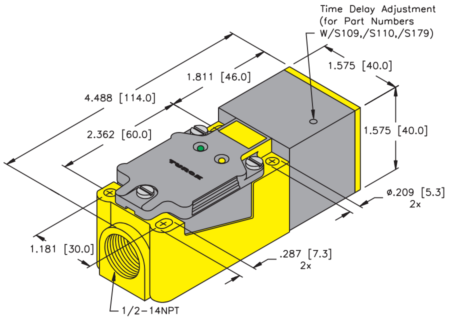
Inductive Sensors

Housing Style - Rectangular	Part Number	ID Number	Features	Embeddable	Sensing Range (mm)	Output
CP40 - Embeddable/Nonembeddable, Terminal Chamber  	Bi15-CP40-VN4X2/S109	M1526900	*Time Delay*	•	15	**4-Wire NPN**
	Ni20-CP40-VN4X2/S109	M1527100	*Time Delay*		20	
	Bi15-CP40-VP4X2/S109	M1504721	*Time Delay*	•	15	**4-Wire PNP**
	Ni30-CP40-VP4X2/S109	M1512521	*Time Delay*		30	
	Bi15-CP40-VN4X2/S110	M1527000	*Time Delay*	•	15	**4-Wire NPN**
	Ni20-CP40-VN4X2/S110	M1527300	*Time Delay*		20	
	Bi15-CP40-VP4X2/S110	M1509821	*Time Delay*	•	15	**4-Wire PNP**
	Ni20-CP40-VP4X2/S110	M1509921	*Time Delay*		20	
	Bi15-CP40-FDZ30X2	M4224100	**Prog. Outputs**	•	15	**2-Wire AC/DC**
	Bi15-CP40-FDZ30X2/S34	M4226100	***WFI***	•	15	
	Bi15-CP40-FDZ30X2/S97	M4226600	*Low Temp -40°C*	•	15	
	Bi15U-CP40-FDZ30X2	M4280601	*Uprox*	•	15	
	Ni20-CP40-FDZ30X2	M4224200	**Prog. Outputs**		20	
	Ni35-CP40-FDZ30X2	M4224500	**Prog. Outputs**		35	
	Ni40U-CP40-FDZ30X2	M4280801	*Uprox*		40	
	Bi15-CP40-FZ3X2	M1341000	**Prog. Outputs**	•	15	**2-Wire AC/DC**
	Bi15-CP40-FZ3X2/S97	M1341010	*Low Temp. -40°C*	•	15	
	Bi15-CP40-FZ3X2/S100	M1377600	*High Temp. 100°C*	•	15	
	Ni20-CP40-FZ3X2	M1341100	**Prog. Outputs**		20	
	Ni20-CP40-FZ3X2/S100	M1377500	*High Temp. 100°C*		20	
	Ni20NF-CP40-FZ3X2	M1378200	**Prog. Outputs**		20	
	Ni35-CP40-FZ3X2	M1341300	**Prog. Outputs**		35	
	Ni40-CP40-FZ3X2/S100	M1374802	*High Temp. 100°C*			
	Bi15-CP40-FZ3X2/S109	M1373700	*Time Delay*	•	15	**2-Wire AC**
	Bi15-CP40-FZ3X2/S110	M1373500	*Time Delay*	•	15	
	Ni20-CP40-FZ3X2/S109	M1374500	*Time Delay*		20	
	Ni20-CP40-FZ3X2/S110	M1374600	*Time Delay*		20	
	Ni30-CP40-FZ3X2/S109	M1374700	*Time Delay*		30	
	Ni30-CP40-FZ3X2/S110	M1374400	*Time Delay*		30	
	Bi15-CP40-VDZ3X2	M4222700	*Comp. Outputs*	•	15	**4-Wire AC/DC**
	Bi15-CP40-Y1X	M1012000		•	15	**NAMUR**
	Ni20-CP40-Y1X	M1012100			20	

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

Industrial Automation

Industrial
Automation

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 #
10-65 VDC	- -	≤200	-25 to +70	IP 67	PBT	PBT	GN	YE	- - - -	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
	- -	≤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
	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	-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
	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
	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 Diagrams

Diagram 1

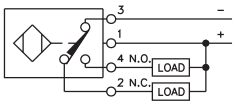


Diagram 2

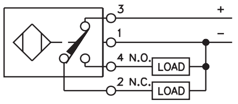


Diagram 3

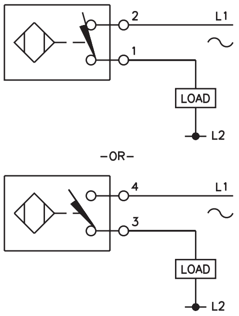


Diagram 4

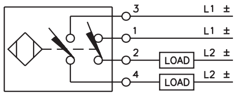
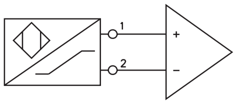
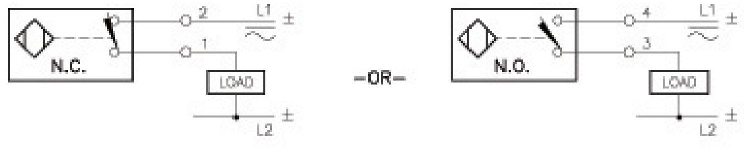


Diagram 5



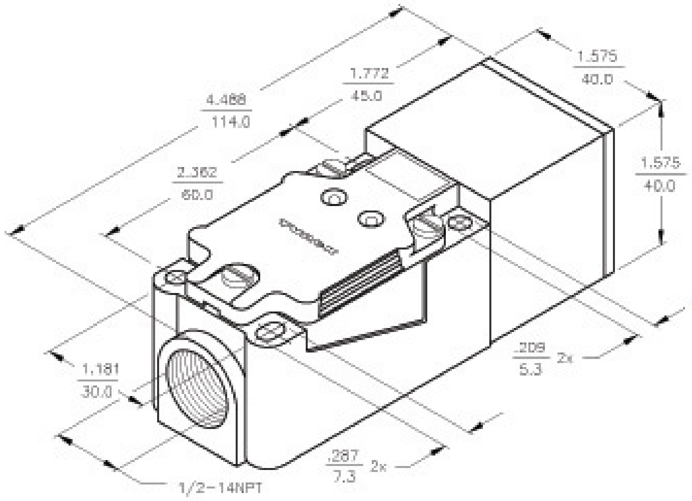
WIRING DIAGRAM



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	≤ 6.0 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.

REV	DESCRIPTION	BY	DATE	ECO NO.
B	UPDATE TO CURRENT TITLE BLOCK	RDS	09/12/02	5504

RELATED DOCUMENTS
1.
2.
3.
4.

3RD ANGLE PROJECTION

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TURCK INC
High Technology Sensors and Automation Controls

MATERIAL
PBT-GF30-V0
PLASTIC

FINISH

TOLERANCES UNLESS OTHERWISE SPECIFIED
.X ±0.02
.XX ±0.01
.XXX ±0.005
ANGLES ±1°
ALL MILLIMETER DIMENSIONS ARE REFERENCE ONLY

DRFT SMW
DATE 10/21/87
DSGN
SCALE NONE

UNIT OF MEASUREMENT
INCH [MILLIMETER]
DO NOT SCALE THIS DRAWING

DESCRIPTION
Bi15-CP40-FDZ30X2

IDENTIFICATION NO.
M4224100

REV
B

FILE: M4224100
SHEET 1 OF 1