

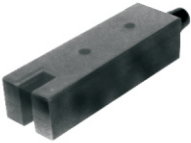
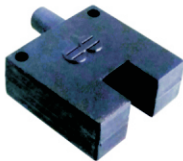
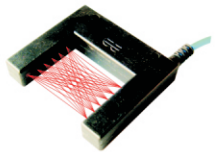



# DIFFUSE SCAN SENSORS

<b>DIFFUSE SENSOR</b>	<b>DIFFUSE SENSOR</b>	<b>DIFFUSE SENSOR</b>	<b>DIFFUSE SENSOR</b>
IRD 181 / 381 / 581 : NPN - NO or NC IRD 183 / 383 / 583 : PNP - NO or NC	IRD 180 : 4 Wire Sensor NPN & PNP : NO / NC Selectable	IRD 1812 / 1834 : 4 Wire Sensor NPN or PNP / NO + NC	IDX 41 / 42 : NPN - NO or NC IDX 43 / 44 : PNP - NO or NC
			
Range : 100 mm / 300 mm / 500 mm Dimensions : 18 D x 60 / 75 L mm	Range : 100 / 300 mm Dimensions : 18 D x 60 L mm	Range : 100 / 300 mm Dimensions : 18 D x 60 L mm	Range : 200 mm Dimensions : 40 x 28 x 13 mm
Output : PNP or NPN Output current : 200 mA	Output : PNP and NPN Output Current : 200 mA	Output : PNP or NPN & NO + NC Output Current : 200 mA	Output : PNP or NPN Output current : 200 mA
Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment	Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment	Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment	Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment
Supply : 10 - 30 V DC	Supply : 10 - 30 V DC	Supply : 10 - 30 V DC	Supply : 10 - 30V DC
Housing : Plated Brass Connector models available	Housing : Plated Brass Connector models available	Housing : Plated Brass Connector models available	Housing : ABS Plastic Connector models available
<b>DIFFUSE SENSOR</b>	<b>DIFFUSE SENSOR</b>	<b>DIFFUSE SENSOR</b>	<b>DIFFUSE SENSOR</b>
IRD 121 / 122 : NPN - NO or NC IRD 123 / 124 : PNP - NO or NC	IRD 311/2 : NPN - NO / NC Selectable IRD 313/4 : PNP - NO / NC Selectable	IDX 11/31 : NPN - NO / NC Selectable IDX 13/33 : PNP - NO / NC Selectable	IRD 181 AC : AC NO IRD 182 AC : AC NC
			
Range : 100 mm Dimensions : 12 D x 80 L mm	Range : 1 meter. / 2 meters Dimensions : 30 D x 65L mm	Range : 300mm / 1 mtr. Dimensions : 50 x 55 x 17 mm	Range : 100 mm Dimensions : 18 D x 75 L mm
Output : PNP or NPN Output Current : 200 mA	Output : PNP or NPN Output current : 200 mA	Output : PNP or NPN Output current : 200 mA	Output : NO or NC Output Current : 200 mA
Protection : Short ckt / Reverse Polarity Without Sensitivity Adjustment	Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment	Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment	Supply : 110 / 230 V AC Without sensitivity adjustment
Supply : 10 - 30 VDC	Supply : 10 - 30 V DC	Supply : 10 - 30V DC	Housing : ABS Plastic
Housing : Plated Brass Connector models available	Housing : Plated Brass Connector models available	Housing : ABS Plastic Connector models available	Two Wire Sensor Connect in series with load
<b>DIFFUSE SENSOR</b>	<b>DIFFUSE - VISIBLE LIGHT</b>	<b>DIFFUSE - LASER LIGHT</b>	<b>DIFFUSE SENSOR</b>
EXD 06 / 08 / 12 EXTENDED HEAD NPN or PNP - NO or NC	IRD 181 V / 381 V : NPN - NO or NC IRD 183 V / 383 V : PNP - NO or NC	LDX 13 / 14	IDX 511/513 : NPN / PNP - NO or NC IDX 515 : RELAY OUTPUT
			
Range : 10 mm / 10 mm / 100 mm resp. Dimensions : 18 x 75 mm - Amplifier Extended Sensor Dia : 06/08/12 x 30mm	Range : 100 mm / 300 mm Dimensions : 18 D x 60 L mm	Range : 300 mm Dimensions : 50 x 55 x 17 mm	Range : 3000 mm Dimensions : 82 x 65 x 28 mm
Output : PNP or NPN Output current : 200 mA	Output : PNP or NPN Output current : 200 mA	Output : PNP / NPN Output current : 200 mA	Output : Relay Contacts Output type : NC - C - NO
Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment	Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment	Protection : Short ckt / Reverse Polarity With Sensitivity Adjustment	Output current : 2 Amp With Sensitivity Adjustment
Supply : 10 - 30V DC	Supply : 10 - 30V DC	Supply : 10 - 30 V DC	Supply : 24 - 240 Volts AC or DC
Sensor Housing : Plated Brass	Housing : Plated Brass With Visible beam for targeting	Housing : ABS Plastic Sensor Emits laser beam	Universal Supply Housing : ABS Plastic

# THROUGH SCAN SENSORS

<b>THROUGH BEAM SENSOR</b>	<b>THROUGH BEAM SENSOR</b>	<b>DUAL CROSS BEAM SENSOR</b>	<b>THROUGH BEAM SENSOR</b>
IRB 121/122 : NPN - NO or NC IRB 123/124 : PNP - NO or NC	IRB 031/101/201 : NPN NO/NC Select IRB 033/103/203 : PNP NO/NC Select	DBX 031/101 : NPN NO or NC DBX 033/103 : PNP NO or NC	EXB 06 / 08 / 12 EXTENDED HEAD NPN / PNP - NO or NC
			
Range : 3 mtr.	Range : 3 mtr / 10 mtr. / 20 mtr.	Range : 3 mtr. / 10 mtr.	Range : 500 mm / 500 mm / 1000 mm
Dimensions : 12 D x 80 L mm	Dimensions : 18 D x 75 L mm	Dimensions : 50 x 55 x 17mm	Amplifier Dimensions : 18 x 75 mm
Output : PNP or NPN	Output : PNP or NPN	Output : PNP or NPN	Extended Sensor Dia : 06/08/12 x 30mm
Output current : 200 mA	Output current : 200 mA	Output current : 200 mA	Output : PNP or NPN
Protection : Short ckt / Reverse Polarity	Protection : Short ckt / Reverse Polarity	Protection : Short ckt / Reverse Polarity	Output current : 200 mA
Without sensitivity adjustment	With sensitivity adjustment	Pitch / Gap : 30 mm	Protection : Short ckt / Reverse Polarity
Supply : 10 - 30 VDC	Supply : 10 - 30 VDC	Supply : 10 - 30 VDC	With Sensitivity Adjustment
Housing : Plated Brass	Housing : Plated Brass	Housing : ABS Plastic	Supply : 10 - 30 VDC
			Housing : Plated Brass
<b>THROUGH BEAM SENSOR</b>	<b>THROUGH BEAM SENSOR</b>	<b>THROUGH BEAM SENSOR</b>	<b>THROUGH BEAM SENSOR</b>
IBX 41 / 42 : NPN - NO or NC IBX 43 / 44 : PNP - NO or NC	IBX 11/101/201 : NPN - NO/NC Select IBX 13/103/203 : PNP - NO/NC Select	IBX 21 / 22 : NPN - NO / NC Selectable IBX 23 / 24 : PNP - NO / NC Selectable	IBX 1001/2 : NPN - NO or NC IBX 1003/4 : PNP - NO or NC
			
Range : 3 mtr.	Range : 3 mtr. / 10 mtr. / 20 mtr.	Range : 3 mtr. / 10 mtr. / 20 mtr.	Range : 100 mtr.
Dimensions : 40 x 28 x 13 mm	Dimensions : 50 x 55 x 17mm	Dimensions : 17 x 35 x 80 mm	Dimensions : 82 x 65 x 28mm
Output : PNP or NPN	Output : PNP / NPN	Output : PNP or NPN	Output : PNP / NPN
Output current : 200 mA	Output current : 200 mA	Output current : 200 mA	Output current : 200 mA
Protection : Short ckt / Reverse Polarity	Protection : Short ckt / Reverse Polarity	Protection : Short ckt / Reverse Polarity	Protection : Short ckt / Reverse Polarity
Supply : 10 - 30V DC	Supply : 10 - 30 VDC	Supply : 10 - 30 VDC	Supply : 10 - 30 VDC
Housing : ABS Plastic	Housing : ABS Plastic	Housing : ABS Plastic	Housing : ABS Plastic
<b>RETRO REFLECTIVE SENSOR</b>	<b>RETRO REFLECTIVE SENSOR</b>	<b>RETRO REFLECTIVE SENSOR</b>	<b>RETRO REFLECTIVE SENSOR</b>
IRR 181 / 381 - NPN NO or NC IRR 183 / 383 - PNP NO or NC	IRR 301/302 NPN - NO / NC Select IRR 303/304 PNP - NO / NC Select	IRX 11/31/51/61 NPN - NO / NC Select IRX 13/33/53/63 PNP - NO / NC Select	IRX 515 - Relay Output
			
Range : 300 mm / 1 mtr.	Range : 8 mtr.	Range : 1 / 3 / 5 / 6 meter	Range : 5 meters
Dimensions : 18 D x 75 mm	Dimensions : 30 D x 65 mm	Dimensions : 50 x 55 x 17 mm	Dimensions : 82 x 65 x 28mm
Output : PNP or NPN	Output : PNP or NPN	Output : PNP or NPN	Output : NC - C - NO
Output current : 200 mA	Output current : 200 mA	Output current : 200 mA	Output current : 2 Amp
Protection : Short Ckt / Reverse Polarity	Protection : Short Ckt / Reverse Polarity	Protection : Short Ckt / Reverse Polarity	Protection : Short Ckt / Reverse Polarity
With Sensitivity Adjustment	With Sensitivity Adjustment	With Sensitivity Adjustment	With Sensitivity Adjustment
Supply : 10 - 30 VDC	Supply : 10 - 30 VDC	Supply : 10 - 30 VDC	Supply : 10 - 30 VDC
Housing : Plated Brass	Housing : Plated Brass	Housing : Plated Brass	Housing : Plated Brass
With Reflector	With Reflector	With Reflector	With Reflector

# SLOT SENSORS

<b>SLOT SENSOR</b>	<b>LABEL SENSOR</b>	<b>SLOT SENSOR</b>	<b>SLOT SENSOR</b>
IFS 031 NPN - NO or NC Selectable IFS 033 PNP - NO or NC Selectable	LBT 031/2 NPN - NO or NC LBT 033/4 PNP - NO or NC	IFS 201/2 NPN - NO / NC Selectable IFS 203/4 PNP - NO / NC Selectable	IFS 501/2 NPN - NO / NC Selectable IFS 503/4 PNP - NO / NC Selectable
			
Slot Width / Depth : 3mm / 45 mm Dimension : 70 x 50 x 15 mm	Slot Width / Depth : 3 mm / 45 mm Dimension : 70 x 50 x 15 mm	Slot Width / Depth : 20mm / 45 mm Dimension : 70 x 50 x 15mm	Slot Width / Depth : 50mm / 45 mm Dimension : 70 x 80 x 15mm
Output : PNP or NPN Output current : 200 mA	Output : PNP or NPN Output current : 200mA	Output : PNP or NPN Output current : 200 mA	Output : PNP or NPN Output current : 200 mA
Protection : Short ckt / Reverse Polarity With sensitivity adjustment	Protection : Short ckt / Reverse Polarity Sensitivity : Teach Type Microcontroller	Protection : Short ckt / Reverse Polarity With sensitivity adjustment	Protection : Short ckt / Reverse Polarity With sensitivity adjustment
Supply : 10 - 30 VDC Housing : ABS plastic	Speed : High Speed 5000/second max Supply : 10 - 30 VDC Housing : ABS plastic	Supply : 10 - 30 VDC Housing : ABS plastic	Supply : 10 - 30 VDC Housing : ABS plastic
<b>SLOT SENSOR</b>	<b>SLOT SENSOR</b>	<b>SLOT SENSOR</b>	<b>WINDOW SENSOR</b>
IFS 051 NPN - NO / IFS 052 NPN - NC IFS 053 PNP - NO / IFS 054 PNP - NC	IFS 101 / 102 / 103 / 104	IFS 1001/2 NPN - NO or NC Selectable IFS 1003/4 PNP - NO or NC Selectable	WFS 501/503 : NPN NO/PNP NO WFS1001/1003 : NPN NO/PNP NO
			
Slot Width / Depth : 5mm / 10 mm Dimension : 60 x 20 x 15mm	Slot Width / Depth : 10 mm / 10 mm Dimension : 33 x 33 x 13 mm	Slot Width / Depth : 100 mm / 45 mm Dimension : 70 x 130 x 15 mm	To Sense small object & counting. Product size : upto 2mm x 6mm
Output : PNP or NPN Output current : 200 mA	Output : PNP or NPN Output current : 200 mA	Output : PNP or NPN Output current : 200 mA	Slot Width : 50mm / Size : 70x80x15 mm Slot Width : 100mm/Size : 70x130x15mm
Protection : Short ckt / Reverse Polarity Without sensitivity adjustment	Protection : Short ckt / Reverse Polarity Without sensitivity adjustment	Protection : Short ckt / Reverse Polarity With sensitivity adjustment	Slot Depth : 45mm Output : PNP or NPN
Supply : 10 - 30 VDC Housing : ABS plastic	Supply : 10 - 30 VDC Housing : ABS plastic	Supply : 10 - 30 VDC Housing : ABS plastic	Without sensitivity adjustment Supply : 10 - 30V DC Housing : ABS plastic
<b>LASER SENSOR</b>	<b>REGISTRATION MARK SENSOR</b>	<b>REGISTRATION MARK SENSOR</b>	<b>FLAME SENSOR</b>
LASER POINTER LINE GENERATOR	MS 10 : NPN NO - NC MS 20 : PNP NO - NC	PMS 10 : NPN NO - NC PMS 20 : PNP NO - NC	FAS 183 / LBS 183
			
Laser pointer - 20 mtr. Laser Line - 3 mtr.	Range : 12 ± 2 mm Dimensions : 93 x 67 x 37 mm	Range : 12 ± 2 mm Dimensions : 82 x 65 x 28 mm	Range : 2 meters (max) Dimensions : 18 D x 75 L mm
Dimension : 18 D x 75 L mm Laser Pointer -Used for Targeting / Locating small parts	Light ON / Dark ON : Selection by switch Output : PNP or NPN Output current : 200 mA	Light ON / Dark ON : Selection by switch Output : PNP or NPN Output current : 200 mA	Output : PNP NO Supply : 10 - 30 V DC Housing : Metal
Laser Line - For Aligning small objects Laser Colour : Red	Protection : Short Ckt / Reverse Polarity With Sensitivity Adjustment	Protection : Short Ckt / Reverse Polarity With Sensitivity Adjustment	For Yellow Flame Sensing LBS 183 : For LED blinking sensor
Supply : 10 - 30V DC Housing : Plated Brass	Supply : 10 - 30V DC Housing : Metal	Supply : 10 - 30V DC Housing : ABS Plastic	

# CONTROLLERS FOR SENSORS

## COMMON SPECIFICATIONS:

Supply Voltage	: 220 / 110 Volts AC
Output	: Relay contacts ( NC-C-NO )
Relay contact	: 2 Amps at 220V AC
Sensor Supply	: 12 VDC / 24 VDC
Input	: PNP / NPN Sensor
Housing	: DIN Rail Mounting
Dimensions	: 61 x 71 x 110 mm



## PPD MODELS

**1. PPD (STD):** Controller used to operate only one sensor with one relay output (Suitable for NPN or PNP sensor)

**2. PPD T1 T2:** Controller used to operate one sensor and one relay output with ON Delay / OFF delay from 0 - 15 Sec. adjustable by potentiometer. (Suitable for NPN or PNP sensor)

**3. PPD T1T2 (SELECT):** Controller is used to operate two sensors with single relay output. It has a selection facility for Model PPD (STD) and PPD T1T2

**4. PPD AND / OR : AND LOGIC:** Controller is used to operate two sensors with single relay output. When both sensors activates simultaneously then only output gets ON.

**OR LOGIC:** Controller is used to operate two sensors with single relay output. When any one sensors activates then, output gets ON.

**5. PPD BI-STABLE:** Controller is used to operate two sensors with single relay output. Here, when one sensor get activated, the output will get ON, when second sensor gets activated, the output gets OFF.

**6. PPD MONO-STABLE:** Controller is used to operate on sensors with single relay output. When pulse is received, outputs gets ON, when second pulse received, outputs gets OFF. This cycle continues for further repetitions.

**7. HOPPER LEVEL:** Controller is used to operate two sensors with single relay output. It is used for hopper level sensing application. When lower level sensor activates, then the output gets ON. When upper level sensor activates, then the output gets OFF.

**8. PPD 2I2O/ 2110:** 2I2O: Controller is used to operate two sensors with two relay outputs. Two independent sensor input and corresponding outputs can be used

2110: Controller is used to operate two sensors with single relay output. When any one sensors activates then, output gets ON.

**9. ZERO SPEED SWITCH:** when speed of rotary or linear system approaches zero, same is detected by Zero Speed Switch and relay contacts are actuated to alarm or interlock further dependent systems.

**10. SAND LEVEL CONTROLLER:** This controller is used for molding sand application in forging industry, for sensing level of sand in the hopper.

**11. TWO HAND SAFETY:** Controller used for safety of operator in Power Presses or similar machines. Machine is operated when two input switches are pressed simultaneously at a time.

**12. NPN to PNP CONVERTER / PNP to NPN CONVERTER :** Available as per requirement.

# PLUG-IN CONNECTORS

<b>M 12 : FEMALE CONNECTOR</b>	<b>M 12 : FEMALE CONNECTOR</b>	<b>M 12 : FEMALE CONNECTOR</b>	<b>M 12 : MALE CONNECTOR</b>
<b>M 12 - 4 PIN STRAIGHT FEMALE CONNECTOR</b>	<b>M 12 - 4 PIN L - TYPE FEMALE CONNECTOR</b>	<b>M 12 - 4 PIN : L - TYPE - LED FEMALE CONNECTOR</b>	<b>M 12 - 4 PIN STRAIGHT MALE : WITH 6 INCH CABLE</b>
			
Supply : 10 - 30 Volts DC Temperature : Up to 90 C	Supply : 10 - 30 Volts DC Temperature : Up to 90 C	Supply : 10 - 30 Volts DC Temperature : Up to 90 C	Supply : 10 - 30 Volts DC Temperature : Up to 90 C
Cable Spec : 4 x 0.25 mm Flexible Structure : 0.34 mm2 (182x0.05)	Cable Spec : 4 x 0.25 mm Flexible Structure : 0.34 mm2 (182x0.05)	Cable Spec : 4 x 0.25 mm Flexible Structure : 0.34 mm2 (182x0.05)	Cable Spec : 4 x 0.25 mm Flexible Structure : 0.34 mm2 (182x0.05)
Cable Core : 4 Core Cable	Cable Core : 4 Core Cable	Cable Core : 4 Core Cable	Cable Core : 4 Core Cable
No of conductors : 14 nos	No of conductors : 14 nos	No of conductors : 14 nos	No of conductors : 14 nos
Cable Diameter : 5.17 mm	Cable Diameter : 5.17 mm	Cable Diameter : 5.17 mm	Cable Diameter : 5.17 mm
Cable Material : PVC	Cable Material : PVC	Cable Material : PVC	Cable Material : PVC
<b>M 8 : FEMALE CONNECTOR</b>	<b>M 8 : FEMALE CONNECTOR</b>	<b>M 12 : MALE CONNECTOR</b>	<b>M 12 : FEMALE CONNECTOR</b>
<b>M 8 - 3 PIN STRAIGHT FEMALE CONNECTOR</b>	<b>M 8 - 4 PIN L - TYPE FEMALE CONNECTOR</b>	<b>M 12 - 4 PIN STRAIGHT MALE CONNECTOR</b>	<b>M 12 - 4 PIN STRAIGHT FEMALE CONNECTOR</b>
			
Supply : 10 - 30 Volts DC Temperature : Up to 90 C	Supply : 10 - 30 Volts DC Temperature : Up to 90 C	Rated Operating Voltage : 250V DC Degree of Protection : IP 67	Rated Operating Voltage : 250V DC Degree of Protection : IP 67
Cable Spec : 4 x 0.25 mm Flexible Structure : 0.34 mm2 (182x0.05)	Cable Spec : 4 x 0.25 mm Flexible Structure : 0.34 mm2 (182x0.05)	Temperature : Up to 75 C Termination : Screw Type	Temperature : Up to 75 C Termination : Screw Type
Cable Core : 4 Core Cable	Cable Core : 4 Core Cable	Current Rating : 4 Amp	Current Rating : 4 Amp
No of conductors : 14 nos	No of conductors : 14 nos	Contact Plating : Gold Plated	Contact Plating : Gold Plated
Cable Diameter : 5.17 mm	Cable Diameter : 5.17 mm	Contact Carrier : 66 Degree	Contact Carrier : 66 Degree
Cable Material : PVC	Cable Material : PVC	Insulation Resistance >=100M ohm Grip Colour : Black	Insulation Resistance >=100M ohm Grip Colour : Black
<b>M 12 : FEMALE CONNECTOR</b>	<b>M 12 : MALE CONNECTOR</b>	<b>M 12 : MALE + FEMALE CONNECTOR</b>	<b>M 12 : MALE + FEMALE CONNECTOR</b>
<b>M 12 - 5 PIN STRAIGHT / L TYPE FEMALE CONNECTOR</b>	<b>M 12 - 5 PIN STRAIGHT / L TYPE MALE CONNECTOR</b>	<b>M 12 - 4 PIN STRAIGHT / L TYPE MALE + FEMALE CONNECTOR</b>	<b>M 12 - 4 PIN STRAIGHT / L TYPE FEMALE + FEMALE CONNECTOR</b>
			
Rated Operating Voltage : 60V DC Degree of Protection : IP 67	Rated Operating Voltage : 60V DC Degree of Protection : IP 67	Supply : 10 - 30 Volts DC Temperature : Up to 90 C	Supply : 10 - 30 Volts DC Temperature : Up to 90 C
Temperature : Up to 75 C Termination : Screw Type	Temperature : Up to 75 C Termination : Screw Type	Cable Spec : 4 x 0.25 mm Flexible Structure : 0.34 mm2 (182x0.05)	Cable Spec : 4 x 0.25 mm Flexible Structure : 0.34 mm2 (182x0.05)
Current Rating : 4 Amp	Current Rating : 4 Amp	Cable Core : 4 Core Cable	Cable Core : 4 Core Cable
Contact Plating : Gold Plated	Contact Plating : Gold Plated	No of conductors : 14 nos	No of conductors : 14 nos
Contact Carrier : 66 Degree	Contact Carrier : Nylon 66 Degree	Cable Diameter : 5.17 mm	Cable Diameter : 5.17 mm
Insulation Resistance >=100M ohm Grip Colour : Black	Insulation Resistance >=100M ohm Grip Colour : Black	Cable Material : PVC	Cable Material : PVC