont. Pos.</td><td>-90°</td><td>0</td><td>+90°</td></tr> </table>	7-8	■	■	■	5-6	■	■	■	3-4	■	■	■	1-2	■	■	■	Cont. Pos.	-90°	0	+90°						
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FCR003	single speed	<p>4 positions NO mechanical interlock</p>	<table border="1"> <tr><td>3-4</td><td>■</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>1-2</td><td>■</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>Cont. Pos.</td><td>0</td><td>90°</td><td>180°</td><td>270°</td></tr> </table>	3-4	■	■	■	■	1-2	■	■	■	■	Cont. Pos.	0	90°	180°	270°											
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FCR006	two speeds	<p>4 positions with mechanical interlock (•)</p>	<table border="1"> <tr><td>7-8</td><td>■</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>5-6</td><td>■</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>3-4</td><td>■</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>1-2</td><td>■</td><td>■</td><td>■</td><td>■</td></tr> <tr><td>Cont. Pos.</td><td>-180°</td><td>-90°</td><td>0</td><td>+90°</td><td>+180°</td></tr> </table>	7-8	■	■	■	■	5-6	■	■	■	■	3-4	■	■	■	■	1-2	■	■	■	■	Cont. Pos.	-180°	-90°	0	+90°	+180°
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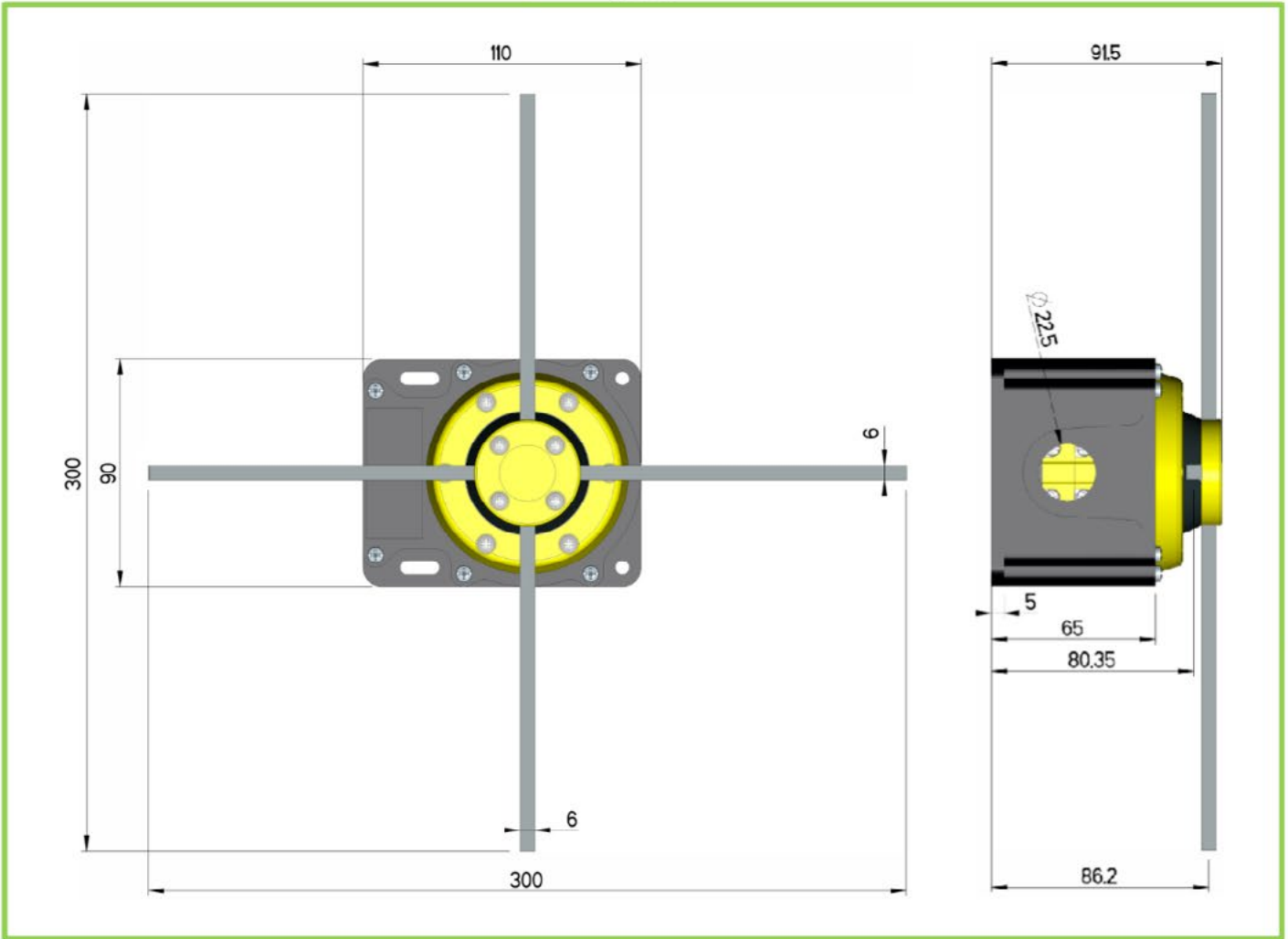
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Other versions available on request →

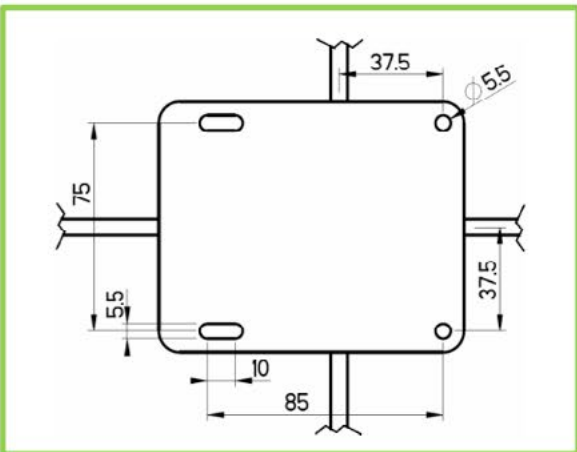


Dimensions



LIMIT SWITCHES

Fixing holes

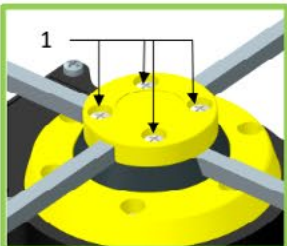


Section view



Rods adjusting guide

- I. Loosen the four screws (1)
- II. Adjust the rods
- III. Tighten the four screws (1)



"ZERO" indicator



Reinforced mechanical stop insert

metallic stop insert
metallic cam's control shaft

