

Global Compact 30 mm Pilot Devices —C30 Flat with Pigtail



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Product Description

The new and modern all-in-one C30 compact and flat 30 mm pilot devices with pigtail integrate the required cable, connector and housing in one single device.

Ability to provide protection up to IP69K at the front and IP65 at the back make these devices the perfect choice for applications where oil-tight protection from dirt and liquid is a must.

Features

Our product offering includes momentary and maintained operators; illuminated and non-illuminated pushbuttons; illuminated and non-illuminated selector switches and indicating lights. C30 pilot devices come with the following pigtail options:

- P5 for 1 m cable with M12
- P32 for 1 m cable with M8
- P62 for 1 m cable with open wire
- P65 for 3.5 m

C30 compact and flat with pigtail 30 mm pilot devices offer modern look and smooth transition between the machine and the operator.

The cable, plug connector and housing are already integrated and permanently installed for plug and play.

C30 pilot devices are also fully assembled for easy stocking and sustainable inventory management.

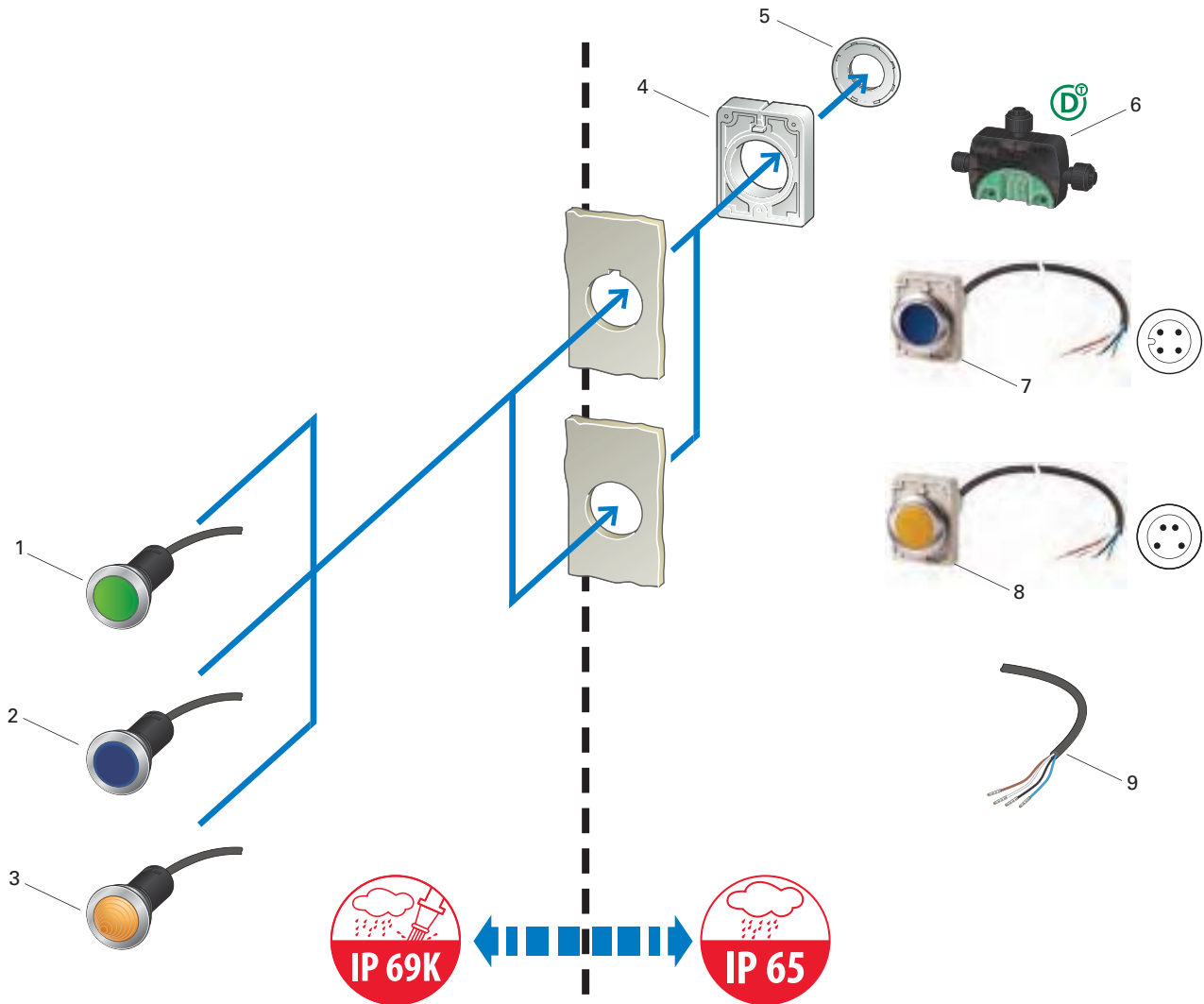
Standards and Certifications

- All operators and components are IEC/EN 60947 VDE 0660
- All C30 flat operators (for enclosed type devices or flat-front surface mounted devices only) are environmentally rated as Type 1, 3R, 4X, 12 or 13 UL File #: E29184
- All operators carry an IP66 rating with some rated for washdown environments with IP67 and IP69K
- Marine classification societies: Bureau Veritas (BV), Germanischer Lloyd (GL) and Lloyd's Register of Shipping (LR) approved



System Overview

Global Compact 30 mm Pilot Devices—C30 Flat with Pigtail



Global Compact 30 mm Pilot Devices—C30 Flat with Pigtail (Legend)

Item	Description
1	C30 Pushbuttons Momentary and maintained Flush Colors: white, green, red, black With cable (1.5 or 3 m) and plug (M12A or M8, 4-pole) or unterminated cable end (4-pole) See Page V7-T1-188
2	C30 Illuminated Pushbutton Actuators Momentary and maintained Flush Colors: white, green, red, blue With cable (1.5 or 3 m) and plug (M12A or M8, 4-pole) or unterminated cable end (4-pole) 24 Vac/Vdc See Page V7-T1-191

Item	Description
3	C30 Indicator Lights Flush Colors: white, green, red, blue, yellow With cable (1.5 or 3 m) and plug (M12A or M8, 4-pole) or unterminated cable end (4-pole) 24 Vac/Vdc See Page V7-T1-190
4	RMQ-AFX Anti-Rotation Tab Included with C30 compact devices
5	Threaded Rings See Page V7-T1-110

Item	Description
6	SmartWire-DT I/O Module For connecting digital input/output signals to SmartWire-DT IP67
7	Cable with M12A Plug, 4-Pole
8	Cable with M8A Plug, 4-Pole
9	Cable End Open, 4-Pole

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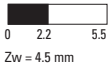







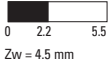





Product Selection

Pushbuttons

30 mm Flat Front—Metal Bezel

IP66, IP67, IP69K (at front), IP65 (at rear)

Flush

Cable Length (m)	Button Plate	Contact Configuration ①		Contact Sequence ②	Contact Diagram	Std. Pack	Momentary Catalog Number	Maintained Catalog Number
		NO = Normally Open Contact	NC = Normally Closed Contact					
1		—	1NC ⊖			1 Unit	C30C-FD-R-K01-P5	C30C-FDR-R-K01-P5
		—	1NC ⊖				C30C-FD-S-K01-P5	C30C-FDR-S-K01-P5
	Without button plate	—	1NC ⊖				C30C-FD-X-K01-P5	C30C-FDR-X-K01-P5
1		1NO	—			1 Unit	C30C-FD-G-K10-P5	C30C-FDR-G-K10-P5
		1NO	—				C30C-FD-W-K10-P5	C30C-FDR-W-K10-P5
	Without button plate	1NO	—				C30C-FD-X-K10-P5	C30C-FDR-X-K10-P5
1		—	1NC ⊖			1 Unit	C30C-FD-R-K01-P32	C30C-FDR-R-K01-P32
		—	1NC ⊖				C30C-FD-S-K01-P32	C30C-FDR-S-K01-P32
	Without button plate	—	1NC ⊖				C30C-FD-X-K01-P32	C30C-FDR-X-K01-P32
1		1NO	—			1 Unit	C30C-FD-G-K10-P32	C30C-FDR-G-K10-P32
		1NO	—				C30C-FD-W-K10-P32	C30C-FDR-W-K10-P32
	Without button plate	1NO	—				C30C-FD-X-K10-P32	C30C-FDR-X-K10-P32

Notes

① ⊖ = Safety function implemented with positive opening as defined in IEC/EN 60947-5-1.

② Contact sequence: ■ = contact closed; □ = contact open.

30 mm Flat Front—Metal Bezel, continued

IP66, IP67, IP69K (at front), IP65 (at rear)
Flush



Cable Length (m)	Button Plate	Contact Configuration ①		Contact Sequence ②	Contact Diagram	Std. Pack	Momentary Catalog Number	Maintained Catalog Number
		NO = Normally Open Contact	NC = Normally Closed Contact					
1	 Without button plate	—	1NC ⊕	 BN WH BK BU	 0 2.2 5.5 Zw = 4.5 mm	1 Unit	C30C-FD-R-K01-P62	C30C-FDR-R-K01-P62
		—	2NC ⊕	 BN WH BK BU	 0 2.2 5.5 Zw = 4.5 mm		C30C-FD-S-K01-P62	C30C-FDR-S-K01-P62
		1NO	1NC ⊕	 BN WH BK BU	 0 2.2 5.5 3.15		C30C-FD-X-K01-P62	C30C-FDR-X-K01-P62
		—	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-X-K02-P62	C30C-FDR-X-K02-P62
		1NO	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-X-K11-P62	C30C-FDR-X-K11-P62
		2NO	—	 BN WH BK BU	 0 3.15 5.5			
	 Without button plate	1NO	—	 BN WH BK BU	 0 3.15 5.5	1 Unit	C30C-FD-G-K10-P62	C30C-FDR-G-K10-P62
		—	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-W-K10-P62	C30C-FDR-W-K10-P62
		—	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-X-K10-P62	C30C-FDR-X-K10-P62
		2NO	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-X-K20-P62	C30C-FDR-X-K20-P62
		1NO	—	 BN WH BK BU	 0 3.15 5.5			
		2NO	—	 BN WH BK BU	 0 3.15 5.5			
3.5	 Without button plate	—	1NC ⊕	 BN WH BK BU	 0 2.2 5.5 Zw = 4.5 mm	1 Unit	C30C-FD-R-K01-P65	C30C-FDR-R-K01-P65
		—	2NC ⊕	 BN WH BK BU	 0 2.2 5.5 Zw = 4.5 mm		C30C-FD-S-K01-P65	C30C-FDR-S-K01-P65
		1NO	1NC ⊕	 BN WH BK BU	 0 2.2 5.5 3.15		C30C-FD-X-K01-P65	C30C-FDR-X-K01-P65
		—	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-X-K02-P65	C30C-FDR-X-K02-P65
		1NO	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-X-K11-P65	C30C-FDR-X-K11-P65
		2NO	—	 BN WH BK BU	 0 3.15 5.5			
	 Without button plate	1NO	—	 BN WH BK BU	 0 3.15 5.5	1 Unit	C30C-FD-G-K10-P65	C30C-FDR-G-K10-P65
		—	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-W-K10-P65	C30C-FDR-W-K10-P65
		—	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-X-K10-P65	C30C-FDR-X-K10-P65
		2NO	—	 BN WH BK BU	 0 3.15 5.5		C30C-FD-X-K20-P65	C30C-FDR-X-K20-P65
		1NO	—	 BN WH BK BU	 0 3.15 5.5			
		2NO	—	 BN WH BK BU	 0 3.15 5.5			

Notes















































- ① ⊕ = Safety function implemented with positive opening as defined in IEC/EN 60947-5-1.
- ② Contact sequence: ■ = contact closed; □ = contact open.

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Indicating Lights

30 mm Flat Front—Metal Bezel

LED Rated Operating Voltage: 24 Vac/Vdc
IP66, IP67, IP69K (at Front), IP65 (at Rear)

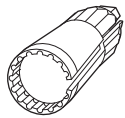
	Connection Type	Cable Length (m)	Lens	LED	Contact Sequence	Std. Pack	Catalog Number	
	Cable (Black) with M12A Plug 4-Pole	1				1 Unit	C30C-FL-B-24-P5	
							C30C-FL-G-24-P5	
							C30C-FL-R-24-P5	
							C30C-FL-W-24-P5	
							C30C-FL-Y-24-P5	
	Cable (Black) with M8 Plug 4-Pole	1				1 Unit	C30C-FL-B-24-P32	
							C30C-FL-G-24-P32	
							C30C-FL-R-24-P32	
							C30C-FL-W-24-P32	
							C30C-FL-Y-24-P32	
	Cable (Black) with Untermated End 4-Pole	1				1 Unit	C30C-FL-B-24-P62	
							C30C-FL-G-24-P62	
							C30C-FL-R-24-P62	
							C30C-FL-W-24-P62	
							C30C-FL-Y-24-P62	
			3.5				1 Unit	C30C-FL-B-24-P65
								C30C-FL-G-24-P65
								C30C-FL-R-24-P65
								C30C-FL-W-24-P65
								C30C-FL-Y-24-P65

Illuminated Pushbutton Actuators

30 mm Flat Front—Metal Bezel

LED Rated Operating Voltage: 24 Vac/Vdc
 IP66, IP67, IP69K (at Front), IP65 (at Rear)
 Flush

Cable Length (m)	Button Plate	LED	Contact Configuration ①		Contact Sequence ②	Contact Diagram	Std. Pack	Momentary Catalog Number	Maintained Catalog Number		
			NO = Normally Open Contact	NC = Normally Closed Contact							
1			—	1NC ⊕			1	C30C-FDL-RK01-24P5	C30C-FDRL-RK01-24P5		
			1NO	—							
			1NO	—							
			—	—							
1			—	1NC ⊕			1	C30C-FDL-RK01-24P32	C30C-FDRL-RK01-24P32		
			1NO	—							
			1NO	—							
			—	—							
1			—	1NC ⊕			1	C30C-FDL-RK01-24P62	C30C-FDRL-RK01-24P62		
			1NO	—							
			1NO	—							
			—	—							
1			—	1NC ⊕			1	C30C-FDL-RK01-24P65	C30C-FDRL-RK01-24P65		
			1NO	—							
			1NO	—							
			—	—							



Mounting Ring Tool

Description	Std. Pack	Catalog Number
For threaded ring; can be used with cordless screwdriver.	1 Unit	C22-MS

Notes

- ① ⊕ = Safety function implemented with positive opening as defined in IEC/EN 60947-5-1.
- ② Contact sequence: ■ = contact closed; □ = contact open.

Technical Data

Global Compact 30 mm Pilot Devices—C30 Flat with Pigtail

Description	Unit	Controlled stop/ emergency switching off buttons	(Illuminated) pushbuttons Momentary/ maintained	Selector switches	Key-operated buttons	Indicator lights
General						
Standards		IEC/EN 60947-5-5 VDE 0660	IEC/EN 60947-5-1 VDE 0660	IEC/EN 60947-5-1 VDE 0660	IEC/EN 60947-5-1 VDE 0660	IEC/EN 60947-5-1 VDE 0660
Lifespan, mechanical	Operations x 10 ⁶	0.05	5/1	1	0.1	—
Operating frequency	Operations/h	300	3600	2000	100	—
Operating force	N	50	5	—	—	—
Operating torque	Nm	—	—	0.3	0.5	—
Plug tightening torque	Nm	M12 = 1, M8 = 0.6	M12 = 1, M8 = 0.6	M12 = 1, M8 = 0.6	M12 = 1, M8 = 0.6	M12 = 1, M8 = 0.6
Threaded ring tightening torque	Nm	2	2	2	2	2
Climatic proofing						
Damp heat, constant		As defined in IEC 60068-2-78	As defined in IEC 60068-2-78	As defined in IEC 60068-2-78	As defined in IEC 60068-2-78	As defined in IEC 60068-2-78
Damp heat, cyclic		As defined in IEC 60068-2-30	As defined in IEC 60068-2-30	As defined in IEC 60068-2-30	As defined in IEC 60068-2-30	As defined in IEC 60068-2-30
Degree of protection		IP66, IP67, IP69K (at front) IP65 (at rear)	IP66, IP67, IP69K (at front) IP65 (at rear)	IP66, IP67, IP69K (at front) IP65 (at rear)	IP66, IP67, IP69K (at front) IP65 (at rear)	IP66, IP67, IP69K (at front) IP65 (at rear)
Ambient air temperature ^①						
Open	°C	-30 – +70	-30 – +70	-30 – +70	-30 – +70	-25 – +70
Storage	°C	-30 – +80	-30 – +80	-30 – +80	-30 – +80	-30 – +80
Mounting position		Any	Any	Any	Any	Any
Mechanical shock resistance for a shock duration of 11 ms	g	>30	>30	>30	>30	>30
Contacts						
Rated impulse withstand voltage	U _{imp}	Vac	M12A/unterminated: 4000 M8: 800	M12A/unterminated: 4000 M8: 800	M12A/unterminated: 4000 M8: 800	M12A/unterminated: 4000 M8: 800
Rated insulation voltage	U _i	V	M12A/unterminated: 250 M8: 30	M12A/unterminated: 250 M8: 30	M12A/unterminated: 250 M8: 30	M12A/unterminated: 250 M8: 30
Overvoltage category/degree of pollution		III/3	III/3	III/3	III/3	III/3
Control circuit reliability at 17 Vdc/7 mA	HF					
NO (statistically determined)		1 failure per 17 x 10 ⁶ operations	1 failure per 17 x 10 ⁶ operations	1 failure per 17 x 10 ⁶ operations	1 failure per 17 x 10 ⁶ operations	—
NC (statistically determined)		1 failure per 0.9 x 10 ⁶ operations	1 failure per 0.9 x 10 ⁶ operations	1 failure per 0.9 x 10 ⁶ operations	1 failure per 0.9 x 10 ⁶ operations	—
Fuse	gG/gL	A	4	4	4	4
Conditional short-circuit current	I _q	kA	1	1	1	1
Switching capacity						
Rated operational current	I _e	A				
AC-15: 24 V	I _e	A	4	4	4	—
DC-13: 24 V	I _e	A	3	3	3	—
Cable characteristics						
Versions			M12A/ unterminated	M12A/M8/ unterminated	M12A/M8/ unterminated	M12A/M8/ unterminated
Material			PUR	PUR	PUR	PUR
Diameter	∅	mm	4.7	4.7	4.7	4.7
Actuator travel and actuation force as per DIN EN 60947-5-1, K.5.4.1						
Positive opening sequence	mm		4.65	4.65	4.65	—
Maximum travel	mm		5.11	5.7	5.7	—
Minimum force for positive opening	N		K01 = 15/ K11 = 20/K02 = 34	K01 = 15/ K11 = 20/K02 = 30	K01 = 15/ K11 = 20/K02 = 35	K01 = 15/ K11 = 20/K02 = 36

Note

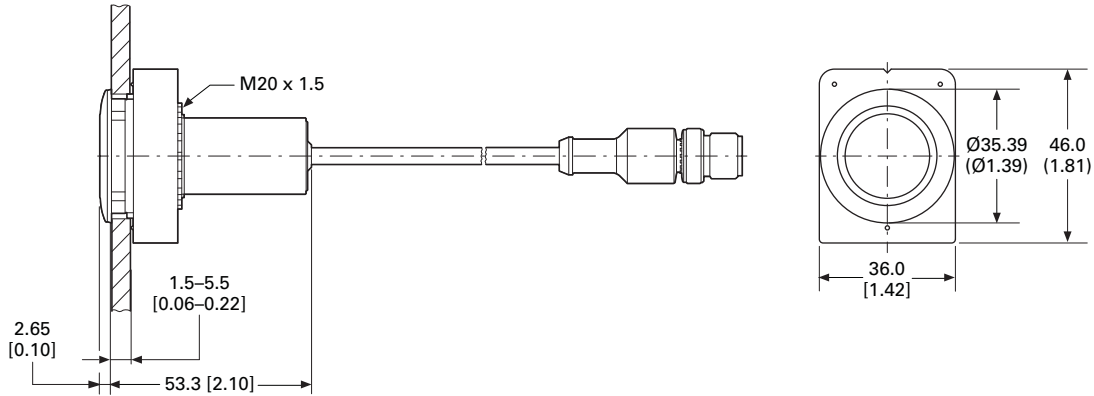
① Applicable for C22 with pigtail options.

Dimensions

Approximate Dimensions in mm [inches]

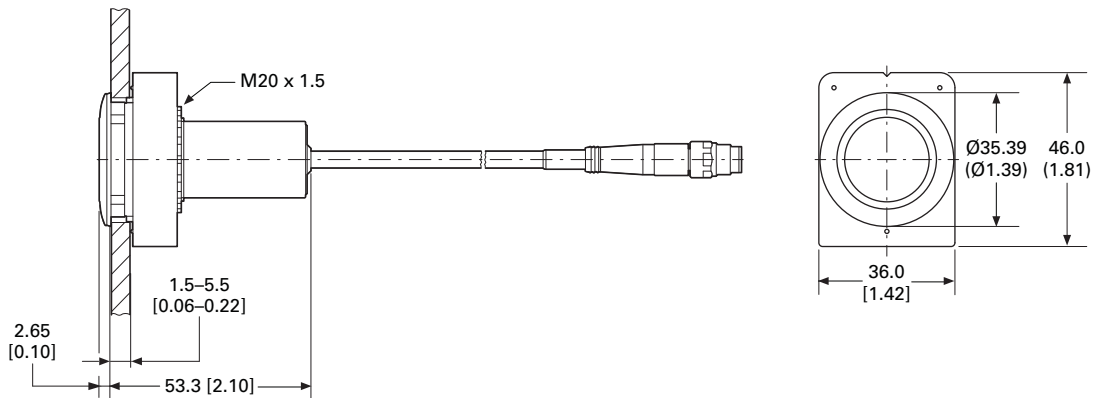
Pushbuttons, M12A

C30C-FD(R/L)-...-P5



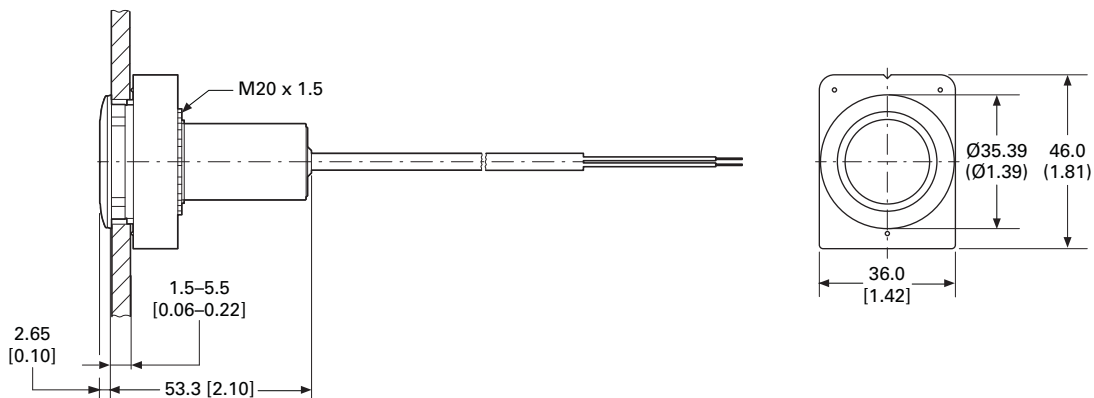
Pushbuttons, M8

C30C-FD(R/L)-...-P32



Pushbuttons, Unterminated Cable End

C30C-FD(R/L)-...-P62/-65



1.7

Pushbuttons and Indicating Lights

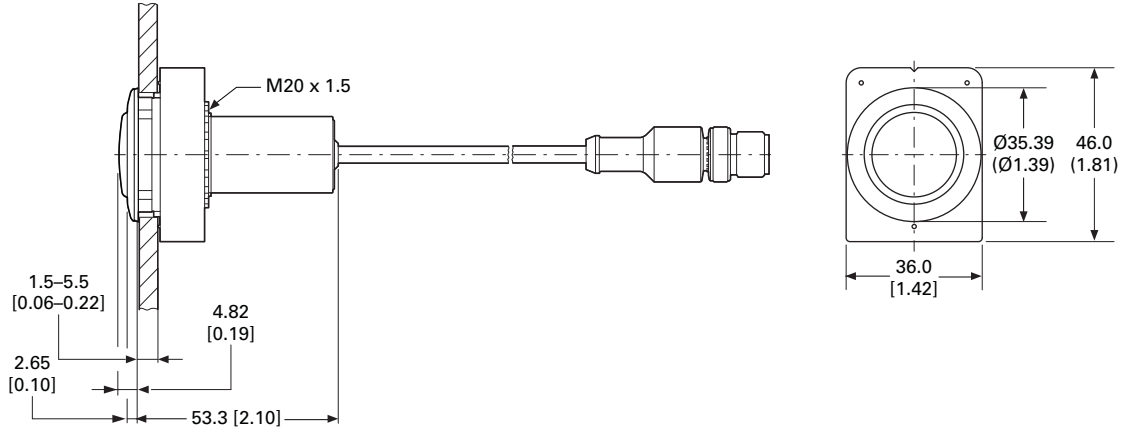
Global Compact 30 mm Pilot Devices—C30 Flat with Pigtail

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Approximate Dimensions in mm [inches]

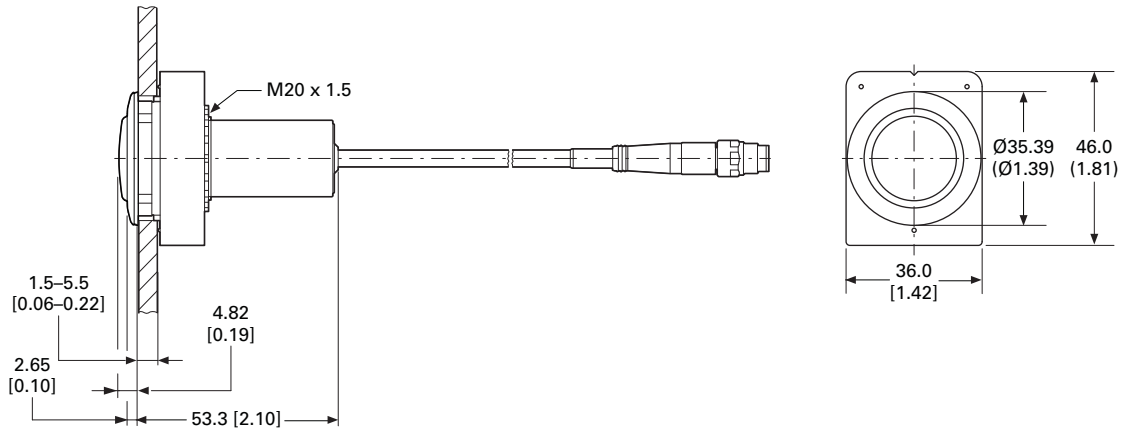
Indicator Lights, M12A

C30C-FL-...-P5



Indicator Lights, M8

C30C-FL-...-P32



Indicator Lights, Underminated Cable End

C30C-FL-...-24-P62/-P65

