Catalogue No: **42JT-D2LAT1-P4**

DIFF 10-30VDC RED 3-800mm LO/DO NPN/PNP PICO-4

Field Switching and Sensing > Non Contact Sensors > Photoelectric Sensors > Allen-Bradley Photoelectric Sensors > Digital Diffuse Sensors > Compact Rectangular

Representative Photo Only
(actual product may vary based on configuration selections)

PHOTOSWITCH Photoelectric Sensor, VisiSight, Diffues, Red, Teach Button, Teachable Light or Dark Operate, Auto PNP or NPN, 4-pin DC Pico QD (M8) on 152mm (6in) pigtail

- Comprehensive range of photoelectric sensing technologies available which include retroreflective, through-beam, diffuse, background suppression, clear object detection, colour detection and fibre-optics
- Extensive range of photoelectric sensors with laser light source available suitable for high precisions applications
- Extensive range of housing styles and mounting options
- Specialised versions with IP69k rating available for high-pressure washdown applications in the food and beverage industry
- Specialised long-range laser sensors available for distance measurement applications
- Specialised versions available with IO-Link technology. This technology enables the data delivery from the sensor directly into a control system in a very efficient manner

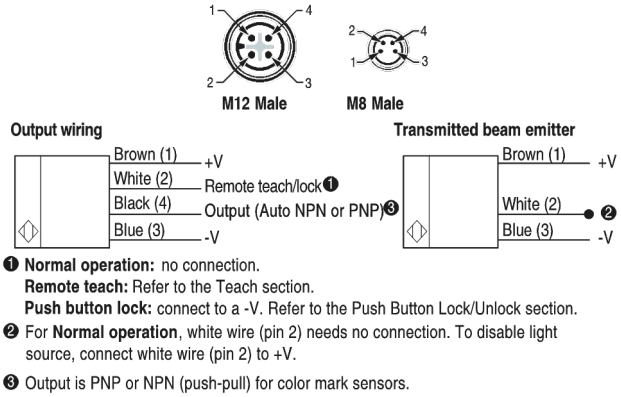
SPECIFICATIONS	
Product Series	42JT VisiSight
Component Type Field Switching & Sensing	Photoelectric Sensor
Sensing Mode	Diffuse
Light source type	LED
Colour, light source	Red (660nm)
Spot Size	70mm
Material, Lens	PMMA / Acrylic / Perspex / Plexiglas (Polymethyl methacrylate)
Material, Body / Housing	ABS material
Shape	Rectangular
Height	35 mm
Width	14 mm
Depth	20.6 mm
Orientation	Right Angle
Mounting (Multiple)	Mounting Bracket (Ordered Separately) Panel Mount
Teach Mode / Sensitivity Adjustment	Teach Button sensitivity
Sensing Distance, Min	3 mm min
Sensing Distance, Max	800 mm max
Sensing Direction	Face
Voltage Supply Operating Range	10 ... 30V DC
Ue, Rated Operational Voltage, DC, min	10 V DC
Ue, Rated Operational Voltage, DC, max	30 V DC
Switching Mode	Light or Dark Operate Selectable
Output Type	NPN/PNP Auto-Detect
Load Current	0.1 A
Response Time (Off → On)	0.5 ms

Response Time (On → Off)	0.5 ms
Indicators	Green LED Yellow LED
Connection / Termination	M8 x 1, DC, Pico, 4-pin
Operating Temperature, Min	-20 °C min
Operating Temperature, Max	70 °C max
Relative Humidity, Min	5 %RH
Relative Humidity, Max	95 %RH
IP Rating	IP67 IP69K
Shock Acceleration (Max.)	30 g
Shock Duration (Max.)	1 ms
Shock Rating	IEC 60947-5-2
Vibration Displacement (Peak to Peak Max.)	2 mm
Vibration Frequency, Operational (Max.)	55 Hz
Vibration Rating	IEC 60947-5-2

REFERENCES

IECEx Certificate	-
Supplier Declaration of Conformity:	-
Installation Guide:	-
User Manual:	-
Manufacturer Datasheet:	42JTD2LAT1P4_ManufacturerDatasheet
Manufacturer Catalogue & Product Selection:	-

42JT VisiSight



❶ **Normal operation:** no connection.
Remote teach: Refer to the Teach section.
Push button lock: connect to a -V. Refer to the Push Button Lock/Unlock section.

❷ For **Normal operation**, white wire (pin 2) needs no connection. To disable light source, connect white wire (pin 2) to +V.

❸ Output is PNP or NPN (push-pull) for color mark sensors.

42JT Remote Teach (RT)

The sensor can be taught remotely via the white wire (pin 2). Connection to +V acts the same as the button being pressed and no connection is the same as the button not being pressed. The sensor can be taught by following the same teach/timing sequence as used in the push button teach (e.g., connect to the +V for more than three seconds to teach the “target,” disconnect from the +V; remove the target and connect to the +V for less than one second to teach the “no target” condition. All push button functions can also be carried out via RT.

Connection / Wiring Diagram

Sensing Mode	Polarized Retroreflective	Clear Object Detection	Diffuse	Background Suppression	Color Mark	Transmitted Beam
42JS VisiSight—Visible red 645 nm						
Field of View	2.8°	—	5.5° for 250 mm, 4° for 800 mm	14° for 55 mm, 17° for 130 mm	—	4°
Spot Size	175 mm @ 3.5 m	—	40 mm @ 250 mm, 60 mm @ 800 mm	7.6 mm @ 55 mm, 11.5 mm @ 130 mm	—	700 mm @ 10 m
Light Source	Visible red	—	Visible red	Visible red	—	Visible red and infrared
Response Time	1 ms	—	1 ms	1 ms	—	1 ms
42JT VisiSight—Visible red 660 nm (except for color mark models)						
Spot Size	500 mm @ 6 m	40 mm @ 1 m	70 mm @ 800 mm	15 mm @ 180 mm, 27 mm @ 400 mm	1 x 4 mm @ 12 mm (white LED)	1.1 m @ 13 m
Response Time	0.5 ms	0.5 ms	0.5 ms	0.5 ms	50 µs	0.5 ms
42JT VisiSight—Class 1 laser 650 nm						
Spot Size	14 mm @ 13 m	—	0.6 mm @ 250 mm	1.3 mm @ 120 mm	—	13 mm @ 18 m
Response Time	0.25 ms	—	0.333 ms	0.5 ms	—	0.25 ms

Note: For more information on spot size, refer to the typical response curves.

Technical Diagram