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### Product Description

The new and modern M30 30 mm operators of the Global pilot devices offer a flat design and functionality while withstanding exposure to oil, dirt and water. Ability to be combined with existing traditional and flat designed M22 contact blocks and indicating lights, M30 operators provide modularity, simplicity and elegance for more demanding commercial and industrial applications.

Our new offering includes stainless steel bezel (M30I) options for extended corrosion protection along with the metal bezel (M30C) options for everyday operations.

### Features

- Flat design for modern look and smooth transition between the machine and the operator
- Compatible with existing M22 contact blocks (M22-K...) and indicating lights for enhanced modularity (M22-LED...) and sustainable inventory management
- Compatible with the new M22 flat contact blocks (M22-FK...) and indicating lights for optimized footprint (M22-FLED-...)
- Stainless steel bezel (M30I) options for extended corrosion protection along with the metal bezel (M30C) options for everyday operations
- AFX mounting system for easy and secure installation
- Robust against vandalism
- IP69K for increased protection

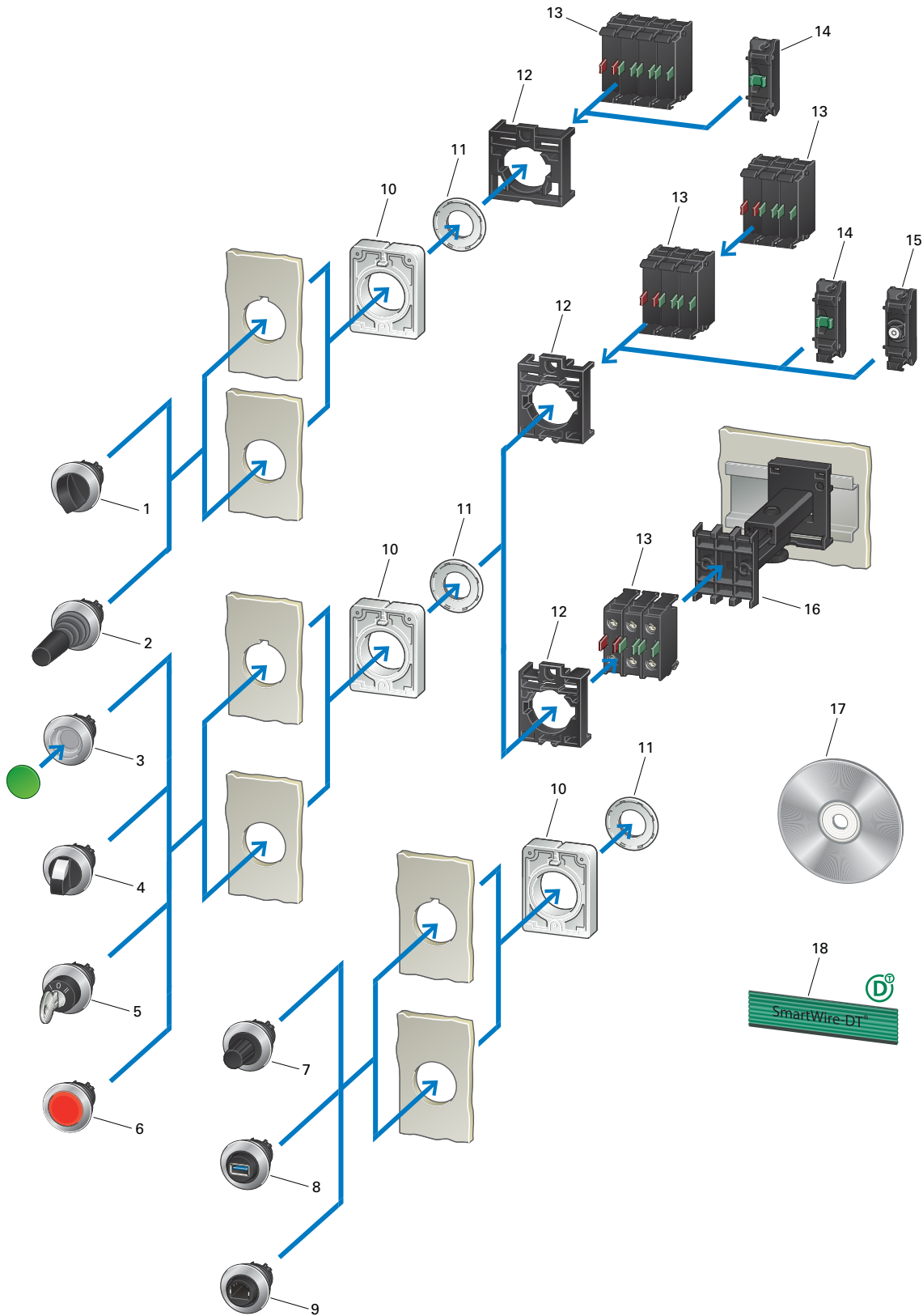
### Standards and Certifications

- UL, CE, CSA, and RoHS certifications for Global Acceptance
- All operators and components are IEC/EN 60947 VDE 0660
- All operators carry an IP66 rating with some rated for washdown environment with IP67 and IP69K
- All pushbuttons, emergency-stops, indicating lights, potentiometers and selector switches carry NEMA 4X, 13
- Marine classification societies: Bureau Veritas (BV), Germanischer Lloyd (GL), and Lloyd's Register of Shipping (LR) approved



### System Overview

#### Global Modular 30 mm Pilot Devices—M30 Flat Operators



## Global Modular 30 mm Pilot Devices—M30 Flat Operators (Legend)

















Item	Description
1	<b>M30 4-Way Selector Switches</b> 4-positions With rotary head or thumb-grip 0-1-0-2-0-3-0-4 maintained action See <a href="#">Page V7-T1-178</a>
2	<b>M30 Joysticks</b> 2- or 4-positions See <a href="#">Page V7-T1-182</a>
3	<b>M30 Pushbuttons</b> Momentary and maintained Flush Colors: White, green, red, yellow, blue, black Illuminated pushbutton actuators Colors: White, green, red, yellow, blue, orange See <a href="#">Page V7-T1-177</a>
4	<b>M30 Selector Switches</b> 2- and 3-positions With rotary head, thumb-grip Programmable maintained/momentary action Illuminated selector switches with transparent thumb-grip Colors: White, green, red, yellow, blue See <a href="#">Page V7-T1-178</a>
5	<b>M30 Key-Operated Buttons</b> For individual lock mechanisms 2- or 3-positions Programmable momentary/maintained action and key withdraw Suitable for master key systems See <a href="#">Page V7-T1-179</a>
6	<b>M30 Indicator Lights</b> Colors: White, green, red, yellow, blue, orange See <a href="#">Page V7-T1-182</a>
7	<b>SmartWire-DT Encoders, M30 Potentiometers</b> Resistances of 1 k $\Omega$ –1 M $\Omega$ Three individual connections See <a href="#">Page V7-T1-185</a>
8	<b>M30 Panel Mount Connectors</b> USB 3.0
9	<b>M30 Panel Mount Connectors</b> RJ45
10	<b>RMQ-AFX</b> Anti-rotation tab Included with the equipment supplied with M30 front elements
11	<b>Threaded Rings</b>









Item	Description
12	<b>Mounting Adapters</b> For flush mounting For contact and LED elements See <a href="#">Page V7-T1-186</a>
13	<b>Contact Elements</b> N/C and N/O Universal contacts suitable for use with electronic devices Safety function implemented with positive opening as defined in IEC/EN 60947-5-1 Max. 2 levels, each with 3 contact elements See <a href="#">Page V7-T1-186</a>
14	<b>Flat Rear Contact Elements</b> Cage clamp with push-in terminals
15	<b>Flat Rear LED Elements</b> Cage clamp with push-in terminals
16	<b>Telescopic Clip</b> For adjusting the depth of rear mounting devices in CI and CI-K enclosures and cabinets
17	<b>Convenient Labeling</b> A laser inscription with any text and/or symbol can be added to all button plates, indicator lights, and add-on legend plates from the RMQ-Silver range of products. Download: <a href="http://www.eaton.eu/config/rm">www.eaton.eu/config/rm</a> Keyword: "Pushbutton Configurator → Label Editor function"
18	<b>SmartWire-DT</b> <b>Product Characteristics</b> <ul style="list-style-type: none"> <li>• Clip-fit assembly modular system</li> <li>• Metal bezel, flus</li> <li>• Mounting hole diameter: 30.5 mm</li> <li>• Minimum grid dimension: 40 x 50 mm</li> <li>• Min. degree of protection: IP66</li> <li>• Up to 6 contacts per mounting location</li> <li>• For switching differing potential</li> <li>• Approved throughout the world</li> </ul> See <a href="#">Page V7-T1-185</a>

### Product Selection

#### M30—Flat Front Pushbuttons

**IP67, IP69K—Metal Bezel—Flush**  
 Front Dimensions: 36 mm Diameter

	Button Plate	Std. Pack	Catalog Number
<b>M30C-FD-</b> 	<b>Momentary</b> <sup>①②</sup>		
		1 unit	<b>M30C-FD-S</b>
			<b>M30C-FD-W</b>
			<b>M30C-FD-R</b>
			<b>M30C-FD-G</b>
			<b>M30C-FD-Y</b>
			<b>M30C-FD-B</b>
			<b>M30C-FD-GR</b>
			<b>M30C-FD-S-X0</b>
			<b>M30C-FD-W-X1</b>
			<b>M30C-FD-W-X11</b>
			<b>M30C-FD-R-X0</b>
			<b>M30C-FD-G-X1</b>
			<b>M30C-FD-B-X217</b>
			<b>M30C-FD-GR-X66</b>
Custom		<b>M30C-FD-ETCH</b> <sup>③</sup>	
<b>M30C-FD-X</b> 	Without button plate	1 unit	<b>M30C-FD-X</b>

	Button Plate	Std. Pack	Catalog Number
<b>M30C-FDR-S</b> 	<b>Maintained</b> <sup>①②</sup>		
		1 unit	<b>M30C-FDR-S</b>
			<b>M30C-FDR-W</b>
			<b>M30C-FDR-R</b>
			<b>M30C-FDR-G</b>
			<b>M30C-FDR-Y</b>
			<b>M30C-FDR-B</b>
			<b>M30C-FDR-S-X0</b>
			<b>M30C-FDR-W-X1</b>
			<b>M30C-FDR-R-X0</b>
			<b>M30C-FDR-G-X1</b>
	Custom		<b>M30C-FDR-ETCH</b> <sup>③</sup>
<b>M30C-FDR-X</b> 	Without button plate	1 unit	<b>M30C-FDR-X</b>

**Notes**

- ① Maintained/momentary action can be changed on device.
- ② Includes contact block mounting adapter.
- ③ When ordering, specify inscription per catalog number suffix from the Symbols Library (see **Pages V7-T1-129 to V7-T1-136**).

#### M30—Flat Front Selector Switches

##### IP64, Metal Bezel














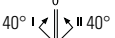
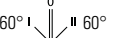






Front dimensions: 36 mm diameter

Maintained/momentary action can be changed with M22-XC-Y configuration adapters

##### Action

▷ = Momentary (MO)

∟ = Maintained (MA)

		Button Plate	Std. Pack	Catalog Number
<b>With Rotary Head</b> 	<b>Two-Position</b>			
	▷ 40°		1 unit	<b>M30C-FW</b>
	∟ 60°			<b>M30C-FWR</b>
		AUTO HAND 		<b>M30C-FWR-X91</b>
				<b>M30C-FWR-X92</b>
<b>With Thumb-Grip</b> 	▷ 40°		1 unit	<b>M30C-FWK</b>
	∟ 60°			<b>M30C-FWRK</b>
<b>With Thumb-Grip</b> 	∨ 60°		1 unit	<b>M30C-FWKV</b>
<b>With Rotary Head</b> 	<b>Three-Position</b> ①			
	40° ∟ 40°		1 unit	<b>M30C-FW</b>
	60° ∟ 60°			<b>M30C-FWR3</b>
				<b>M30C-FWR3-X7</b>
				<b>M30C-FWR3-X94</b>
<b>With Thumb-Grip</b> 	40° ∟ 40°		1 unit	<b>M30C-FWK3</b>
	60° ∟ 60°			<b>M30C-FWRK3</b>
	Selectable	Maintained, return from left		<b>M30C-FWRK3-1</b>
				
		Maintained, return from right		<b>M30C-FWRK3-2</b>
				
<b>With Rotary Head</b> 	<b>Four-Position</b> ②③			
			1 unit	<b>M30C-FWR4</b>
<b>With Thumb-Grip</b> 				<b>M30C-FWRK4</b>

##### Notes

- ① With plunger bridge for middle contact.
- ② Not compatible with configuration adapters.
- ③ Use M22-A4 mounting adapter, see [Page V7-T1-186](#).

### M30—Flat Front Key-Operated Buttons

#### Key-Operated Buttons for Individual Lock Mechanisms

##### IP64, Metal Bezel

Front dimensions: 36 mm diameter

Maintained/momentary action can be changed with M22-XC-Y configuration adapters

Key withdraw can be changed with M22-XC-... configuration adapters

##### Action

▷ = Momentary (MO)

∟ = Maintained (MA)

#### Two-Position



	Lock Mechanism	Key Withdrawable at Position		Equipment Supplied	Key Code	Std. Pack	Catalog Number		
<b>Two-Position</b>									
▷ 40°	—	0	—	—	With one key	1 unit	<b>M30C-FWS</b>		
					MS2		<b>M30C-FWS-MS2</b>		
					MS3		<b>M30C-FWS-MS3</b>		
					MS4		<b>M30C-FWS-MS4</b>		
					MS5		<b>M30C-FWS-MS5</b>		
					MS6		<b>M30C-FWS-MS6</b>		
					MS7		<b>M30C-FWS-MS7</b>		
					MS8		<b>M30C-FWS-MS8</b>		
	∟ 60°	—	0	—	I		MS1	1 unit	<b>M30C-FWRS</b>
							MS2		<b>M30C-FWRS-MS2</b>
					MS3	<b>M30C-FWRS-MS3</b>			
					MS4	<b>M30C-FWRS-MS4</b>			
					MS5	<b>M30C-FWRS-MS5</b>			
					MS6	<b>M30C-FWRS-MS6</b>			
					MS7	<b>M30C-FWRS-MS7</b>			
					MS8	<b>M30C-FWRS-MS8</b>			
					MS10	<b>M30C-FWRS-MS10</b>			
		—	0	—	—	MS1	<b>M30C-FWRS-A1</b>		
					MS2	<b>M30C-FWRS-MS2-A1</b>			
					MS3	<b>M30C-FWRS-MS3-A1</b>			
					MS4	<b>M30C-FWRS-MS4-A1</b>			
					MS5	<b>M30C-FWRS-MS5-A1</b>			
					MS6	<b>M30C-FWRS-MS6-A1</b>			
					MS7	<b>M30C-FWRS-MS7-A1</b>			
					MS8	<b>M30C-FWRS-MS8-A1</b>			
					MS10	<b>M30C-FWRS-MS10-A1</b>			
	—	I	—	II	MS1	<b>M30C-FWRS-X95</b>			
▷ 60°	Ronis 455	0	—	I	With two keys	1 unit	<b>M30C-FWRS-RS</b>		
	Ronis 455	0	—	—	MS1		<b>M30C-FWRS-RS-A1</b>		

#### Two-Position (Ronis 455)



#### IP64, Metal Bezel, continued

Front dimensions: 36 mm diameter

Maintained/momentary action can be changed with M22-XC-Y configuration adapters

Key withdraw can be changed with M22-XC-... configuration adapters

#### Action

▷ = Momentary (MO)

∨ = Maintained (MA)

#### Three-Position



#### Three-Position

	Lock Mechanism	Key Withdrawable at Position		Equipment Supplied	Key Code	Std. Pack	Catalog Number
40° ∨ 40°	—	0	—	—	With one key	1 unit	M30C-FWS3
							M30C-FWS3-MS2
							M30C-FWS3-MS3
							M30C-FWS3-MS4
							M30C-FWS3-MS5
							M30C-FWS3-MS6
							M30C-FWS3-MS7
							M30C-FWS3-MS8
60° ∨ 60°	Selectable	—	Selectable	—			M30C-FWRS3-MS1-A1
							M30C-FWRS3-MS2-A1
							M30C-FWRS3-MS3-A1
							M30C-FWRS3-MS4-A1
							M30C-FWRS3-MS5-A1
							M30C-FWRS3-MS6-A1
							M30C-FWRS3-MS7-A1
							M30C-FWRS3-MS8-A1
	—	—	Selectable	—			M30C-FWRS3-MS1-A2
							M30C-FWRS3-MS2-A2
							M30C-FWRS3-MS3-A2
							M30C-FWRS3-MS4-A2
							M30C-FWRS3-MS5-A2
							M30C-FWRS3-MS6-A2
							M30C-FWRS3-MS7-A2
							M30C-FWRS3-MS8-A2
	—	—	Selectable	—			M30C-FWRS3-MS1-A3
							M30C-FWRS3-MS2-A3
							M30C-FWRS3-MS3-A3
							M30C-FWRS3-MS4-A3
							M30C-FWRS3-MS5-A3
							M30C-FWRS3-MS6-A3
							M30C-FWRS3-MS7-A3
							M30C-FWRS3-MS8-A3
	—	—	Selectable	—			M30C-FWRS3-MS1-A4
							M30C-FWRS3-MS2-A4
							M30C-FWRS3-MS3-A4
							M30C-FWRS3-MS4-A4
							M30C-FWRS3-MS5-A4
							M30C-FWRS3-MS6-A4
							M30C-FWRS3-MS7-A4
							M30C-FWRS3-MS8-A4

### IP64, Metal Bezel, continued

Front dimensions: 36 mm diameter




Maintained/momentary action can be changed with M22-XC-Y configuration adapters

Key withdrawable can be changed with M22-XC-... configuration adapters

#### Action

↳ = Momentary (MO)

↳ = Maintained (MA)

		Lock Mechanism	Key Withdrawable at Position		Equipment Supplied	Key Code	Std. Pack	Catalog Number		
<b>Three-Position</b> 	<b>Three-Position, continued</b>									
	60° ↓↓ 60°	Selectable	—	Selectable	—	With one key	1 unit	<b>M30C-FWRS3-MS1-A5</b>		
								MS2	<b>M30C-FWRS3-MS2-A5</b>	
								MS3	<b>M30C-FWRS3-MS3-A5</b>	
								MS4	<b>M30C-FWRS3-MS4-A5</b>	
								MS5	<b>M30C-FWRS3-MS5-A5</b>	
								MS6	<b>M30C-FWRS3-MS6-A5</b>	
								MS7	<b>M30C-FWRS3-MS7-A5</b>	
								MS8	<b>M30C-FWRS3-MS8-A5</b>	
		—	—	Selectable	—			MS1	<b>M30C-FWRS3-MS1-A6</b>	
								MS2	<b>M30C-FWRS3-MS2-A6</b>	
								MS3	<b>M30C-FWRS3-MS3-A6</b>	
								MS4	<b>M30C-FWRS3-MS4-A6</b>	
								MS5	<b>M30C-FWRS3-MS5-A6</b>	
								MS6	<b>M30C-FWRS3-MS6-A6</b>	
								MS7	<b>M30C-FWRS3-MS7-A6</b>	
								MS8	<b>M30C-FWRS3-MS8-A6</b>	
		—	—	Selectable	—			MS1	<b>M30C-FWRS3-MS1-A7</b>	
								MS2	<b>M30C-FWRS3-MS2-A7</b>	
								MS3	<b>M30C-FWRS3-MS3-A7</b>	
								MS4	<b>M30C-FWRS3-MS4-A7</b>	
								MS5	<b>M30C-FWRS3-MS5-A7</b>	
								MS6	<b>M30C-FWRS3-MS6-A7</b>	
								MS7	<b>M30C-FWRS3-MS7-A7</b>	
								MS8	<b>M30C-FWRS3-MS8-A7</b>	
	<b>Three-Position (Ronis 455)</b> 	60° ↓↓ 60°	Ronis 455	0	—	—		With two keys	1 unit	<b>M30C-FWRS3-RS</b>
										<b>M30C-FWRS3-RS-A1</b>
	<b>Two- or Three-Position</b> 	<b>Two- or Three-Position</b>								
60° ↓↓ 60°		—	—	Selectable	—	With two keys		1 unit	<b>M30C-FWRS3-A1</b>	
							MS2		<b>M30C-FWRS3-A2</b>	
							MS3		<b>M30C-FWRS3-A3</b>	
							MS4		<b>M30C-FWRS3-A4</b>	
							MS5		<b>M30C-FWRS3-A5</b>	
							MS6		<b>M30C-FWRS3-A6</b>	
							MS7		<b>M30C-FWRS3-A7</b>	
							MS10		<b>M30C-FWRS3-A10</b>	



#### 1

#### M30—Flat Front Joysticks, Indicator Lights

##### Joystick



##### Joysticks—IP66, Metal Bezel

With one operating point per operating direction  
With metal shaft  
Front dimensions: 36 mm diameter

Description	Action	Std. Pack	Catalog Number
	> = Momentary (M0) < = Maintained (MA)		
Two-position	—	1 unit	<b>M30C-FWRJS2H</b>
Three-position			<b>M30C-FWRJS2V</b>
Four-position	◊		<b>M30C-FWJS4</b>

##### Indicator Lights


















##### Indicator Lights—IP67, Metal Bezel

Front dimensions: 36 mm diameter













Lens	Std. Pack	Catalog Number
○	1 unit	<b>M30C-FL-W</b>
●		<b>M30C-FL-R</b>
●		<b>M30C-FL-G</b>
●		<b>M30C-FL-Y</b>
●		<b>M30C-FL-B</b>
●		<b>M30C-FL-A</b>

### Illuminated Pushbutton Actuators

**IP67, IP69K, Metal Bezel, Flush**  
Front dimensions: 36 mm diameter

	Button Plate	Std. Pack	Catalog Number
<b>Momentary</b> 		1 unit	<b>M30C-FDL-W</b>
			<b>M30C-FDL-R</b>
			<b>M30C-FDL-G</b>
			<b>M30C-FDL-Y</b>
			<b>M30C-FDL-B</b>
			<b>M30C-FDL-A</b>
			<b>M30C-FDL-W-X0</b>
			<b>M30C-FDL-W-X1</b>
			<b>M30C-FDL-W-X100</b>
			<b>M30C-FDL-R-X0</b>
			<b>M30C-FDL-G-X1</b>
			<b>M30C-FDL-G-X32</b>
			<b>M30C-FDL-Y-X162</b>
	Custom		<b>M30C-FDL-ETCH</b> <sup>①</sup>
	<b>Momentary</b> 	Without button plate	1 unit

**IP67, IP69K, Metal Bezel, Flush**  
Front dimensions: 36 mm diameter

	Button Plate	Std. Pack	Catalog Number
<b>Maintained</b> 		1 unit	<b>M30C-FDRL-W</b>
			<b>M30C-FDRL-R</b>
			<b>M30C-FDRL-G</b>
			<b>M30C-FDRL-Y</b>
			<b>M30C-FDRL-B</b>
			<b>M30C-FDRL-A</b>
			<b>M30C-FDRL-W-X0</b>
			<b>M30C-FDRL-W-X1</b>
			<b>M30C-FDRL-R-X0</b>
			<b>M30C-FDRL-G-X1</b>
	Custom		<b>M30C-FDRL-ETCH</b> <sup>①</sup>
<b>Maintained</b> 	Without button plate	1 unit	<b>M30C-FDRL-X</b>

**Note**

<sup>①</sup> When ordering, specify inscription per catalog number suffix from the Symbols Library (see Pages V7-T1-129 to V7-T1-136).

#### 1

#### Illuminated Selector Switches

##### IP64, Metal Bezel, with Thumb-Grip

Front dimensions: 36 mm diameter  
Maintained/momentary action can be changed with M22-XC-Y configuration adapters

###### Action

▷ = Momentary (MO)  
∟ = Maintained (MA)

###### Momentary



Action	Angle	Button Plate	Std. Pack	Catalog Number	
▷	40°	○	1 unit	M30C-FWLK-W	
		●		M30C-FWLK-R	
		●		M30C-FWLK-G	
		●		M30C-FWLK-Y	
		●		M30C-FWLK-B	
	∟	60°	○	1 unit	M30C-FWRLK-W
			●		M30C-FWRLK-R
			●		M30C-FWRLK-G
			●		M30C-FWRLK-Y
			●		M30C-FWRLK-B

###### Momentary



Action	Angle	Button Plate	Std. Pack	Catalog Number
▷	60°	○	1 unit	M30C-FWLKV-W
		●		M30C-FWLKV-R
		●		M30C-FWLKV-G
		●		M30C-FWLKV-Y
		●		M30C-FWLKV-B

##### IP64, Metal Bezel, with Thumb-Grip

Front dimensions: 36 mm diameter  
Maintained/momentary action can be changed with M22-XC-Y configuration adapters

###### Action

▷ = Momentary (MO)  
∟ = Maintained (MA)

###### Momentary





Action	Angle	Button Plate	Std. Pack	Catalog Number	
▷	40°	○	1 unit	M30C-FWLK3-W	
		●		M30C-FWLK3-R	
		●		M30C-FWLK3-G	
		●		M30C-FWLK3-Y	
		●		M30C-FWLK3-B	
	∟	60°	○	1 unit	M30C-FWRLK3-W
			●		M30C-FWRLK3-R
			●		M30C-FWRLK3-G
			●		M30C-FWRLK3-Y
			●		M30C-FWRLK3-B
∟	Maintained, return from left	○	1 unit	M30C-FWRLK3-1-W	
		●		M30C-FWRLK3-1-R	
		●		M30C-FWRLK3-1-G	
		●		M30C-FWRLK3-1-Y	
		●		M30C-FWRLK3-1-B	
∟	Maintained, return from right	○	1 unit	M30C-FWRLK3-2-W	
		●		M30C-FWRLK3-2-R	
		●		M30C-FWRLK3-2-G	
		●		M30C-FWRLK3-2-Y	
		●		M30C-FWRLK3-2-B	

### Potentiometers

#### IP66, Metal Bezel Potentiometer



Three individual screw connections

Resistance accuracy:  $\pm 10\%$  (linear) / Rated power  $P = 0.5\text{ W}$

	Resistance (R) kOhm	Scale/Inscription	Contact Sequence	Std. Pack	Catalog Number
<b>Potentiometer</b> 	1	Standard scale/inscription		1 unit	<b>M30C-FR1K</b>
	4.7				<b>M30C-FR4K7</b>
	10				<b>M30C-FR10K</b>
	47				<b>M30C-FR47K</b>
	100				<b>M30C-FR100K</b>
	470				<b>M30C-FR470K</b>
	2.2				<b>M30C-FR2K2</b>
	22				<b>M30C-FR22K</b>
	1000				<b>M30C-FR1M</b>
	1				Without scale/inscription
	2.2	<b>M30C-FR2K2-BLANK</b>			
	4.7	<b>M30C-FR4K7-BLANK</b>			
	10	<b>M30C-FR10K-BLANK</b>			
	22	<b>M30C-FR22K-BLANK</b>			
	47	<b>M30C-FR47K-BLANK</b>			
	100	<b>M30C-FR100K-BLANK</b>			
	470	<b>M30C-FR470K-BLANK</b>			
	1000	<b>M30C-FR1M-BLANK</b>			

#### IP65, SmartWire-DT Potentiometer


Only in conjunction with M22-SWD-R function element

	Bezel	Contact Sequence	Std. Pack	Catalog Number
<b>M22-R-SWD</b> 	Silver bezel (M22)		1 unit	<b>M22-R-SWD</b>
	Metal bezel (flat front)		1 unit	<b>M30C-FR-SWD</b>

#### IP65, SmartWire-DT Encoders

With actuation function

Only in conjunction with M22-SWD-INC function element

	Bezel	Contact Sequence	Std. Pack	Catalog Number
<b>M30C-FINC-SWD</b> 	Silver bezel (M22)	—	1 unit	<b>M22-INC-SWD</b>
	Metal bezel (flat front)	—	1 unit	<b>M30C-FINC-SWD</b>

## Technical Data

## Global Modular 30 mm Pilot Devices

Description	Unit	Contact Elements		Double Contact Elements	LED Elements	(Illuminated) Pushbuttons, Mushroom Pushbuttons		
		M22-(C)K...	M22-FK...	M22-CK20/02/11	M22(C)-LED...	M22-FLED...	Momentary	Maintained
<b>General</b>								
Standards	x 10 <sup>6</sup>	IEC/EN 60947-5-1	—	IEC/EN 60947-5-1	IEC/EN 60947-5-1	—	EC/EN 60947-5-1	—
Lifespan, mechanical (operations)		5	1	—	—	—	5	1
Operating frequency (operations)	h	≤ 3600	≤ 3600	≤ 3600	—	—	≤ 3600	≤ 1800
Operating force	N	5	4.5	10	—	—	5	5
Operating torque (screw terminals)	Nm	0.8	—	—	0.8	—	—	—
Degree of protection (IEC/EN 60529)		IP20	IP20	IP20	IP20	IP20	IP67, IP69K	IP67, IP69K
Climatic proofing		Damp heat, constant as defined in IEC 60068-2-7; Damp heat, cyclic as defined in IEC 60068-2-3						
Ambient air temperature, open	°C	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70	-25 to +70
Mounting position		Any	Any	Any	Any	Any	Any	Any
Mechanical shock resistance as defined in IEC 60068-2-27 Shock duration: 11 ms, half sine shock	g	30	50	30	30	50	M22: 30 M30: 15	M22: 30 M30: 15
<b>Terminal capacities</b>								
Solid	mm <sup>2</sup>	0.75–2.5	2 x 1 (0.2–1.5) 2 x 1 (0.75–1.5) <sup>①</sup>	0.5–1.5	0.75–2.5	1 x 1 (0.2–1.5) 1 x 1 (0.75–1.5) <sup>①</sup>	—	—
Stranded	mm <sup>2</sup>	0.5–2.5	—	0.5–1.5	0.5–2.5	1 x 1 (0.2–1.5)	—	—
Flexible with ferrule	mm <sup>2</sup>	0.5–1.5	2 x 1 (0.25–1) <sup>②</sup>	0.5–1.5	—	1 x 1 (0.25–1) <sup>②</sup>	—	—
<b>Contacts</b>								
Rated impulse withstand voltage (U <sub>imp</sub> )	Vac	6000	4000	—	6000	4000	—	—
Rated insulation voltage (U <sub>i</sub> )	V	500	250	—	500	250	—	—
Overvoltage category/ degree of pollution		III/3	III/3	—	III/3	III/3	—	—
<b>Control circuit reliability</b>								
At 24 Vdc/5 mA (failure rate)	H <sub>F</sub>	< 10 <sup>-7</sup> <sup>③</sup>	—	—	—	—	—	—
At 5 Vdc/1 mA (failure rate)	H <sub>F</sub>	< 5 x 10 <sup>-6</sup> <sup>④</sup>	—	—	—	—	—	—
<b>Max. short-circuit protective device</b>								
Fuseless (part no.)	A	PKZMD-10/FAZ-B6/1	FAZ-B4	—	—	—	—	—
Fuse (gG/gL)		10	4	—	—	—	—	—
<b>Switching Capacity</b>								
<b>Rated operational current</b>								
AC-15: 24 V I <sub>e</sub>	A	—	4	—	—	—	—	—
60 V I <sub>e</sub>	A	—	4	—	—	—	—	—
100 V I <sub>e</sub>	A	—	2	—	—	—	—	—
115 V I <sub>e</sub>	A	6	—	—	—	—	—	—
230 V I <sub>e</sub>	A	6	1.5	—	—	—	—	—
400 V I <sub>e</sub>	A	4	—	—	—	—	—	—
500 V I <sub>e</sub>	A	2	—	—	—	—	—	—
DC-13: 24 V I <sub>e</sub>	A	3	1.5	—	—	—	—	—
42 V I <sub>e</sub>	A	1.7	—	—	—	—	—	—
60 V I <sub>e</sub>	A	1.2	0.8	—	—	—	—	—
110 V I <sub>e</sub>	A	0.6 (M22-CK...: 0.8)	0.4	—	—	—	—	—
220 V I <sub>e</sub>	A	0.3	0.2	—	—	—	—	—
<b>Lifespan, electrical</b>								
AC-15: 230 V/0.5 A (operations)	x 10 <sup>6</sup>	1.6	—	—	—	—	—	—
230 V/1.0 A (operations)	x 10 <sup>6</sup>	1	—	—	—	—	—	—
230 V/3.0 A (operations)	x 10 <sup>6</sup>	0.7	—	—	—	—	—	—
DC-15: 12 V/2.8 A (operations)	x 10 <sup>6</sup>	1.2	—	—	—	—	—	—

**Notes**

- ① Can be plugged without tools.  
 ② Use WAGO Variocrimp 4 crimping tool; please enquire for others.  
 ③ < 10<sup>-7</sup> (i.e., one failure every 10<sup>7</sup> operations).  
 ④ < 5 x 10<sup>-6</sup> (i.e., one failure every 5 x 10<sup>6</sup> operations).

### Global Modular 30 mm Pilot Devices, continued

Description	Unit	Double Actuator Pushbuttons	(Illuminated) Selector Switches	Joysticks	Key-Operated Buttons	Indicator Lights Acoustic Devices Potentiometers	Controlled Stop/Emergency Stop
<b>General</b>							
Standards	x 10 <sup>6</sup>	IEC/EN 60947-5-1	IEC/EN 60947-5-1	IEC/EN 60947-5-1	IEC/EN 60947-5-1	IEC/EN 60947-5-1	IEC/EN 60947-5-5
Lifespan, mechanical (operations)		0.2	0.1	0.1	0.1	—	0.1
Operating frequency (operations)	h	≤ 3600	≤ 2000	≤ 2000	≤ 100	—	≤ 600
Operating force	N	5	—	5	—	—	50
Operating torque (screw terminals)	Nm	—	0.3	—	0.5	—	—
Degree of protection (IEC/EN 60529)		IP66	M22: IP66 M30: IP64	IP66	M22: IP66 M30: IP64	Indicator lights: IP67 Acoustic devices: IP40 Potentiometers: IP66	IP67, IP69K
Climatic proofing							
Damp heat, constant as defined in IEC 60068-2-7; Damp heat, cyclic as defined in IEC 60068-2-3							
Ambient air temperature, open	°C	–25 to +70	–25 to +70	–25 to +70	–25 to +70	–25 to +70	–25 to +70
Mounting position		Any	Any	Any	Any	Any	Any
Mechanical shock resistance as defined in IEC 60068-2-27 Shock duration: 11 ms, half sine shock	g	30	M22: 30 M30: 15	M22: 30 M30: 15	M22: 30 M30: 15	M22: 30 M30: —	50
Terminal capacities							
Solid	mm <sup>2</sup>	—	—	—	—	0.5–1.5	—
Stranded	mm <sup>2</sup>	—	—	—	—	0.5–1.5	—
Flexible with ferrule	mm <sup>2</sup>	—	—	—	—	—	—
<b>Contacts</b>							
Rated impulse withstand voltage (U <sub>imp</sub> )	Vac	—	—	—	—	4000	—
Rated insulation voltage (U <sub>i</sub> )	V	—	—	—	—	250	—
Overvoltage category/degree of pollution		—	—	—	—	III/3	—
Control circuit reliability							
At 24 Vdc/5 mA (failure rate)	H <sub>f</sub>	—	—	—	—	—	—
At 5 Vdc/1 mA (failure rate)	H <sub>f</sub>	—	—	—	—	—	—
Max. short-circuit protective device							
Fuseless (part no.)	A	—	—	—	—	—	—
Fuse (gG/gL)		—	—	—	—	—	—
<b>Switching Capacity</b>							
	A	N/A	N/A	N/A	N/A	N/A	N/A