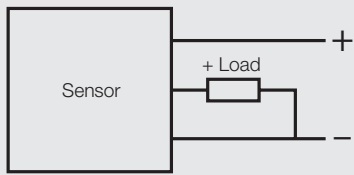


Fundamentals of Automation

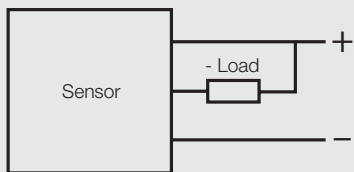
WHAT YOU NEED TO KNOW ABOUT GENERAL WIRING OF SENSORS

Which output type do you need: PNP or NPN? What is the difference? And what do you have to watch out for?



PNP output (Sourcing output +24 V DC):

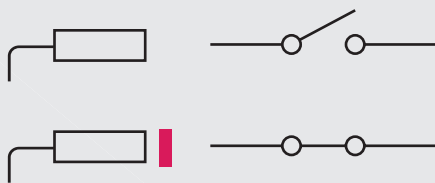
The load is connected to the switching output and the common ground (-). This type of output is common in Europe and North America.



NPN output (Sinking output 0 V DC):

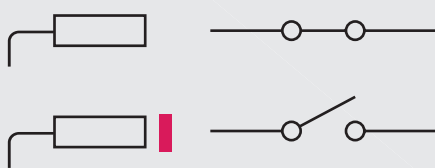
The load is connected to the switching output and the reference point (+). This type of output is common in Asia.

What is the difference between normally open and normally closed?



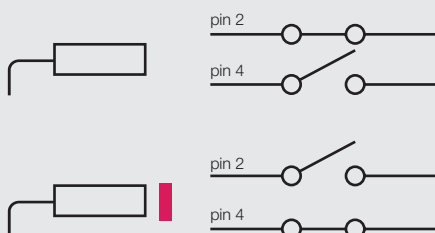
NO = normally open

NO: when the sensor detects an object it switches **on**. This principle is the most commonly used in automation technology.



NC = normally closed

NC: when the sensor detects an object it switches **off**.



NO + NC = complementary

Sensors with a complementary output (NO + NC) provide both signals. When the sensor detects an object both outputs are switched.