1

Global Compact 30 mm Pilot Devices —C30 Flat with Pigtail

Contents

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.

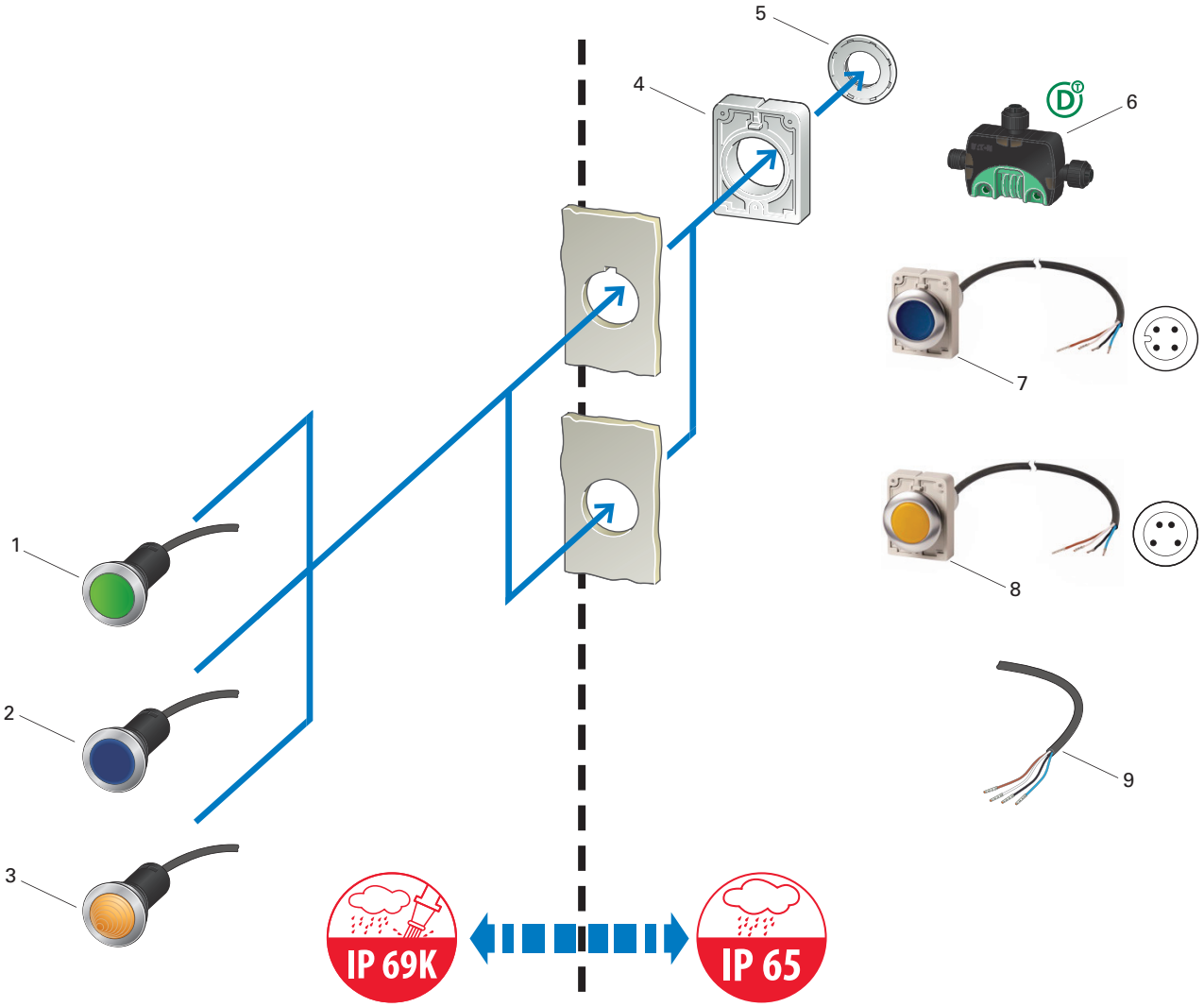
C30 pilot devices are also fully assembled for easy stocking and sustainable inventory management.

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-T1-194**
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-T1-197**
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-T1-196**
4	**RMQ-AFX Anti-Rotation Tab** Included with C30 compact devices
5	**Threaded Rings** See **Page V7-T1-116**
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**

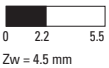
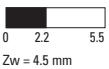
1

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 NO = Normally Open Contact	NC = Normally Closed Contact	Contact Sequence ②	Contact Diagram	Std. Pack	Momentary Catalog Number	Maintained Catalog Number
Cable (Black) with M12A Plug, 4-Pole 	1	Without button plate	—	1NC ⊖		 0 2.2 5.5 Zw = 4.5 mm	1 Unit	**C30C-FD-R-K01-P5**	**C30C-FDR-R-K01-P5**
								C30C-FD-S-K01-P5	**C30C-FDR-S-K01-P5**
								C30C-FD-X-K01-P5	**C30C-FDR-X-K01-P5**
	1	Without button plate	1NO	—		 0 3.15 5.5	1 Unit	**C30C-FD-G-K10-P5**	**C30C-FDR-G-K10-P5**
								C30C-FD-W-K10-P5	**C30C-FDR-W-K10-P5**
								C30C-FD-X-K10-P5	**C30C-FDR-X-K10-P5**
Cable (Black) with M8 Plug, 4-Pole 	1	Without button plate	—	1NC ⊖		 0 2.2 5.5 Zw = 4.5 mm	1 Unit	**C30C-FD-R-K01-P32**	**C30C-FDR-R-K01-P32**
								C30C-FD-S-K01-P32	**C30C-FDR-S-K01-P32**
								C30C-FD-X-K01-P32	**C30C-FDR-X-K01-P32**
	1	Without button plate	1NO	—		 0 3.15 5.5	1 Unit	**C30C-FD-G-K10-P32**	**C30C-FDR-G-K10-P32**
								C30C-FD-W-K10-P32	**C30C-FDR-W-K10-P32**
								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 (Black) with M12A Plug, 4-Pole

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

Notes

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

1

Indicating Lights

30 mm Flat Front—Metal Bezel

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

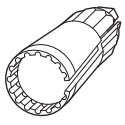
	Connection Type	Cable Length (m)	Lens	LED	Contact Sequence	Std. Pack	Catalog Number
C30C-FL-B-24-P5 	Cable (Black) with M12A Plug 4-Pole	1				1 Unit	**C30C-FL-B-24-P5**
							C30C-FL-G-24-P5
							C30C-FL-R-24-P5
							C30C-FL-W-24-P5
							C30C-FL-Y-24-P5
C30C-FL-B-24-P32 	Cable (Black) with M8 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
C30C-FL-B-24-P62 	Cable (Black) with Unterminated 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 NO = Normally Open Contact	Contact Configuration ① NC = Normally Closed Contact	Contact Sequence ②	Contact Diagram	Std. Pack	Momentary Catalog Number	Maintained Catalog Number
Cable (Black) with M12A Plug, 4-Pole 	1			—	1NC ⊖	1 2 / 4 3	0 2.2 5.5 Zw = 4.5 mm	1	**C30C-FDL-RK01-24P5**	**C30C-FDRL-RK01-24P5**
				1NO	—	1 2 / 4 3	0 3.15 5.5		**C30C-FDL-BK10-24P5**	**C30C-FDRL-BK10-24P5**
									C30C-FDL-GK10-24P5	**C30C-FDRL-GK10-24P5**
									C30C-FDL-WK10-24P5	**C30C-FDRL-WK10-24P5**
Cable (Black) with M8 Plug, 4-Pole 	1			—	1NC ⊖	1 2 / 4 3	0 2.2 5.5 Zw = 4.5 mm	1	**C30C-FDL-RK01-24P32**	**C30C-FDRL-RK01-24P32**
				1NO	—	1 2 / 4 3	0 3.15 5.5		**C30C-FDL-BK10-24P32**	**C30C-FDRL-BK10-24P32**
									C30C-FDL-GK10-24P32	**C30C-FDRL-GK10-24P32**
									C30C-FDL-WK10-24P32	**C30C-FDRL-WK10-24P32**
Cable (Black) with Unterminated End, 4-Pole 	1			—	1NC ⊖	BN WH / BK BU	0 2.2 5.5 Zw = 4.5 mm	1	**C30C-FDL-RK01-24P62**	**C30C-FDRL-RK01-24P62**
				1NO	—	BN WH / BK BU	0 3.15 5.5		**C30C-FDL-BK10-24P62**	**C30C-FDRL-BK10-24P62**
									C30C-FDL-GK10-24P62	**C30C-FDRL-GK10-24P62**
									C30C-FDL-WK10-24P62	**C30C-FDRL-WK10-24P62**
	1			—	1NC ⊖	BN WH / BK BU	0 2.2 5.5 Zw = 4.5 mm	1	**C30C-FDL-RK01-24P65**	**C30C-FDRL-RK01-24P65**
				1NO	—	BN WH / BK BU	0 3.15 5.5		**C30C-FDL-BK10-24P65**	**C30C-FDRL-BK10-24P65**
									C30C-FDL-GK10-24P65	**C30C-FDRL-GK10-24P65**
									C30C-FDL-WK10-24P65	**C30C-FDRL-WK10-24P65**



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.

1

Technical Data

Global Compact 30 mm Pilot Devices—C30 Flat with Pigtail

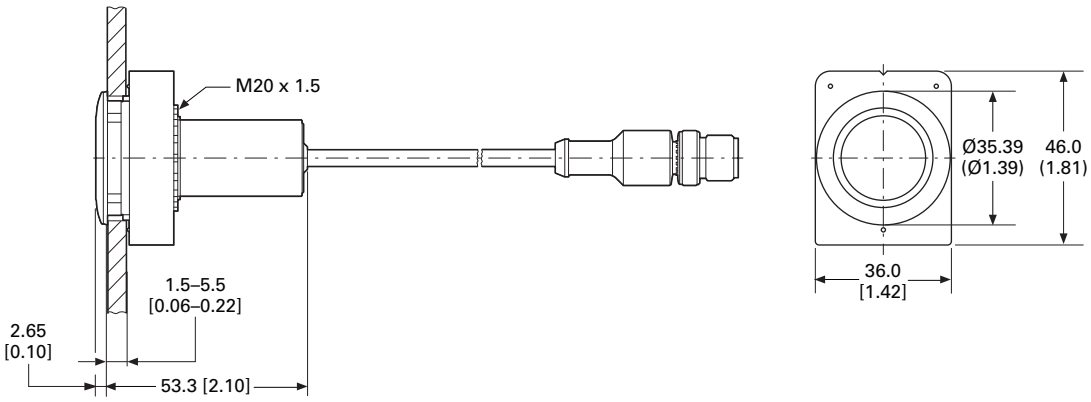
Description		Unit	Controlled stop/ emergency switching off buttons	(Illuminated) pushbuttons Momentary/ maintained	Selector switches	Key-operated buttons	Indicator lights
General							
Standards			IEC/EN 60947-5-5 VDE 0660	IEC/EN 60947-5-1 VDE 0660	IEC/EN 60947-5-1 VDE 0660	IEC/EN 60947-5-1 VDE 0660	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							
Open		°C	–25 – +70	–25 – +70	–25 – +70	–25 – +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	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	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	4
Conditional short-circuit current	I_q	kA	1	1	1	1	1
Switching capacity							
Rated operational current	I_e	A					
AC-15: 24 V	I_e	A	4	4	4	4	—
DC-13: 24 V	I_e	A	3	3	3	3	—
Cable characteristics							
Versions			M12A/ unterminated	M12A/M8/ unterminated	M12A/M8/ unterminated	M12A/M8/ unterminated	M12A/M8/ unterminated
Material			PUR	PUR	PUR	PUR	PUR
Diameter	∅	mm	4.7	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	4.65	—
Maximum travel		mm	5.11	5.7	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	—

Dimensions

Approximate Dimensions in mm [inches]

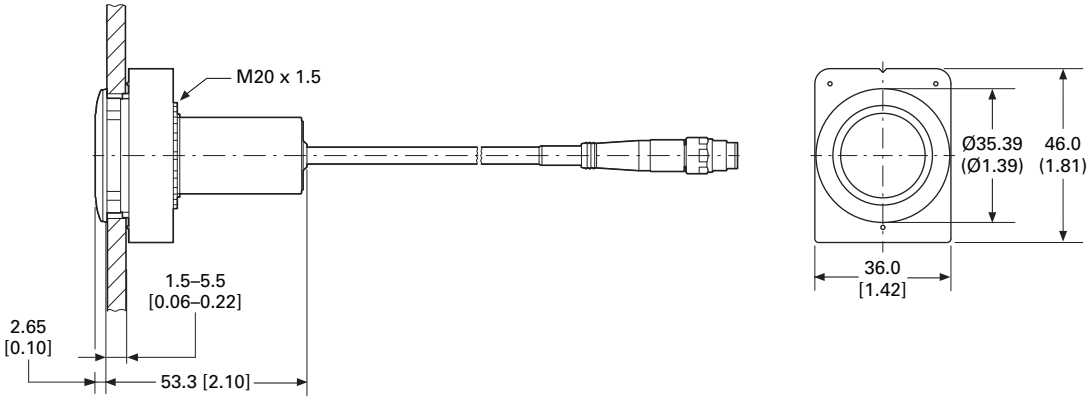
Pushbuttons, M12A

C30C-FD(R)(L)-…-P5



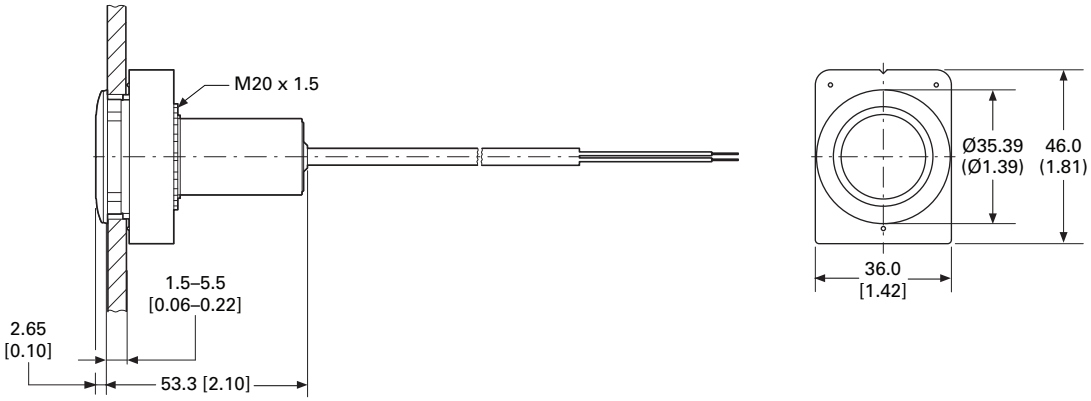
Pushbuttons, M8

C30C-FD(R)(L)-…-P32



Pushbuttons, Unterminated Cable End

C30C-FD(R)(L)-…-P62/-65



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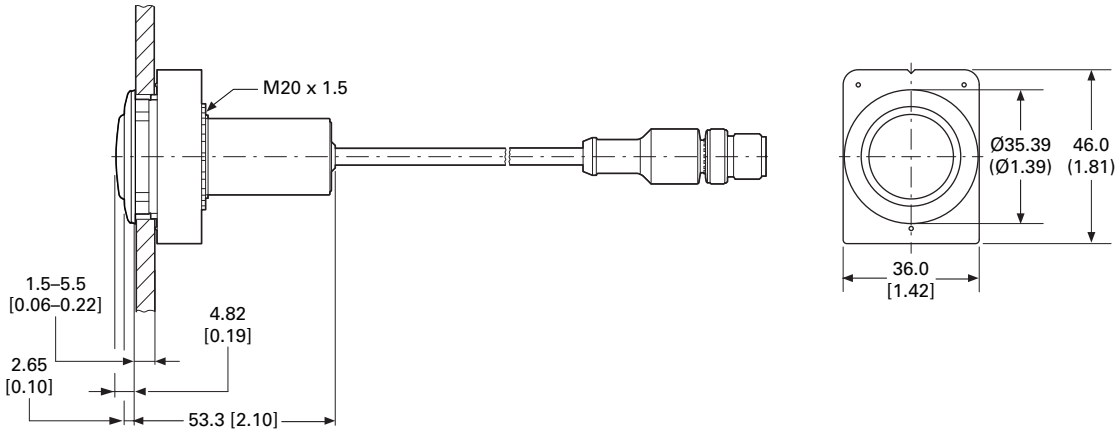
Approximate Dimensions in mm [inches]

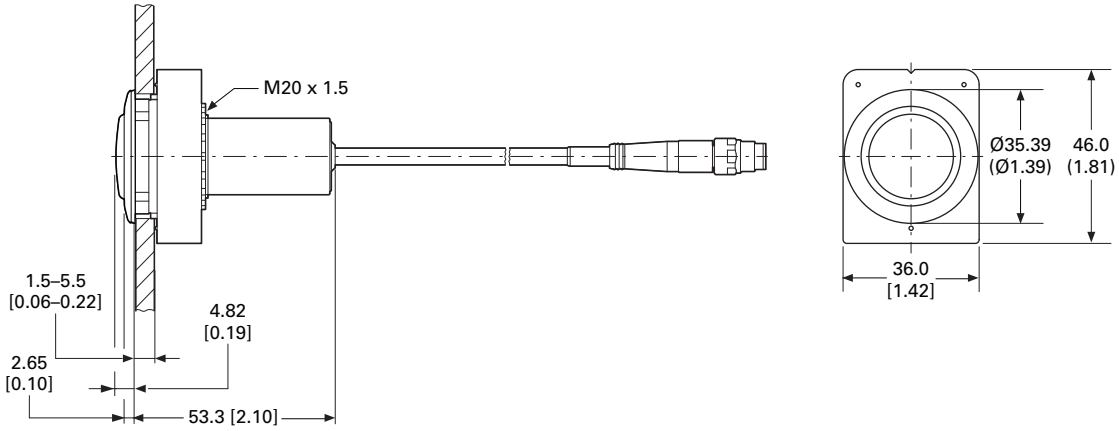
Indicator Lights, M12A

C30C-FL-…-P5



Indicator Lights, M8

C30C-FL-…-P32



Indicator Lights, Unterminated Cable End

C30C-FL-…-24-P62/-P65