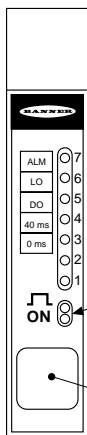## *Quick Reference Card*

D12Expert Series Features

7-segment LED bargraph indicates:
- Signal strength
- Sensing contrast
- Programming status
- Diagnostic warnings

ALM 7
LO 6
DO 5
40 ms 4
0 ms 3
2
1

ON

Indicators for:
- Output status
- Input Power/**TEACH** Mode

Push button for:
- programming

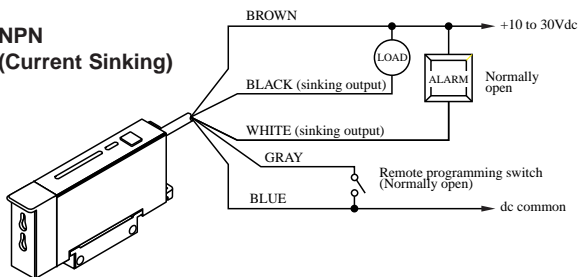| TEACH Mode Programming		
Push Button	**Mode**	**Indicator Status**
Push and Hold 2 Seconds	Display Output Configuration	LEDs indicate current output settings (LO or DO & 0 ms or 40 ms).
Double-click	Change to **TEACH** Mode	Green ON LED single-flashes at 1 Hz to indicate sensor is ready to learn

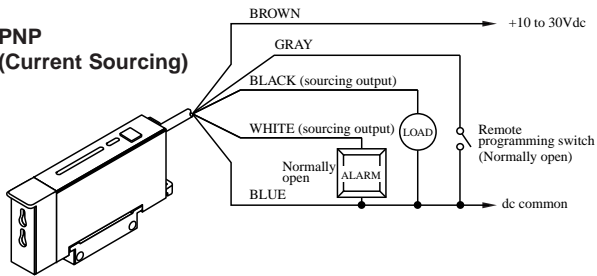| **Push Button**	**Indicator Status**
Present the first sensing condition and single-click	7-segment display sequentially flashes each of it's LEDs. The green ON LED double-flashes at 1 Hz to indicate that the sensor is ready to learn the second condition.
Present the second sensing condition and single-click	7-segment display sequentially flashes each of it's LEDs. The sensor then indicates the relative sensing contrast by flashing 1 to 7 of its LEDs three times. If the contrast is acceptable, (two or more flashing LEDs), the sensor returns to **RUN** mode after a few seconds with new, optimized sensitivity setting. If the contrast is unacceptable, (only one flashing LED), the sensor returns to **TEACH** mode Condition 1.

Output Configuration Programming

Push Button	Mode	Indicator Status
Push and Hold 2 Seconds	Display Output Configuration	LEDs indicate current output settings (LO or DO & 0 ms or 40 ms).
Triple-click*	Change to **OUTPUT CONFIGURATION** Program Mode	Red LED flashes opposite either "0 ms" or "40 ms" output timing selection.
Single-click* to toggle selection		
Double-click*	Continue in **OUTPUT CONFIGURATION** Program Mode	Output timing selection is stored. Red LED flashes opposite either "LO" or "DO" selection.
Single-click* to toggle selection		
Double-click*	Sensor returns to **RUN** Mode	"LO" or "DO" selection is stored. 7-Segment LED bar graph indicates relative received signal strength.
* NOTE: Sensor returns to RUN mode if push button is not clicked within 90 seconds.		

Connection Diagrams

NPN (Current Sinking)

BROWN → +10 to 30Vdc
BLACK (sinking output)
WHITE (sinking output)
LOAD
ALARM Normally open
GRAY
Remote programming switch (Normally open)
BLUE → dc common

PNP (Current Sourcing)

BROWN → +10 to 30Vdc
GRAY
BLACK (sourcing output)
WHITE (sourcing output)
LOAD
Remote programming switch (Normally open)
Normally open
ALARM
BLUE → dc common

For applications assistance call: PH: (612) 544-3164
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