



Position Limit switches

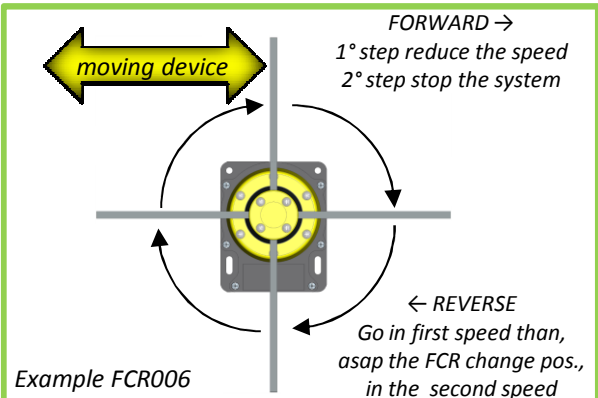
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The position (rotary-angular) limit switch is used to control several handling system:

- 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.

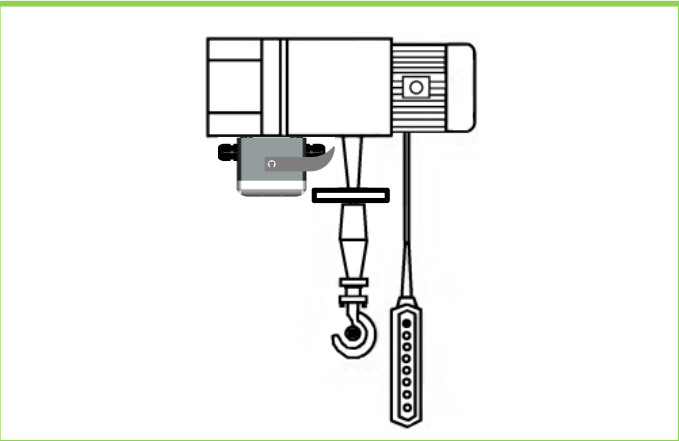
How it works?

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.



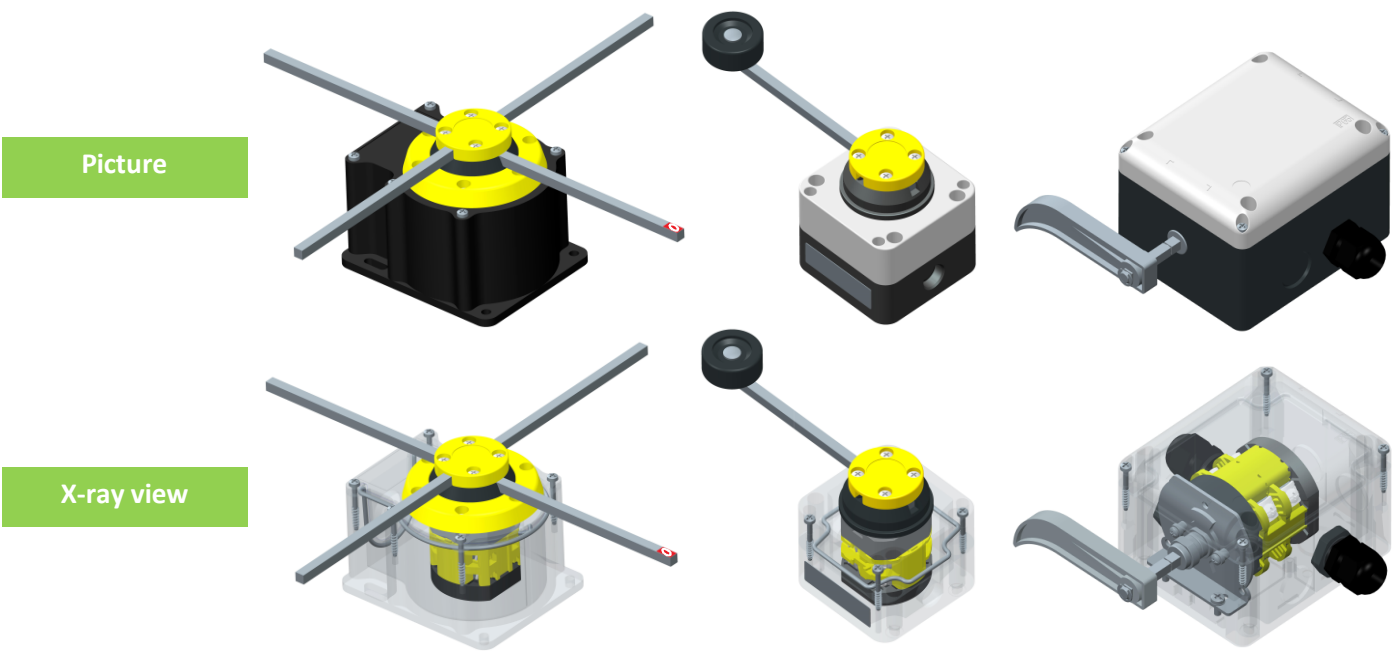
Picture shows a FCR working on a crane system

Picture shows a FCP working on a hoist





Line	FCR	FFH	FCP
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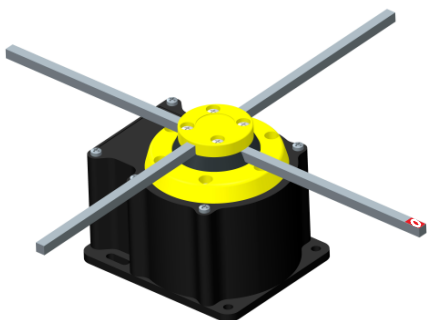


Characteristics				
Standards		IEC/EN 60947/3	IEC/EN 60947/3	IEC/EN 60947/3, EN81-1
Case		self extinguishing housing V0 UL94	self extinguishing cover V0 UL94	self extinguishing housing V0 UL94
Protection class IEC/EN 60529		IP65	IP65	IP65
Cam switch	enclosed thermal current [Ithe]	16A	20A	40A
	rated 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

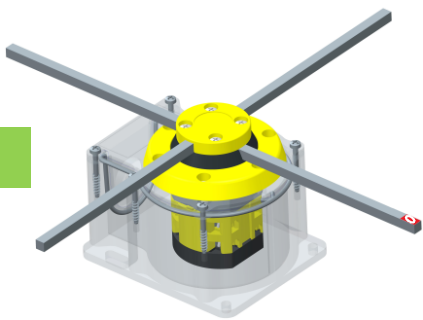
LIMIT SWITCHES



Picture



X-ray view












☐ contact open
☒ contact close

Versions

FCR001	single speed	<div><div><div>0</div><div>-</div><div>+</div><div>90°</div><div>90°</div></div><div>3 positions with mechanical interlock (●)</div></div>	<table><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>-90°</td><td>0</td><td>+90°</td><td></td></tr></table>	3-4					1-2					Cont. Pos.	-90°	0	+90°																
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FCR002	single speed	<div><div><div>0</div><div>-</div><div>+</div><div>90°</div><div>90°</div></div><div>3 positions with mechanical interlock (●)</div></div>	<table><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>-90°</td><td>0</td><td>+90°</td><td></td></tr></table>	7-8					5-6					3-4					1-2					Cont. Pos.	-90°	0	+90°						
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FCR003	single speed	<div><div><div>0</div><div>270°</div><div>90°</div><div>180°</div></div><div>4 positions NO mechanical interlock</div></div>	<table><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	<div><div><div>0</div><div>-</div><div>+</div><div>90°</div><div>90°</div></div><div>4 positions with mechanical interlock (●)</div></div>	<table><tr><td>7-8</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5-6</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3-4</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1-2</td><td></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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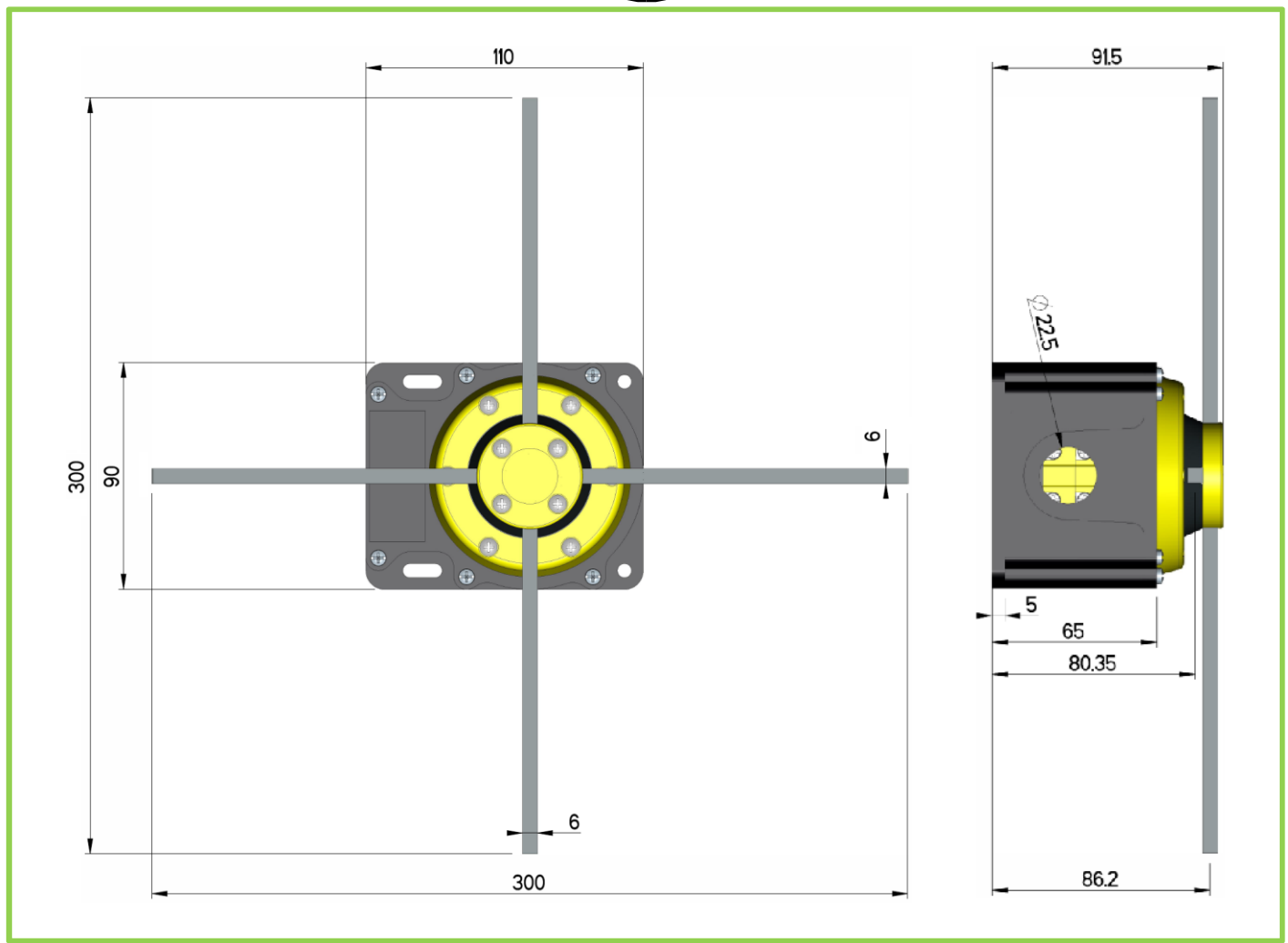
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Other versions available on request →

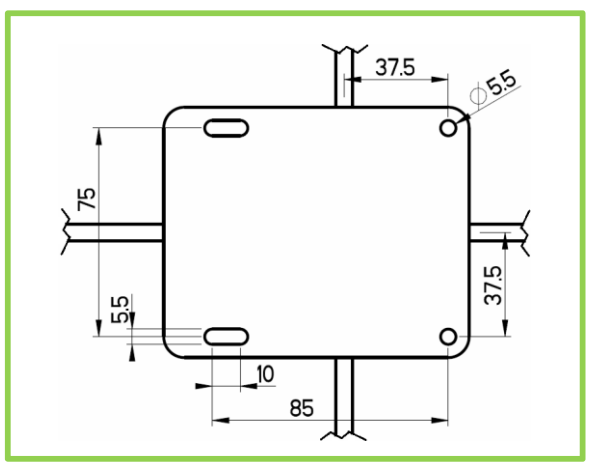


Dimensions

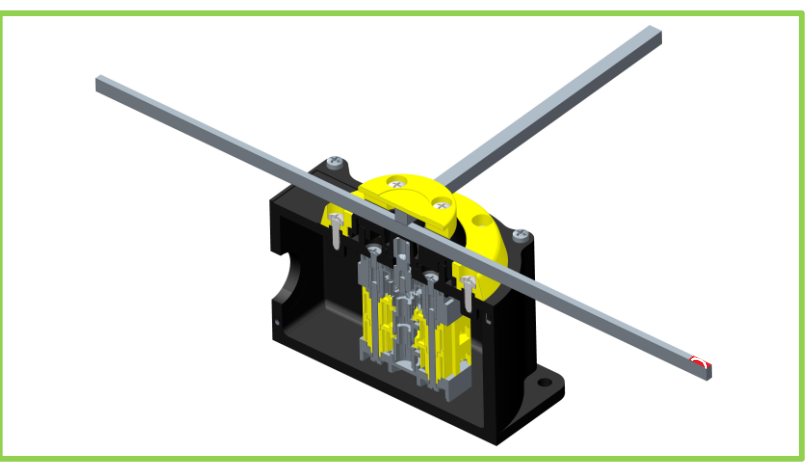


LIMIT SWITCHES

Fixing holes

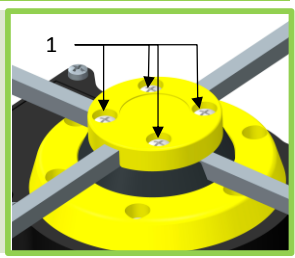


Section view

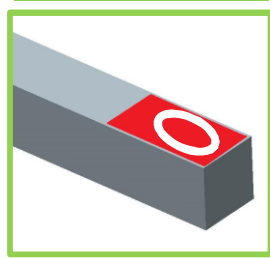


Rods adjusting guide

- 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

