

Inductive Sensors

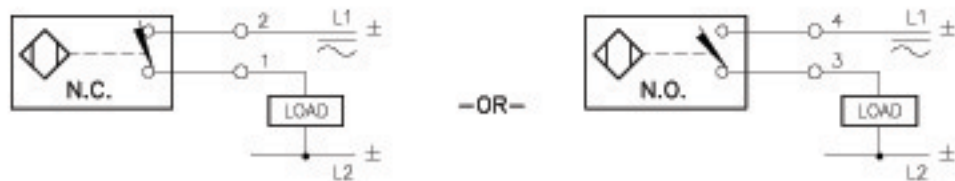


Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
CP40 - Embeddable/Nonembeddable, Terminal Chamber 	Bi 15-CP40-VN4X2/S109	M1526900	Time Delay	•	15	4-Wire NPN
	Ni 20-CP40-VN4X2/S109	M1527100	Time Delay		20	
	Bi 15-CP40-VP4X2/S109	M1504721	Time Delay	•	15	4-Wire PNP
	Ni 30-CP40-VP4X2/S109	M1512521	Time Delay		30	
	Bi 15-CP40-VN4X2/S110	M1527000	Time Delay	•	15	4-Wire NPN
	Ni 20-CP40-VN4X2/S110	M1527300	Time Delay		20	
	Bi 15-CP40-VP4X2/S110	M1509821	Time Delay	•	15	4-Wire PNP
	Ni 20-CP40-VP4X2/S110	M1509921	Time Delay		20	
	Bi 15-CP40-FDZ30X2	M4224100	Prog. Outputs	•	15	2-Wire AC/DC
	Bi 15-CP40-FDZ30X2/S34	M4226100	WFI	•	15	
	Bi 15-CP40-FDZ30X2/S97	M4226600	Low Temp. -40°C	•	15	
	Bi 15U-CP40-FDZ30X2	M4280601	Uprox	•	15	
	Ni 20-CP40-FDZ30X2	M4224200	Prog. Outputs		20	
	Ni 35-CP40-FDZ30X2	M4224500	Prog. Outputs		35	
	Ni 40U-CP40-FDZ30X2	M4280801	Uprox		40	
	Bi 15-CP40-FZ3X2	M1341000	Prog. Outputs	•	15	2-Wire AC/DC
	Bi 15-CP40-FZ3X2/S97	M1341010	Low Temp. -40°C	•	15	
	Bi 15-CP40-FZ3X2/S100	M1377600	High Temp. 100°C	•	15	
	Ni 20-CP40-FZ3X2	M1341100	Prog. Outputs		20	
	Ni 20-CP40-FZ3X2/S100	M1377500	High Temp. 100°C		20	
Ni 20NF-CP40-FZ3X2	M1378200	Prog. Outputs		20		
Ni 35-CP40-FZ3X2	M1341300	Prog. Outputs		35		
Ni 40-CP40-FZ3X2/S100	M1374802	High Temp. 100°C				
Bi 15-CP40-FZ3X2/S109	M1373700	Time Delay	•	15	2-Wire AC	
Bi 15-CP40-FZ3X2/S110	M1373500	Time Delay	•	15		
Ni 20-CP40-FZ3X2/S109	M1374500	Time Delay		20		
Ni 20-CP40-FZ3X2/S110	M1374600	Time Delay		20		
Ni 30-CP40-FZ3X2/S109	M1374700	Time Delay		30		
Ni 30-CP40-FZ3X2/S110	M1374400	Time Delay		30		
Bi 15-CP40-VDZ3X2	M4222700	Comp. Outputs	•	15	4-Wire AC/DC	
Bi 15-CP40-Y1X	M1012000		•	15	NAMUR	
Ni 20-CP40-Y1X	M1012100			20		

WFI = Weld-Field Immune Sensors.
 "/S109" Designates on Delay.
 "/S110" Designates off Delay.

Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Front Cap/Face	Power LED	Output LED	Mating Cord, Cable Length/Jacket	Wiring Diagram #	Wiring Diagrams
10-65 VDC	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	Diagram 1
	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	
10-65 VDC	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
10-65 VDC	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	Diagram 2
	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	1	
10-65 VDC	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	2	
10-300 VDC 20-250 VAC	60	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	Diagram 3
	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	60	≤400/300	-40 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	3	
	60	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	3	
	60	≤400/300	-30 to +85	IP 67	PBT	PBT	GN	YE	- - - -	3	
10-300 VDC 20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	Diagram 4
	20	≤400/300	-40 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	0 to +60	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +100	IP 67	PBT	PBT	GN	YE	- - - -	4	
20-250 VAC	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	Diagram 5
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
	20	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
20-250 VAC 20-320 VDC	30	≤400/300	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	4	
5-30 VDC	150	Remote	-25 to +70	IP 67	PBT	PBT	N/A	YE	- - - -	5	
	150	Remote	-25 to +70	IP 67	PBT	PBT	N/A	YE	- - - -	5	

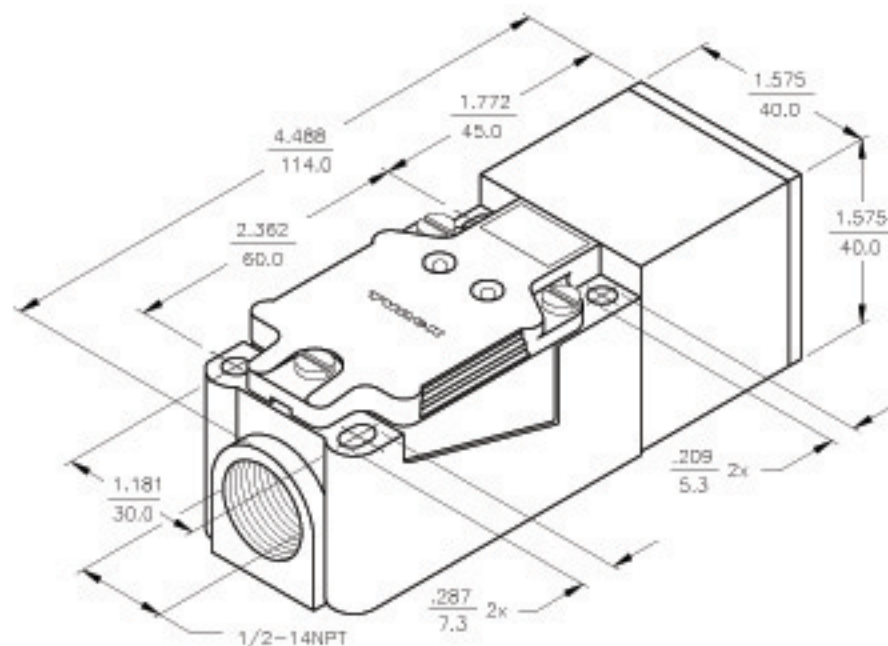
WIRING DIAGRAM



SHORT-CIRCUIT AND OVERLOAD PROTECTED

SPECIFICATIONS

OPERATING VOLTAGE	20-250 VAC/DC
LINE FREQUENCY	40-60 Hz
HYSTERESIS (DIFFERENTIAL TRAVEL)	3-15% (5% TYPICAL)
VOLTAGE DROP ACROSS CONDUCTING SENSOR	≤ 5.0 V at 400 mA
OUTPUT FUNCTION	CONNECTION PROGRAMMABLE NORMALLY OPEN OR NORMALLY CLOSED
SHORT-CIRCUIT PROTECTED	YES
TRIGGER CURRENT FOR OVERLOAD PROTECTION	≥ 500 mA
CONTINUOUS LOAD CURRENT	≤ 400 mA
LEAKAGE (OFF-STATE) CURRENT	≤ 1.7 mA
MINIMUM LOAD CURRENT	≥ 3.0 mA
INRUSH CURRENT	≤ 3.0 A (≤ 20 ms/5 Hz)
TIME DELAY BEFORE AVAILABILITY	≤ 30 ms
POWER-ON EFFECT PROTECTION	INCORPORATED
PROTECTION AGAINST TRANSIENTS	5 kV, 10 ms, 10 kΩ
OPERATING TEMPERATURE	-25°C to +70°C (-13°F to +158°F)
ENCLOSURE	MEETS NEMA 1, 3, 4, 6, 13 AND IEC IP67
SHOCK	30 g, 11 ms
VIBRATION	55 Hz, 1 mm AMPLITUDE (IN ALL 3 PLANES)
LED FUNCTION	GREEN: STEADY = POWER ON FLASHING = SHORT-CIRCUIT WARNING RED: OUTPUT ENERGIZED
SENSING RANGE	15 mm = .591" (NOMINAL)
SWITCHING FREQUENCY	150 Hz
REPEATABILITY	≤ 2% of NOMINAL SENSING RANGE
SHIELDED	YES



NOTE:

1. SENSING HEAD TURNS TO ACCOMMODATE 9 DIFFERENT SENSING POSITIONS.

RELATED DOCUMENTS 1. 2. 3. 4.	3RD ANGLE PROJECTION 	THIS DRAWING IS PROPERTY OF TURCK INC. USE OF THIS DOCUMENT WITHOUT WRITTEN PERMISSION IS PROHIBITED.		TURCK INC High Technology Sensors and Automation Controls	
	MATERIAL PBT-GF30-VO PLASTIC	TOLERANCES UNLESS OTHERWISE SPECIFIED .X ±0.02 .XX ±0.01 .XXX ±0.005 ANGLES ±1° ALL MILLIMETER DIMENSIONS ARE REFERENCE ONLY	DRFT SNW	DATE 10/21/87	DESCRIPTION Bi15-CP40-FDZ30X2
FINISH		USDR	SCALE NONE	UNIT OF MEASUREMENT INCH [MILLIMETER]	IDENTIFICATION NO. M4224100
				DO NOT SCALE THIS DRAWING	REV B
B	UPDATE TO CURRENT TITLE BLOCK	RDS	09/12/03	5504	
REV	DESCRIPTION	BY	DATE	EDD NO.	FILE: M4224100