



### ifm efector Items

### As listed in:

**North American Powertrain Controls Standards** 

PT\_TS\_CR\_NA\_Controls\_Project\_Book v20.08

**Revision:** 

**Revision Date: 2020-08-01** 

Initial Release Date: 2006-07-01

The controlled version of this document is the one stored on the FCA AME Powertrain "Technical Specifications" web site. This project book is "for reference only". The user shall verify from the web site that he / she is using the appropriate version of the specification for their specific project.

### **Table of Contents**

| ELECTRICAL CONTROLS, I/O DEVICE, INDUCTIVE                               | 3  |
|--|----|
| ELECTRICAL CONTROLS, I/O DEVICE, PHOTOELECTRIC                           |    |
| ELECTRICAL CONTROLS, I/O DEVICE, ULTRASONIC                              | 9  |
| ELECTRICAL CONTROLS, I/O DEVICE, ACCESSORIES                             | 10 |
| ELECTRICAL CONTROLS, I/O DEVICE, PRESSURE                                | 11 |
| ELECTRICAL CONTROLS, I/O DEVICE, FLOW                                    | 12 |
| ELECTRICAL CONTROLS, I/O DEVICE, LEVEL SENSOR                            | 14 |
| ELECTRICAL CONTROLS, I/O DEVICE, TEMPERATURE                             | 15 |
| ELECTRICAL CONTROLS, I/O DEVICE, HUMIDITY, OIL PARTICLE AND CONDUCTIVITY | 16 |
| ELECTRICAL CONTROLS, I/O DEVICE, VIBRATION SENSOR                        | 16 |
| ELECTRICAL CONTROLS, I/O BLOCK, IO-LINK MASTER                           |    |
| ELECTRICAL CONTROLS, SAFETY, SWITCH                                      | 18 |
| CONTACTS   | 20 |

## **Electrical Controls, I/O Device, Inductive**

| ifm#          | Description   | Picture |
|---------------|---|---------|
| <u>IE5318</u> | 8mm metal barrel, 62mm long, 2mm sensing range flush mount, 10 to 36 VDC, PNP, IP 67, normally open with micro DC 4 pin M12 connector.  |         |
| <u>IE5331</u> | 8mm metal barrel, 62mm long, 4mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 67, normally open with micro DC 4 pin M12 connector.  |         |
| <u>IE5288</u> | 8mm metal barrel, 62mm long, 4mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 67, normally open with micro DC 4 pin M12 connector.  |         |
| <u>IEC200</u> | 8mm metal barrel, 60mm long, 2mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. Impact Resistant Stainless Steel sensing face                        |         |
| <u>IE5351</u> | 8mm metal barrel, 37mm long, 3mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, normally open .3m long PVC pigtail cable with micro DC 4 pin M12 connector.   | _       |
| <u>IE5352</u> | 8mm metal barrel, 37mm long, 3mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, normally open .3m long PVC pigtail cable with micro DC 4 pin M12 connector.   |         |
| <u>IES200</u> | 8mm metal barrel, 40mm long, 3mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, IP 68; IP 69K; normally open with M8 3 pin connector. <b>K=1 correction factor</b>                                    |         |
| <u>IES201</u> | 8mm metal barrel, 40mm long, 6mm sensing range non-flush mount, 10 to 30 VDC, PNP, IP 67, IP 68; IP 69K; normally open with M8 3 pin connector. <b>K=1 correction factor</b>                                |         |
| <u>IFC204</u> | 12mm metal barrel, 45mm long, 4mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector.   |         |
| <u>IFC205</u> | 12mm metal barrel, 50mm long, 7mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector.   |         |
| <u>IFC206</u> | 12mm metal barrel, 45mm long, 4mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. <b>Ceramic sensing face</b>   |         |
| IFC210        | 12mm metal barrel, 70mm long, 4mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. <b>Ceramic sensing face</b>   |         |
| <u>IF5775</u> | 12mm metal barrel, 60mm long, 4mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector.   |         |
| <u>IF5811</u> | 12mm metal barrel, 60mm long, 7mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector.   |         |
| <u>IFC263</u> | 12mm metal barrel, <b>Ferrous-only sensing</b> , 60mm long, 2.5mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. <b>Stainless Steel sensing face</b> |         |
| <u>IFC258</u> | 12mm metal barrel, 60mm long, 3mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. Impact Resistant Stainless Steel sensing face                       |         |
| <u>IFT245</u> | 12 mm metal barrel, 70mm long, 6mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>Stainless Steel sensing face</b> .                    |         |
| <u>IFC207</u> | 12mm metal barrel, 45mm long, 4mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally closed with micro DC 4 pin M12 connector.   | e= =    |
| <u>IFC208</u> | 12mm metal barrel, 50mm long, 7mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector.   |         |

| <u>IFS289</u> | 12mm metal barrel 45mm long, 4mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor</b> .  | -12 |
|---------------|--|-----|
| <u>IFS290</u> | 12mm metal barrel 45mm long, 10mm sensing range non-flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor.</b>  |     |
| <u>IFS285</u> | 12mm metal barrel 60mm long, 4mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor</b> . Brass (brass white bronze coated) or SS (stainless steel). |     |
| <u>IFS286</u> | 12mm metal barrel 60mm long, 10mm sensing range non-flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor.</b>  |     |
| <u>IF6123</u> | 12mm metal barrel, 60mm long, .7 – 3.15mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>IO Link capable</b>  |     |
| <u>IF6124</u> | 12mm metal barrel, 60mm long, 1.3 – 6.5mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>IO Link capable</b>  |     |
| <u>IFC277</u> | 12mm metal barrel, 60mm long, .7 – 3.51mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>SS sensing face &amp; IO Link capable.</b>                         |     |
| <u>IGC204</u> | 18mm metal barrel, 46mm long, 8mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector.  | === |
| <u>IGC205</u> | 18mm metal barrel, 51mm long, 12mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector.   |     |
| <u>IGC206</u> | 18mm metal barrel, 46mm long, 8mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. <b>Ceramic sensing face</b>  |     |
| <u>IGC210</u> | 18mm metal barrel, 70mm long, 8mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. <b>Ceramic sensing face</b>  |     |
| <u>IGC213</u> | 18mm metal barrel, 70mm long, 12mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector.   | === |
| <u>IGC249</u> | 18mm metal barrel, <b>Ferrous-only sensing</b> , 70mm long, 4.5mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. <b>Stainless Steel sensing face</b>                                |     |
| <u>IGC248</u> | 18mm metal barrel, 70mm long, 5mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. <b>Impact Resistant Stainless Steel sensing face</b>   |     |
| <u>IGT249</u> | 18 mm metal barrel, 70mm long, 12mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>Stainless Steel sensing face</b> .  |     |
| <u>IGC207</u> | 18mm metal barrel, 46mm long, 8mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally closed with micro DC 4 pin M12 connector.  |     |
| <u>IGC208</u> | 18mm metal barrel, 51mm long, 12mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68, normally closed with micro DC 4 pin M12 connector.   |     |
| <u>IGS279</u> | 18mm metal barrel 45mm long, 8mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor</b> .  |     |
| <u>IGS280</u> | 18mm metal barrel 45mm long, 15mm sensing range non-flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor.</b>  |     |
| <u>IGS277</u> | 18mm metal barrel 60mm long, 8mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor</b> .  |     |
| <u>IGS278</u> | 18mm metal barrel 60mm long, 15mm sensing range non-flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor.</b>  |     |
| <u>IG6615</u> | 18mm metal barrel, 60mm long, 1.41 - 7mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>IO Link capable</b>   |     |

| <u>IG6616</u> | 18mm metal barrel, 60mm long, , 2.4 – 12.1mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>IO Link capable</b>   |  |
|---------------|--|--|
| <u>IGC260</u> | 18mm metal barrel, 60mm long, 1.41 - 7.01mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>SS sensing face &amp; IO Link capable.</b>   |  |
| <u>II5742</u> | 30mm metal barrel, 72mm long, 15mm sensing range flush mount, 10 to 36 VDC, PNP, IP 67, normally open with micro DC 4 pin M12 connector.   |  |
| <u>II5785</u> | 30mm metal barrel, 72mm long, 22mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 67, normally open with micro DC 4 pin M12 connector.   |  |
| <u>IIC224</u> | 30mm metal barrel, 70mm long, 10mm sensing range flush mount, 10 to 36 VDC, PNP, IP 68, normally open with micro DC 4 pin M12 connector. Impact Resistant Stainless Steel sensing face   |  |
| <u>IIT231</u> | 30 mm metal barrel, 70mm long, 25mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>Stainless Steel sensing face</b> .  |  |
| <u>IIS208</u> | 30mm metal barrel, 50mm long, 15mm sensing range flush mount, 10 to 36 VDC, PNP, IP 67, normally closed with micro DC 4 pin M12 connector.   |  |
| <u>IIT219</u> | 30mm metal barrel, 50mm long, 22mm sensing range non-flush mount, 10 to 36 VDC, PNP, IP 67, normally closed with micro DC 4 pin M12 connector.   |  |
| <u>IIS269</u> | 30mm metal barrel 45mm long, 15mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor</b> .   | 電  |
| <u>IIS267</u> | 30mm metal barrel 60mm long, 15mm sensing range flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor</b> .   |  |
| <u>IIS268</u> | 30mm metal barrel 60mm long, 30mm sensing range non-flush mount, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open with micro DC 4 pin M12 connector. <b>K=1 correction factor</b> .   |  |
| <u>II5973</u> | 30mm metal barrel, 60mm long, 2.4 – 12.1mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>IO Link capable</b>   |  |
| <u>II5974</u> | 30mm metal barrel, 60mm long, 4.3 – 21.5mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>IO Link capable</b>   |  |
| <u>IIC236</u> | 30mm metal barrel, 60mm long, 2.44 – 12.16mm switch point range IO-Link, 10 to 30 VDC, PNP, IP 67, 68 & 69K, normally open or closed with micro DC 4 pin M12 connector. <b>SS sensing face &amp; IO Link capable.</b>  |  |
| IM5xxx        | 66mm x 40mm x 40mm rectangular plastic cube housing, 10 to 36 VDC, PNP, IP 67, with micro DC 4 pin M12 connector. Sensing direction selectable in 5 directions.  IM5115 20mm range flush mount normally open IM5116 35mm range non-flush mount normally open IM5117 40mm range non-flush mount normally open IM5123 20mm range flush mount normally open & normally closed IM5134 35mm range non-flush mount normally open & normally closed IM5136 40mm range flush mount normally open & normally closed IM5128 20mm range flush mount normally open & R=1 IM5130 35mm range non-flush mount normally open & K=1 IM5131 40mm range flush mount normally open & normally closed K=1 IM5132 20mm range flush mount normally open & normally closed K=1 IM5133 35mm range non-flush mount normally open & normally closed K=1 IM5135 40mm range non-flush mount normally open & normally closed K=1 IM5135 40mm range non-flush mount normally open & normally closed K=1 | Company of the compan |
| <u>MK5107</u> | <b>Magnetic cylinder switch</b> , GMR cell T-slot mounting, plastic housing, 3-wire DC PNP, normally open output, 0.3m pigtail, IP 67 with micro DC 4 pin M12 connector.   | -  |
| <u>MK5139</u> | <b>Magnetic cylinder switch</b> , AMR cell T-slot mounting, plastic housing, 3-wire DC PNP, normally open output, 0.3m pigtail, IP 67 with micro DC 4 pin M12 connector.   |  |
| <u>MK5304</u> | Magnetic cylinder switch, GMR cell, C-slot mounting, plastic housing, 3-wire DC PNP, normally open output, 0.3m pigtail, IP 67 with micro DC 4 pin M12 connector.  |  |
| <u>MK5314</u> | <b>Magnetic cylinder switch,</b> AMR cell, C-slot mounting, plastic housing, 3-wire DC PNP, normally open output, 0.3m pigtail, IP 67 with micro DC 4 pin M12 connector.   | -  |

| <u>IN5327</u> | 1/4 Turn Valve switch, 40mm x 26mm plastic cube switch, 40mm long, two Sensors with 4mm sensing range non-flush mount, 10 to 36 VDC, PNP, 2 normally open outputs, IP 67 with micro DC 4 pin M12 connector.   |  |
|---------------|---|--|
| MVQ101        | <b>Position sensor for valve actuators,</b> 95 x 50 x 57 mm, 10 to 30 VDC, PNP, 3 normally open / normally closed selectable outputs, IP 67 with micro DC 4 pin M12 connector. <b>IO Link capable.</b>  |  |
| I7R2**        | Ring Sensor, 10- 35 VDC, PNP, 10 to 35 VDC, IP67, Programmable normally open or closed output with micro DC 4 pin M12 connector.  I7R201: Static operation, 10.1 mm ring diameter I7R205: Static operation, 15.1 mm ring diameter I7R209: Static operation, 20.1 mm ring diameter I7R213: Static operation, 25.1 mm ring diameter I7R217: Static operation, 51 mm ring diameter |  |

# **Electrical Controls, I/O Device, Photoelectric**

| ifm#          | Description  | Picture |
|---------------|--|---------|
| <u>OGS500</u> | <b>Thru-Beam,</b> 18mm stainless steel barrel, 72 mm visible red transmitter, up to 25m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need receiver.</b>                                      |         |
| <u>OGE500</u> | <b>Thru-Beam,</b> 18mm stainless steel barrel, 72 mm visible red receiver, up to 25m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need transmitter.</b>                                      | =       |
| <u>OGS200</u> | <b>Thru-Beam,</b> 18mm stainless steel barrel, 60mm long transmitter, 20m sensing range, 10 to 36 VDC, IP 67 with micro DC 4 pin M12 connector. <b>Need receiver</b> .   |         |
| <u>OGE200</u> | <b>Thru-Beam,</b> 18mm stainless steel barrel, 60mm long receiver, 20m sensing range, dark-on mode, 10 to 36 VDC, IP 67 with micro DC 4 pin M12 connector. <b>Need transmitter.</b>  |         |
| <u>OGE201</u> | <b>Thru-Beam,</b> 18mm stainless steel barrel, 60mm long receiver, 20m sensing range, light-on mode, 10 to 36 VDC, IP 67 with micro DC 4 pin M12 connector. <b>Need transmitter.</b>   |         |
| <u>OGP500</u> | <b>Polarized Retroreflective,</b> 18mm stainless steel barrel, 72 mm polarized retro-reflective visible red light, up to 5m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need reflector.</b> |         |
| <u>OGP200</u> | <b>Polarized Retroreflective,</b> 18mm stainless steel barrel, 60mm long, polarized retro-reflective sensor, 4m sensing range, 10 to 36 VDC PNP, dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need reflector.</b>               |         |
| <u>OGP201</u> | <b>Polarized Retroreflective,</b> 18mm stainless steel barrel, 60mm long, polarized retro-reflective sensor, 4m sensing range, 10 to 36 VDC PNP light operate, IP 67 with micro DC 4 pin M12 connector. <b>Need reflector.</b>               |         |
| <u>OGH500</u> | Background Suppressed Diffuse Reflective, 18mm stainless steel barrel, 72mm long, background suppressed diffuse reflective sensor, 300mm sensing range, 10 to 36 VDC PNP light or dark operate, IP 67 with micro DC 4 pin M12 connector.     |         |
| <u>OGH200</u> | Background Suppressed Diffuse Reflective, 18mm stainless steel barrel, 72mm long, background suppressed diffuse reflective sensor, 250mm sensing range, 10 to 36 VDC PNP light or dark operate, IP 65 with micro DC 4 pin M12 connector.     |         |
| <u>OGT200</u> | <b>Diffuse Reflective,</b> 18mm stainless steel barrel, 72 mm diffuse reflective with visible red light, up to 600mm range, 10 to 36 VDC, PNP, light operate, IP 65 with micro DC 4 pin M12 connector.                                       |         |
| <u>OGT500</u> | <b>Diffuse Reflective,</b> 18mm stainless steel barrel, 72 mm diffuse reflective with visible red light, up to 800mm range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector.                               | •       |

| OGS280        | <b>Thru-Beam,</b> 18mm metal mounting cube style (52mm x 36mm x 18mm) body transmitter, 20 m sensing range, 10 to 30 VDC PNP light or dark operate, IP 67 with micro DC 4 pin M12   |         |
|---------------|---|---------|
| 003200        | connector. <b>Need receiver. IO Link capable</b>  |         |
| <u>OGE280</u> | <b>Thru-Beam,</b> 18mm metal mounting cube style (52mm x 36mm x 18mm) body receiver, 20 m sensing range, 10 to 30 VDC PNP dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need transmitter. IO Link capable.</b>  | O Crops |
| <u>OGE281</u> | <b>Thru-Beam,</b> 18mm metal mounting cube style (52mm x 36mm x 18mm) body receiver, 20 m sensing range, 10 to 30 VDC PNP light operate, IP 67 with micro DC 4 pin M12 connector. <b>Need transmitter. IO Link capable.</b>   | 9       |
| <u>OGP280</u> | <b>Polarized Retroreflective,</b> 18mm metal mounting cube style (52mm x 36mm x 18mm) body receiver, 4 m sensing range, 10 to 30 VDC PNP dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need reflector. IO Link capable.</b>                                 | 9       |
| <u>OGP281</u> | <b>Polarized Retroreflective,</b> 18mm metal mounting cube style (52mm x 36mm x 18mm) body receiver, 4 m sensing range, 10 to 30 VDC PNP light operate, IP 67 with micro DC 4 pin M12 connector. <b>Need reflector. IO Link capable.</b>                                |         |
| <u>OGH580</u> | <b>Background Suppressed Diffuse Reflective,</b> 18mm metal mounting cube style (52mm x 36mm x 18mm) body, 200mm sensing range, 10 to 30 VDC PNP light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>IO Link capable.</b>                                | 9       |
| OG5124        | <b>Background Suppressed Diffuse Reflective</b> , 18mm stainless steel barrel, 75mm long, diffuse reflective sensor, 200mm sensing range, 10 to 30 VDC PNP light operate, IP 68 with micro DC 4 pin M12 connector.  | 00      |
| <u>OG5123</u> | <b>Background Suppressed Diffuse Reflective</b> , 18mm stainless steel barrel, 75mm long, diffuse reflective sensor, 100mm sensing range, 10 to 30 VDC PNP light operate, IP 68 with micro DC 4 pin M12 connector.  | 00)     |
| <u>OGS700</u> | <b>Thru-Beam Laser,</b> 18mm stainless steel barrel, 72 mm CLASS 1 laser transmitter, up to 60m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need receiver.</b>   |         |
| <u>OGE700</u> | <b>Thru-Beam Laser,</b> 18mm stainless steel barrel, 72 mm CLASS 1 laser receiver, up to 60m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need transmitter.</b>   | -       |
| <u>0GS701</u> | <b>Thru-Beam Laser,</b> 18mm stainless steel barrel, 72 mm CLASS 1 laser transmitter, up to 2m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need receiver.</b>  | -       |
| <u>OGE701</u> | <b>Thru-Beam Laser,</b> 18mm stainless steel barrel, 72 mm CLASS 1 laser receiver, up to 2m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need transmitter.</b>  |         |
| <u>OGP700</u> | <b>Polarized Retroreflective Laser,</b> 18mm stainless steel barrel, 72 mm polarized retro-reflective CLASS 1 laser, up to 15m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need reflector.</b>                         | -       |
| <u>OGP701</u> | <b>Polarized Retroreflective Laser,</b> 18mm stainless steel barrel, 72 mm polarized retro-reflective CLASS 1 laser, up to 2m range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector. <b>Need reflector.</b>                          | -       |
| <u>OGH700</u> | Background Suppressed Diffuse Reflective Laser, 18mm stainless steel barrel, 72 mm background suppressed diffuse reflective CLASS 1 laser, 20mm – 200mm range, 10 to 36 VDC, PNP, light or dark operate, IP 67 with micro DC 4 pin M12 connector.                       | -       |
| <u>OGD580</u> | <b>Distance measuring laser switch,</b> cube stainless steel body style, 18mm barrel mounting on face, 36mm long, 2 programmable outputs settable from 30mm to 1500 mm, 10 to 30 VDC PNP light operate, IP 67 with micro DC 4 pin M12 connector. <b>IO Link capable</b> |         |
| <u>OGD592</u> | <b>Distance measuring laser switch,</b> cube stainless steel body style, 18mm barrel mounting on face, 36mm long, 2 programmable outputs settable from 30 mm to 300 mm, 10 to 30 VDC PNP light operate, IP 67 with micro DC 4 pin M12 connector. <b>IO Link capable</b> |         |

| Rectangular Photoelectric switch, 35mm x 13 mm x 21mm stainless steel body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. Coolant rated Part # Type Range O65402 Thru beam transmitter Up to 10 m O65404 Thru beam receiver Up to 10 m O65404 Dolarized Retroreflective Up to 5 m O65404 Dolarized Retroreflective Up to 5 m O65404 Diffuse Reflective Up to 500 mm O67404 Diffuse Reflective Up to 500 mm O67404 Diffuse Reflective Up to 500 mm O67404 Diffuse Reflective Up to 500 mm Up to 500 mm O67404 Diffuse Reflective Up to 500 mm O67404 Diffuse Reflective Up to 10 m O67404 Diffuse Reflective Up to 10 m O67404 Diffuse Reflective Up to 10 m O67405 Up to 10 m O67406 Dolarized Retroreflective Up to 10 m O67407 Dolarized Retroreflective Up to 5 m O68301 Thru beam receiver Up to 10 m O67401 Diffuse Reflective Up to 500 mm O67401 Diffuse Reflective Up to 10 m O67500 Thru beam receiver, dark operate Up to 10 m O67500 Thru beam receiver, dark operate Up to 10 sector. Part # Type Renge O55500 Thru beam transmitter Up to 25 m O55500 Thru beam transmitter Up to 25 m O55500 Thru beam transmitter Up to 25 m  |  |
|--|--|
| M12 connector. Coolant rated Part # Type Range  O6\$402 Thru beam transmitter Up to 10 m O6\$404 Thru beam receiver Up to 10 m O6\$404 Thru beam receiver Up to 10 m O6\$404 Polarized Retroreflective Up to 200 mm O6\$404 Diffuse Reflective Up to 500 mm O6\$404 Diffuse Reflective Up to 500 mm  Rectangular Photoelectric, 35mm x 13 mm x 21mm stainless steel body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PVC pigtail micro DC 4 pin M12 connector.  Part # Type Range O6\$301 Thru beam transmitter Up to 10 m O6\$301 Thru beam receiver Up to 10 m O6\$301 Polarized Retroreflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5\$200 Thru beam receiver, dark operate Up to 25 m O5\$200 Thru beam receiver, dark operate Up to 10 m O5\$201 Polarized Retroreflective, light operate Up to 10 m O5\$202 Thru beam receiver, dark operate Up to 10 m O5\$200 Polarized Retroreflective, light operate Up to 10 m O5\$201 Polarized Retroreflective, light operate Up to 1.8 m Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5\$500 Thru beam transmitter Up to 25 m O5\$500 Thru beam transmitter Up to 25 m Up to 25 m Up to 25 m O5\$500 Thru beam transmitter Up to 25 m  |  |
| Part # Type  |  |
| O6x40x  O65402 Thru beam transmitter O6F404 Polarized Retroreflective O6F404 Polarized Retroreflective Up to 10 m O6F404 Polarized Retroreflective Up to 200 mm OF404 Diffuse Reflective Up to 500 mm OF404 Diffuse Reflective Up to 500 mm Rectangular Photoelectric, 35mm x 13 mm x 21mm stainless steel body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PVC pigtail micro DC 4 pin M12 connector. Part # Type Range O6x30x O65301 Thru beam transmitter Up to 10 m O6F301 Polarized Retroreflective Up to 5 m O6H301 Background Suppressed Diffuse Reflective Up to 50 mm O6T301 Diffuse Reflective Up to 50 mm O6T301 Diffuse Reflective Up to 50 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5x200 Thru beam transmitter Up to 25 m O5P200 Polarized Retroreflective, dark operate Up to 10 m O5P201 Polarized Retroreflective, dark operate Up to 10 m OSP200 Background Suppressed Diffuse Reflective, light operate Up to 10 m OSP200 Polarized Retroreflective, dark operate Up to 10 m OSP200 Background Suppressed Diffuse Reflective, light operate Up to 18 m Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5x500 Thru beam transmitter Up to 25 m  |  |
| O6E404 Thru beam receiver Up to 10 m O6P404 Polarized Retroreflective Up to 50 m O6H404 Background Suppressed Diffuse Reflective Up to 500 mm O6T404 Diffuse Reflective Up to 500 mm  Rectangular Photoelectric, 35mm x 13 mm x 21mm stainless steel body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PVC pigtail micro DC 4 pin M12 connector.  Part # Type Range O6S301 Thru beam transmitter Up to 10 m O6F301 Thru beam receiver Up to 10 m O6F301 Polarized Retroreflective Up to 5 m O6H301 Background Suppressed Diffuse Reflective Up to 200 mm O6T301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S200 Thru beam transmitter Up to 25 m O5E200 Thru beam receiver, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S200 Thru beam transmitter Up to 25 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5S500 Thru beam transmitter Up to 25 m O5S500 Thru beam transmitter Up to 25 m  |  |
| O6P404 Polarized Retroreflective Up to 5 m O6H404 Background Suppressed Diffuse Reflective Up to 200 mm O6T404 Diffuse Reflective Up to 500 mm Rectangular Photoelectric, 35mm x 13 mm x 21mm stainless steel body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PVC pigtail micro DC 4 pin M12 connector.  Part # Type Range O6S301 Thru beam transmitter Up to 10 m O6E301 Thru beam receiver Up to 10 m O6H301 Background Suppressed Diffuse Reflective Up to 5 m O6H301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S200 Thru beam transmitter Up to 25 m O5P201 Polarized Retroreflective, dark operate Up to 25 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, S6 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5S500 Thru beam transmitter Up to 25 m O5S500 Thru beam transmitter Up to 25 m   |  |
| O6H404 Diffuse Reflective Up to 200 mm Up to 500 mm  Rectangular Photoelectric, 35mm x 13 mm x 21mm stainless steel body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PVC pigtail micro DC 4 pin M12 connector.  Part # Type Range O6\$301 Thru beam transmitter Up to 10 m O6P301 Polarized Retroreflective Up to 5 m O6H301 Background Suppressed Diffuse Reflective Up to 200 mm O6T301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector.  IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5\$200 Thru beam transmitter Up to 25 m O5\$200 Thru beam transmitter Up to 10 m O5P201 Polarized Retroreflective, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate Polarized Retroreflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5\$200 Thru beam transmitter Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5\$500 Thru beam transmitter Up to 25 m  O5\$500 Thru beam transmitter Up to 25 m  O5\$500 Thru beam transmitter Up to 25 m   |  |
| Rectangular Photoelectric, 56 mm x 18 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PVC pigtail micro DC 4 pin M12 connector.  Part # Type Range  O65301 Thru beam transmitter Up to 10 m  O6E301 Thru beam receiver Up to 10 m  O6901 Polarized Retroreflective Up to 5 m  O6H301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O55200 Thru beam transmitter Up to 25 m  O5F201 Polarized Retroreflective, dark operate Up to 10 m  O5F201 Polarized Retroreflective, dark operate Up to 10 m  O5F201 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate Programmable, IP 67 with micro DC 4 pin M12 connector.  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate Programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O5S500 Thru beam transmitter Up to 25 m  O5S500 Thru beam transmitter Up to 25 m  OFF201 Diffuse Reflective, Up to 25 m  OFF201 Diffuse Reflective, Up to 25 m  OFF201 Diffuse Reflective, Up to 25 m  OFF202 Diffuse Reflective, Up to 25 m  OFF203 Diffuse Reflective, Up to 25 m  OFF204 Diffuse Reflective, Up to 25 m  OFF205 Diffuse Reflective, Up to 25 m  OFF206 Diffuse Reflective, Up to 25 m  OFF207 Diffuse Reflective, Up to 25 m  OFF208 Diffuse Reflective, Up to 25 m  OFF209 Diffuse Reflective, Up to 25 m  OFF201 Diffuse Reflective, Up to 25 m  OFF201 Diffuse Reflective, Up to 25 m  OFF202 Diffuse Reflective, Up to 25 m  OFF203 Diffuse Reflective, Up to 25 m  OFF204 Diffuse Reflective, Up to 25 m  OFF205 Diffuse Reflective, Up to 25 m  OFF206 Diffuse Reflect |  |
| Rectangular Photoelectric, 35mm x 13 mm x 21mm stainless steel body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PVC pigtail micro DC 4 pin M12 connector.  Part # Type Range  O65301 Thru beam transmitter Up to 10 m O66301 Thru beam receiver Up to 10 m O66301 Background Suppressed Diffuse Reflective Up to 200 mm O61301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O55200 Thru beam transmitter Up to 25 m O5P200 Polarized Retroreflective, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m  |  |
| light or dark operate programmable, IP 67 & 68 with 0.3 m PVC pigtail micro DC 4 pin M12 connector.  Part # Type Range  O65301 Thru beam transmitter Up to 10 m  O6E301 Thru beam receiver Up to 10 m  O6P301 Polarized Retroreflective Up to 5 m  O6H301 Background Suppressed Diffuse Reflective Up to 200 mm  O6H301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O5S200 Thru beam transmitter Up to 25 m  O5P201 Polarized Retroreflective, dark operate Up to 10 m  O5P200 Polarized Retroreflective, light operate Up to 10 m  O5P200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O5S500 Thru beam transmitter Up to 25 m  O5S500 Thru beam transmitter Up to 25 m  Thru beam transmitter Up to 25 m  O5S500 Thru beam transmitter Up to 25 m  O5S500 Thru beam transmitter Up to 25 m  Thru beam transmitter Up to 25 m  O5S500 Thru beam transmitter Up to 25 m  Thru beam receiver Up to 25 m   |  |
| Connector.  Part # Type Range  O68301 Thru beam transmitter Up to 10 m O68301 Thru beam receiver Up to 10 m O69301 Polarized Retroreflective Up to 200 mm O69301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector.  IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5\$200 Thru beam transmitter Up to 25 m O5P200 O5P201 Thru beam receiver, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5\$500 Thru beam transmitter Up to 10 m Odark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5\$500 Thru beam transmitter Up to 25 m Thru beam receiver Up to 25 m Thru beam transmitter Up to 25 m Thru beam receiver Up to 25 m Thru beam receiver Up to 25 m   |  |
| O6x30x  Part # Type Range O65301 Thru beam transmitter Up to 10 m O6E301 Thru beam receiver Up to 10 m O69301 Polarized Retroreflective Up to 20 mm O61301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5x200 Thru beam transmitter Up to 25 m O5P200 Polarized Retroreflective, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m Up to 25 m O5E500 Thru beam transmitter Up to 25 m Up to 25 m  |  |
| O6x30x  O65301  Thru beam transmitter O6E301  Thru beam receiver O6B301  O6B301  Thru beam receiver O6B301  O6H301  O6H301  Diffuse Reflective O6H301  O6H301  Diffuse Reflective O6H301  O6H301  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5x200  O5E200  Thru beam transmitter O5P201 O5H200  Polarized Retroreflective, dark operate O5H200 OFH201  OFH201  OFH201  OFH201  OFH201  OFH202  OFH201  OFH202  OFH203  OFH203  OFH203  OFH204  OFH204  OFH205  OFH206  OFH206  OFH207  OFH207  OFH207  OFH207  OFH207  OFH207  OFH207  OFH207  OFH208  OFH |  |
| O6E301 Thru beam receiver Up to 10 m O6P301 Polarized Retroreflective Up to 5 m O6H301 Background Suppressed Diffuse Reflective Up to 200 mm O6T301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S200 Thru beam transmitter Up to 25 m O5P200 Polarized Retroreflective, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m Up to 25 m   |  |
| O6H301 O6H301 O6H301 Background Suppressed Diffuse Reflective Up to 200 mm O6T301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O55200 Thru beam transmitter Up to 25 m O5P200 O5P200 Polarized Retroreflective, dark operate O5P200 Polarized Retroreflective, light operate Up to 10 m O5P201 D5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5S500 Thru beam transmitter Up to 25 m   |  |
| O6H301 Diffuse Reflective Up to 200 mm O6T301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5S200 Thru beam transmitter Up to 25 m O5P200 Polarized Retroreflective, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m   |  |
| O61301 Diffuse Reflective Up to 500 mm  Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O55200 Thru beam transmitter Up to 25 m O5F200 Polarized Retroreflective, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam transmitter Up to 25 m O5E500 Thru beam receiver Up to 25 m   |  |
| Rectangular Laser switches, 42 mm x 13 mm x 21mm plastic body, 10 to 30 VDC, PNP, light or dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector. IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type   |  |
| dark operate programmable, IP 67 & 68 with 0.3 m PUR pigtail micro DC 4 pin M12 connector.  IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O5S200 Thru beam transmitter  O5E200 Thru beam receiver, dark operate  O5P200 Polarized Retroreflective, dark operate  O5P201 Polarized Retroreflective, light operate  O5H200 Background Suppressed Diffuse Reflective, light operate  Up to 10 m  O5H200 Background Suppressed Diffuse Reflective, light operate  Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O5S500 Thru beam transmitter  Up to 25 m  O5E500 Thru beam receiver  Up to 25 m  O5E500 Thru beam receiver  Up to 25 m   |  |
| IO Link capable  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range  O55200 Thru beam transmitter O5P200 Polarized Retroreflective, dark operate O5P201 Polarized Retroreflective, light operate O5H200 Background Suppressed Diffuse Reflective, light operate Up to 10 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam receiver Up to 25 m O5E500 Thru beam receiver Up to 25 m  | 1  |
| Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, IP 67 with micro DC 4 pin M12 connector. Part # Type Range  O55200 Thru beam transmitter Up to 25 m O5F200 Polarized Retroreflective, dark operate Up to 10 m O5P201 Polarized Retroreflective, light operate Up to 10 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam receiver Up to 25 m   | B /  |
| with micro DC 4 pin M12 connector.  Part # Type  |  |
| Part # Type  |  |
| O5x200  Thru beam transmitter O5E200 Thru beam receiver, dark operate O5P200 Polarized Retroreflective, dark operate O5P201 Polarized Retroreflective, light operate O5H200 Background Suppressed Diffuse Reflective, light operate Up to 10 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam receiver Up to 25 m   |  |
| O5F200 Thru beam receiver, dark operate O5P200 Polarized Retroreflective, dark operate O5P201 Polarized Retroreflective, light operate O5H200 Background Suppressed Diffuse Reflective, light operate Up to 10 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam receiver Up to 25 m   |  |
| OSE200 Thru beam receiver, dark operate OSP200 Polarized Retroreflective, dark operate OSP201 Polarized Retroreflective, light operate OSH200 Background Suppressed Diffuse Reflective, light operate Up to 10 m OSH200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector. Part # Type Range OSS500 Thru beam transmitter Up to 25 m OSE500 Thru beam receiver Up to 25 m   | 日日   |
| O5P201 Polarized Retroreflective, light operate Up to 10 m O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range O5S500 Thru beam transmitter Up to 25 m O5E500 Thru beam receiver Up to 25 m  | - 8  |
| O5H200 Background Suppressed Diffuse Reflective, light operate Up to 1.8 m  Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O5S500 Thru beam transmitter Up to 25 m  O5E500 Thru beam receiver Up to 25 m   |  |
| Rectangular Photoelectric, 56 mm x 18 mm x 47 mm plastic body, 10 to 36 VDC, PNP, light or dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O5S500 Thru beam transmitter Up to 25 m  O5E500 Thru beam receiver Up to 25 m   |  |
| dark operate programmable, IP 67 with micro DC 4 pin M12 connector.  Part # Type Range  O5S500 Thru beam transmitter Up to 25 m  O5E500 Thru beam receiver Up to 25 m  |  |
| Part # Type Range  O5x500 Thru beam transmitter Up to 25 m  O5E500 Thru beam receiver Up to 25 m   |  |
| O5x500 Thru beam transmitter Up to 25 m O5E500 Thru beam receiver Up to 25 m   |  |
| O5x500 O5E500 Thru beam receiver Up to 25 m  |  |
| OSES00 Thru beam receiver Up to 25 m   |  |
|  |  |
| O5G500 Retroreflective clear object switch Up to 3 m   |  |
| O5P500 Polarized Retroreflective Up to 10 m  |  |
| O5H500 Background Suppressed Diffuse Reflective Up to 1.8 m  |  |
| Time of Flight Laser switch, Rectangular 46.8mm x 70.3mm x 18.2mm plastic body receiver,   |  |
| diffuse-reflective, range dependent on part number, 18 to 30 VDC, 1 @ PNP light operate and  |  |
| 1 @ PNP dark operate outputs, IP 67 with micro DC 4 pin M12 connector. IO Link capable   |  |
| Part # Description OFD100 Up to 3m range Class 3 laser display in sm   |  |
| OSD100 Up to 2m range, Class 2 laser, display in cm  | The second secon |
| OSD101 Up to 2m range, Class 2 laser, display in inches  | The second secon |
| O5D150 Up to 2m range, Class 1 laser, display in cm O5D151 Up to 2m range, Class 1 laser, display in inches  | The second secon |
| Time of Flight Laser, Class 2 laser (except O1D155), rectangular housing, diffuse-reflective,  | The state of the s |
| range dependent on part number, 18 to 30 VDC, output (s) dependent on individual part, IP 67   | The state of the s |
| with micro DC 4 pin M12 connector. IO Link capable   | The state of the s |
| Doubt H. Donosiusian   | a manufacture of the control of the  |
| O LO MARIE   |  |
| O1D100 Up to 10m range   |  |
| O1D101 Up to 10m range, background suppression 10 - 100m   |  |
| O1D155 Up to 6m range, Class 1 laser   |  |
| Time of Flight Laser switch, Class 1 laser, 30mm metal barrel, diffuse-reflective, 2 meter range   |  |
| OID250 adjustable via setting ring, 18 to 30 VDC, 1 @ PNP light operate and 1 @ PNP dark operate   |  |
| outputs, IP 67 with micro DC 4 pin M12 connector. IO Link capable  |  |

| <u>OID254</u>     | <b>Time of Flight Laser switch</b> , Class 1 laser, 30mm metal barrel, diffuse-reflective, 2 meter range adjustable via software, 18 to 30 VDC, 1 @ PNP light operate and 1 @ PNP dark operate outputs, IP 67, IP68 & IP69K with micro DC 4 pin M12 connector. <b>IO Link capable</b>                  | E        |
|-------------------|--|----------|
| <u>OPD100</u>     | <b>PMD Profiler for object profile checking</b> , 88mm x 65mm x 28.5 rectangular metal housing, 150 – 300mm range, 10 to 36 VDC, PNP, 2 configurable NO or NC outputs, with micro DC 4-pin connector. <b>IO Link capable</b>   |          |
| <u>OBF500</u>     | <b>Fiber optic amplifier,</b> 36mm x 15mm x 60mm rectangular plastic housing fiber optic amplifier for plastic fibers, 10 to 36 VDC, PNP, light or dark operate with micro DC 4-pin connector.   |          |
| <u>OBF504</u>     | <b>Fiber optic amplifier,</b> 36mm x 15mm x 60mm rectangular plastic housing fiber optic amplifier for metal fibers, 10 to 36 VDC, PNP, light or dark operate with micro DC 4-pin connector.   |          |
| Fibers for OBF500 | E20775, E20773, E20776, E20774, E20766, E20765, E20767, E20768, E20715, E20748, E20749, E21107, E20712, E21106, E20639, E20645, E20651, E20648, E20654, E20633, E21105, E20711, E20758, E20782, E20714, E20603, E21101, E21103, E20609, E20615, E20606, E21102, E20753, E21104, E20752, E20689, E20757 | See Link |
| Fibers for OBF504 | E20824, E20826, E20829, E20822, E20830, E20825, E20827, E20828, E20823   | See Link |
| OPU20x            | Optical fork sensor, zinc diecast housing, DC PNP, light-on/dark-on mode selectable with 3 pin M8 connector. IO Link capable  Part # Width(mm) Depth(mm) Smallest detectable object(mm)  OPU201 20 25 .4  OPU202 30 35 .5  OPU203 50 55 .5  OPU204 80 55 .5  OPU205 120 60 .8                          |          |
| OPL200            | Optical angle sensor, zinc diecast housing, DC PNP, light-on/dark-on mode selectable with 3 pin M8 connector. 50mm(x) x 50mm (y) x 60mm (z)5mm smallest detectable object. IO Link capable   | -        |
| <u>OPL201</u>     | Optical angle sensor, zinc diecast housing, DC PNP, light-on/dark-on mode selectable with 3 pin M8 connector. 80mm(x) x 80mm (y) x 100mm (z)7mm smallest detectable object. IO Link capable  | L        |

## **Electrical Controls, I/O Device, Ultrasonic**

| ifm#   | Description  | Picture |
|--------|--|---------|
| UGTxxx | 18mm metal barrel, diffuse reflective, 10 to 30 VDC, 1 @ PNP, light or dark operate programmable or IO Link output with micro DC 4 pin M12 connector. IO Link capable  Part # Sensing Range (mm)  UGT524 | An ag   |
| UGTxxx | 18mm metal barrel, diffuse reflective, 10 to 30 VDC, 1 @ PNP, light or dark operate programmable or IO Link output with micro DC 4 pin M12 connector. IO Link capable Part # Sensing Range (mm)  UGT592  |         |

## **Electrical Controls, I/O Device, Accessories**

| ifm#          | Description  | Picture    |
|---------------|--|------------|
| E11521        | Plastic snap clamp for 8mm proximity sensors       | <b>A</b> - |
| E11047        | Plastic snap clamp for 12mm proximity sensors      |            |
| E11048        | Plastic snap clamp for 18mm proximity sensors      | 0.14       |
| E11049        | Plastic snap clamp for 30mm proximity sensors      |            |
| E10848        | Mounting sleeve, short, for 8mm proximity sensors  |            |
| E10806        | Mounting sleeve, short, for 12mm proximity sensors | TA         |
| E10807        | Mounting sleeve, short, for 18mm proximity sensors |            |
| E10808        | Mounting sleeve, short, for 30mm proximity sensors | C.         |
| E10849        | Mounting sleeve, short, for 8mm proximity sensors  | 40         |
| E10741        | Mounting sleeve, long, for 12mm proximity sensors  |            |
| E10742        | Mounting sleeve, long, for 18mm proximity sensors  |            |
| E10743        | Mounting sleeve, long, for 30mm proximity sensors  | C. V.      |
| <u>L10743</u> | Mounting Siceve, long, for Somm proximity sensors  |            |
| E20718        | Short swivel bracket for OG sensors                |            |
| E20719        | Long swivel bracket for OG sensors                 |            |
| E20867        | Rail mount short swivel bracket for OG sensors     | FO         |
| E20866        | Rail mount long swivel bracket for OG sensors      |            |
| E20873        | Short swivel bracket for OI sensors                | 10         |
| <u>E20874</u> | Long swivel bracket for OI sensors                 | 70         |
| E20875        | Rail mount long swivel bracket for OI sensors      | <b>FIO</b> |
| E21079        | Rail swivel bracket for O1D sensors                |            |

| <u>E21083</u> | Swivel bracket for O5 sensors                |   |
|---------------|--|---|
| <u>E21084</u> | Freestanding mounting bracket for O5 sensors |   |
| <u>E10077</u> | Mounting bracket for PN and TR switches      | 0 |

## **Electrical Controls, I/O Device, Pressure**

| ifm#          | Description   | Picture  |
|---------------|---|--|
|               | <b>Pressure switch,</b> 2 color numerical rotatable display, 2 NO or NC, PNP or NPN outputs, female |  |
|               | G1/4 BSPP Port, IP 67 with micro DC 4 pin M12 connector. IO Link capable                            | n an II  |
|               | <u>PN7160</u> 0 – 600 bar   |  |
|               | <u>PN7070</u> 0 – 400 bar   |  |
|               | <u>PN7071</u> 0 – 250 bar   | A  |
| PN7xxx        | PN7092 0 – 100 bar  | District Control of the Control of t |
|               | <u>PN7093</u> 0 – 25 bar  |  |
|               | <u>PN7094</u> -1 – 10 bar   |  |
|               | <u>PN7096</u> 0 – 2.5 bar   |  |
|               | <u>PN7097</u> 0 – 1 bar   | 3  |
|               | <u>PN7099</u> -1 – 1 bar (vacuum)   |  |
|               | <b>Pressure switch,</b> 2 color numerical rotatable display, 2 NO or NC, PNP or NPN outputs, male   | 12 E W   |
|               | G1/4 BSPP Port, IP 67 with micro DC 4 pin M12 connector. IO Link capable                            | THE REAL PROPERTY.   |
|               | <u>PN7560</u> 0 – 600 bar   | 069  |
|               | <u>PN7570</u> 0 – 400 bar   |  |
|               | <u>PN7571</u> 0 – 250 bar   | Subku Su   |
| PN7xxx        | <u>PN7592</u> 0 – 100 bar   |  |
|               | <u>PN7593</u> 0 – 25 bar  |  |
|               | <u>PN7594</u> -1 – 10 bar   |  |
|               | <u>PN7596</u> 0 – 2.5 bar   | A  |
|               | <u>PN7597</u> 0 – 1 bar   |  |
|               | <u>PN7099</u> -1 – 1 bar (vacuum)   | 4)   |
|               | <b>Pressure Transducer,</b> 4-20ma analog, G1/4 BSPP female Process Fitting, M12 Connector          |  |
|               | PA3021 0 – 100 bar  |  |
| PA302x        | PA3022 0 – 100 bar  | C  |
|               | <u>PA3023</u> 0 – 25 bar  |  |
|               | PA3024 0 – 10 bar   |  |
|               | Differential Pressure Switch, analog input, G1/4 BSPP female Process Fitting, M12, 8 pin            |  |
|               | connector   | 00   |
| PNI02x        | PNI022 0 – 100 bar system pressure  |  |
|               | PNI023 0 – 25 bar system pressure   |  |
|               | PNI024 0 – 10 bar system pressure   |  |
|               | E11566 T-splitter for PNI sensors   |  |
| PS7570        | Part Seated Pressure Switch. Numerical display, supply pressure 0.7 to 1.5 bar. 2 NO or NC,         |  |
| <u>F3/3/U</u> | PNP or NPN outputs, IP 65 with micro DC 4 pin M12 connector.  |  |
|               |   | 6  |

| PN2xxx        | Analog Pressure Switch, 2 color numerical rotatable display, 1 NO or NC, PNP or NPN outputs, 1 NO or NC, PNP or NPN outputs, second output programmable PNP or NPN or scalable analog 0 – 10 VDC or 4 – 20 ma output, G1/4 BSPP female port, IP 67 with micro DC 4 pin M12 connector. IO Link capable r.  PN2070 0 – 400 bar PN2071 0 – 250 bar PN2092 0 – 100 bar PN2093 0 – 25 bar PN2094 -1 – 10 bar PN2096 0 – 2.5 bar PN2097 0 – 1 bar PN2097 0 – 1 bar PN2098125 – .250 bar PN2099 -1 – 1 bar (vacuum)       | A ST TO ST T |
|---------------|--|--|
| PN2xxx        | Analog Pressure Switch, 2 color numerical rotatable display, 1 NO or NC, PNP or NPN outputs, 1 NO or NC, PNP or NPN outputs, second output programmable PNP or NPN or scalable analog 0 – 10 VDC or 4 – 20 ma output, G1/4 BSPP male port, IP 67 with micro DC 4 pin M12 connector. IO Link capable  PN2560 0 – 600 bar  PN2570 0 – 400 bar  PN2571 0 – 250 bar  PN2592 0 – 100 bar  PN2593 0 – 25 bar  PN2594 -1 – 10 bar  PN2596 0 – 2.5 bar  PN2597 0 – 1 bar  PN2598125 – .250 bar  PN2599 -1 – 1 bar (vacuum) |  |
| E10077        | Mounting bracket for PN and TR switches  | 60   |
| <u>E11566</u> | T splitter for PNI differential pressure switch  | 30,  |

## **Electrical Controls, I/O Device, Flow**

| ifm#          | Description   |   | Picture |
|---------------|---|---|---------|
| <u>SI5010</u> | Flow switch, 10 LED display, solid state operation, PNP normally open or normally closed output, micro 4 pin connector, 20 to 36 VDC, 300 bar over-pressure rating, standard response unit, IP 67 with micro DC 4 pin M12 connector. Operating range 3300cm/sec. Need mounting accessory. IO Link capable   |   |         |
| SAxxxx        | Flow Meters with numerical display for water, Programmable (PNP) outputs, Output 1: Switch Switching NO/NC (flow or temperature), analoteach. 4 pin M12 Connector. Measuring range capable  SA2000 Connection: Male G ½  SA5000 Connection: M18 x 1.5 for adapter  SA4100 Connection: Compression fitting  SA4300 Connection: Compression fitting | ching NO/NC, frequency or IO Link. Output 2: og (flow or temperature), frequency or external  |         |
| <u>SM4000</u> | or output or pulse output, 1 programmable ou  | tings, 5-3000ml range, 1 NO or NC PNP or NPN atput as a second PNP or NPN output, 0-10V or re, 16 bar pressure rating -10° to 70°C media, 19 tor. Conductive medias only. IO Link capable |         |

|               | Magnetic      | Industive Flour Motor 1 NC        | or NC PNP or NPN or output or pulse output, 1                 |          |
|---------------|---------------|-----------------------------------|---|----------|
|               | _             | -                                 | P or NPN output, 0-10V or 4-20 ma analog output <b>for</b>    |          |
|               |               |                                   | rating -10° to 70°C media, 19 to 36 VDC, IP 67 with 4 pin     |          |
| SMx020        |               | .2 connector. <b>Conductive m</b> | - · · · · · · · · · · · · · · · · · · ·                       |          |
| SIVIXUZU      |               | Connection: Male G ½              | 0.05 – 35.0 l/min range                                       |          |
|               |               |                                   | ·   |          |
|               |               | Connection: Male G ¾              |   |          |
|               |               | Connection: Male G 1              |   |          |
|               | _             |                                   | O or NC PNP or NPN or output or pulse output, 1               |          |
|               |               | •                                 | P or NPN output, 0-10V or 4-20 ma analog output <b>for</b>    | CT CT    |
| SMx000        |               |                                   | rating -10° to 70°C media, 19 to 36 VDC, IP 67 with 4 pin     |          |
|               |               | 2 connector. <b>Conductive m</b>  |   | 1        |
|               |               | Connection: Male G 2              | 5 – 300 l/min range   |          |
|               | _             | Connection: Male G 2              | 5 – 600 l/min range   |          |
|               |               |                                   | out 1 with scalable 0-10V or 4-20 ma analog flow output,      |          |
|               | -             |                                   | ma analog -20° to 80°C temperature output, media 16           |          |
|               | -             | _                                 | a temperature, 19 to 36 VDC, IP 67 with 4 pin micro M12       | 1, 11010 |
| SMx004        |               | r. Conductive medias only.        | 14  |          |
|               |               | Connection: Male G ½              | 0.1 – 25.0 l/min range  | 10 E     |
|               | SM7004        | Connection: Male G ¾              | 0.2 – 50.0 l/min range  | 414      |
|               | SM8004        |                                   | 0.2 – 100.0 l/min range                                       |          |
|               | _             | -                                 | out 1 with scalable 0-10V or 4-20 ma analog flow output,      | 夏北 董     |
|               | -             |                                   | ma analog -20° to 80°C temperature output, media 16           | 6        |
| SMx004        | -             | _                                 | a temperature, 19 to 36 VDC, IP 67 with 4 pin micro M12       | 2        |
|               |               | r. Conductive medias only.        |   |          |
|               | <u>SM9004</u> | Connection: Male G 2              | 5 – 300 l/min range   |          |
|               | <u>SM2004</u> | Connection: Male G 2              | 5 – 600 l/min range   |          |
|               |               |                                   | measuring range, 1 NO or NC PNP or NPN or output or           |          |
|               |               |                                   | t as a second PNP or NPN output, 0-10V or 4-20 ma             |          |
|               | _             |                                   | re, 16 bar pressure rating -10° to 80°C media, 19 to 36       | Hote @   |
| SUxxxx        |               |                                   | ector, G3/4 flat seal process connection. Use in water,       |          |
|               |               | glycol and oil.                   | 4. 501/win was a  |          |
|               | <u>SU7000</u> | Connection: G ¾                   | .1 – 50 l/min range   |          |
|               | SU8000        | Connection: G 1                   | .2 – 100 l/min range  |          |
|               | <u>SU9000</u> | Connection: G 1 ¼                 | .4 – 200 l/min range  |          |
|               |               | ' '                               | PNP or NPN, pulse output or <b>IO Link</b> . Output 2: PNP or | 1.0      |
|               |               |                                   | output for flow, pressure or temperature, -10° to 60°C,       |          |
|               |               | •                                 | 67 with 4 pin micro M12 connector. <b>IO Link capable</b>     |          |
| <u>SDx500</u> | SD5500        | Connection: G ¼                   | .8 – 250 l/min range  |          |
|               | SD6500        | Connection: R ½                   | 4 – 1250 l/min range  | 0/0      |
|               | SD8500        | Connection: R 1                   | 14 – 3750 l/min range   |          |
|               | SD9500        | Connection: R 1 ½                 | 20 – 6830 l/min range   |          |
|               | <u>SD2500</u> | Connection: R 2                   | 40 – 11,670 l/min range                                       |          |

# **Electrical Controls, I/O Device, Level Sensor**

| ifm#          | Description  | Picture |
|---------------|--|---------|
| <u>LK102x</u> | Level switch, 0° to 90°C temperature monitoring, 2 @ PNP NO or NC outputs, 18 to 30 VDC, IP67 with 4 pin micro M12 connector. IO Link capable.  LK1022 264mm probe length LK1023 472mm probe length T28mm probe length   |         |
| <u>LK812x</u> | Level switch, 0° to 90°C temperature monitoring, 2 @ PNP NO or NC outputs, 18 to 30 VDC, IP67 with 4 pin micro M12 connector. IO Link capable.  LK8122 264mm probe length LK8123 472mm probe length LK8124 728mm probe length  | F       |
| <u>LT802x</u> | Level and temperature switch, 0° to 90°C temperature monitoring, 4 @ PNP NO or NC outputs of type 2 @ level, 2 @ temperature, 18 to 30 VDC, IP 67 with 8 pin micro M12 connector. IO Link capable.  LT8022 264mm probe length LT8023 472mm probe length T28mm probe length T-Splitter for LK, LR and LT 8 pin connectors |         |
| <u>LT302x</u> | Level and temperature switch, 0° to 90°C temperature monitoring, 1 @ PNP NO or NC outputs, 1 @ analog output, 18 to 30 VDC, IP 67 with 4 pin micro M12 connector. IO Link capable.  LT3022 264mm probe length LT3023 472mm probe length LT3024 782mm probe length  |         |
| <u>LR2050</u> | Guided Wave Radar level Sensor, numerical display, 150mm to 1600mm probe length, 1 @ NO or NC PNP outputs, 1 @ NO or NC PNP or analog outputs, 12 to 30 VDC, IP 67 with 4 pin micro M12 connector. IO Link capable.  | -       |
| <u>LR7000</u> | Guided Wave Radar level Sensor, numerical display, 150mm to 1600mm probe length, 2 NO or NC PNP outputs, 12 to 30 VDC, IP 67 with 4 pin micro M12 connector. <b>IO Link capable.</b>   | -       |
| <u>LR8000</u> | Guided Wave Radar level Sensor, numerical display, 150mm to 1600mm probe length, 4 NO or NC PNP outputs, 12 to 30 VDC, IP 67 with 4 pin micro M12 connector. IO Link capable.  |         |
| E432xx        | Probes for LR switches  E43203 240 mm long  E43204 450 mm long  E43205 700 mm long  E43207 1000 mm long  E43208 1200 mm long  E43209 1400 mm long  E43210 1600 mm long   | /       |
| E432xx        | Coxial tubes for LR level sensors, G ¾ process connection.  E43211 240 mm long  E43212 450 mm long  E43213 700 mm long  E43214 1000 mm long  E43215 1200 mm long  E43216 1400 mm long  E43217 1600 mm long  Point level sensor, 316L stainless steel housing with PEEK tip, DC PNP, programmable NO or                   |         |
| <u>LMT100</u> | NC output with 4 pin M12 connector. Factory output setting complimentary normally open   |         |

|               | and closed output with G ½ mounting, 12mm insertion length, Factory Media Setting: Water based fluids. IO Link capable.   |            |
|---------------|---|------------|
| LMC100        | Point level sensor, 316L stainless steel housing with PEEK tip, DC PNP, programmable NO or NC output with 4 pin M12 connector. Factory output setting complimentary normally open and closed output. G ½ mounting on front of switch, 12mm insertion length, Factory Media Setting: Water based fluids. IO Link capable.      |            |
| LMC400        | Point level sensor, 316L stainless steel housing with PEEK tip, DC PNP, programmable NO or NC output with 4 pin M12 connector. Factory output setting complimentary normally open and closed output. G ½ mounting at back of switch. IO Link capable.   | ES         |
| <u>LMC502</u> | Point level sensor, 316L stainless steel housing with PEEK tip, DC PNP, 2 programmable NO or NC outputs with 4 pin M12 connector. Factory output setting complimentary normally open and closed output. ½" NPT mounting on front of switch, 38mm Insertion length, Factory Media Setting: Water based fluid. IO Link capable. | <b>(</b>   |
| <u>E11627</u> | T splitter, 8 pin female M12 to 2 @ 4 pin M12 male connectors.  | <b>30.</b> |

# **Electrical Controls, I/O Device, Temperature**

| ifm#          | Description   | Picture |
|---------------|---|---------|
| <u>TN7x11</u> | Self-contained numerical display control monitor, -40° to 150°C deg F Set Point range, 18 to 30 VDC, IP 67 with 4 pin micro M12 connector. Need mounting accessories. IO Link capable.  TN7511 2 NO or NC PNP or NPN outputs  TN2511 1 NO or NC PNP output, 1 programmable 0-10V or 4-20 ma analog output                       |         |
| <u>TR2439</u> | <b>2 color numerical display control monitor</b> , -100° to 600°C deg C Set Point range, 1 NO or NC PNP or NPN outputs, second output programmable PNP or NPN or scalable analog 0 – 10 VDC or 4 – 20 ma output, 18 to 30 VDC, IP 67 with 4 pin micro M12 connector. Need RTD and mounting accessories. <b>IO Link capable.</b> |         |
| <u>TR7439</u> | <b>2 color numerical display control monitor,</b> -100° to 600°C deg C Set Point range, 2 NO or NC PNP or NPN outputs, 18 to 32 VDC, IP 67 with 4 pin micro M12 connector. Need RTD and mounting accessories. <b>IO Link capable.</b>   |         |
| TSxxx         | PT100 & PT1000 remote mount RTDs for TR temperature monitors, use only BSPP types if applicable.  |         |
| TTxxx & TMxxx | PT100 & PT1000 remote mount RTDs for TR temperature monitors, use only BSPP types if applicable.  |         |
| E10077        | Mounting bracket for PN and TR switches   |         |
| <u>TW2000</u> | Infrared numerical display temperature sensor, M30 barrel, 0999.5 °C range, 1 NO or NC PNP output, second scalable analog 4 – 20 ma output, 18 to 32 VDC, IP 65 with 4 pin micro M12 connector. IO Link capable.  |         |
| <u>TW2100</u> | Infrared numerical display temperature sensor, M30 barrel, 0999.5 °C range, 1 NO or NC PNP output, second scalable analog 4 – 20 ma output, 18 to 32 VDC, IP 65 with 4 pin micro M12 connector. IO Link capable.  |         |

## Electrical Controls, I/O Device, Humidity, Oil Particle and Conductivity

| ifm#          | Description   | Picture |
|---------------|---|---------|
| <u>LDH100</u> | Oil humidity sensor, no display, G 3/4 process connection, 2 4-20 ma analog outputs monitoring relative humidity and temperature, 9 to 33 VDC, IP 67 with 8 pin micro M12 connector.  |         |
| <u>LDP100</u> | Photoelectric particle counter, for oil applications, M16 x 2 process connection, 1 digital and 1 @ 4-20 ma analog outputs, 9 to 33 VDC, IP 67 with 8 pin micro M12 connector.  |         |
| <u>LDL100</u> | Conductivity sensor, G ½ process connection, 1 @ IO Link and 1 @ analog output, 18 to 30 VDC, IP 68 & 69K with 4 pin M12 Connector. Measuring range of 10015,000 $\mu$ S/cm. <b>IO Link capable</b>                                   |         |
| <u>LDL200</u> | Conductivity sensor, G 1 external thread Aseptoflex Vario process connection, 1 @ IO Link and 1 @ analog output, 18 to 30 VDC, IP 68 & 69K with 4 pin M12 Connector. Measuring range of 1001000000 $\mu$ S/cm. <b>IO Link capable</b> |         |
| <u>LDL210</u> | Conductivity sensor, G 1 external thread sealing cone process connection, 1 @ IO Link and 1 @ analog output, 18 to 30 VDC, IP 68 & 69K with 4 pin M12 Connector. Measuring range of $1001000000~\mu$ S/cm. IO Link capable            |         |

## **Electrical Controls, I/O Device, Vibration Sensor**

| ifm#          | Description  | Picture |
|---------------|--|---------|
| <u>VSA001</u> | <b>Vibration sensor</b> , Operating voltage: 9 V DC, Current consumption: 15 mA, 010mA, analogue, Quick disconnect, M12 connector, for connection to external diagnostic electronics, Housing material: housing: stainless steel 316L / 1.4404   | A STORY |
| <u>VSA002</u> | <b>Vibration sensor</b> , Operating voltage: 9 V DC, Current consumption: 15 mA, Cable with connector, PUR-cable with M12 connector, for connection to external diagnostic electronics, Housing material: housing: stainless steel 316L / 1.4404   | -       |
| <u>VSA004</u> | <b>Vibration sensor</b> , Operating voltage: 9 V DC, Current consumption: 15 mA, Cable, PUR cable, for connection to external diagnostic electronics type VSExxx, Housing material: housing: stainless steel 316L / 1.4404   |         |
| <u>VSA005</u> | <b>Vibration sensor</b> , Operating voltage: 9 V DC, Current consumption: 15 mA, Cable, PUR cable, for connection to external diagnostic electronics type VSExxx, Housing material: housing: stainless steel 316L / 1.4404   |         |
| <u>VSA006</u> | Vibration sensor for VSE control monitor.  |         |
| <u>VSE002</u> | Diagnostic electronics for vibration sensors, Operating voltage: 24 V DC ± 20 % )*, Current consumption: 100 (24 V) mA, 2 digital alarm outputs (PNP 100 mA) or 1 digital output and 1 analog output 0/420/22 mA, Combicon connection, Combicon, Ethernet interface, Housing material: PA  |         |
| <u>VSE100</u> | Diagnostic electronics for vibration sensors, Operating voltage: 24 V DC ± 20 %, Current consumption: 100 (24 V) mA, 2x digital alarm outputs (PNP 100 mA) or 1x digital alarm output + 1x analogue output 0/420/22 mA / 010 V 8x digital outputs/inputs (freely configurable) (PNP 100 mA), Combicon connection, Combicon, 4 sensor inputs 010 mA, Ethernet interface, Housing material: PA |         |
| VSE1xx        | Vibration Control monitor, systems for vibration monitoring and diagnostics, diagnostic electronics.  VSE150 PROFINET protocol  VSE151 EtherNet/IP protocol  |         |
| EC2080        | Ethernet connection cable, R360/PDM360/CROSS-CABLE   | W W     |

**VVB001** 

Vibration sensor; PNP/NPN; (configurable); normally open / closed; (configurable); Measuring range of vibration 0...50 g; 0...45 mm/s; Frequency range 2...10000 Hz; Ambient temperature - 30...80 °C; IP 67; IP 68; IP 69K; 12mm 4 pin connector. **IO Link capable.** 



## **Electrical Controls, I/O Block, IO-Link Master**

| ifm#   | Description   | Picture               |
|--------|---|-----------------------|
|        | IO Link EtherNet/IP Masters IP 67, Imbedded LR Agent                      |                       |
|        | AL1120 4-port, A code M12, 4 pin power supply. 4 @ Class A Ports          | •) (•                 |
|        | AL1122 8-port, A code M12, 4 pin power supply. 8 @ Class A Ports          | <b>(a)</b>            |
| AL112x |   | 0)(0                  |
|        | Standard Ethernet port for communication.                                 | 0)(0                  |
|        | Standard M12 "A" Code Port for power.                                     | 0) (0                 |
|        | Input / Output ports meet classification for Class 2 Power Supply circuit | 0)'(0                 |
|        | IO Link EtherNet/IP Masters IP 67 & 69K, Imbedded LR Agent                | <b>S</b>              |
|        | AL1121 4-port, A code M12, 4 pin power supply. 4 @ Class A Ports          | •) (•                 |
|        | AL1123 8-port, A code M12, 4 pin power supply. 8 @ Class A Ports          | <b>©</b> ,            |
| AL112x |   | 0)(0                  |
|        | Standard Ethernet port for communication.                                 | <ul><li>(o)</li></ul> |
|        | Standard M12 "A" Code Port for power.                                     | ©) (©                 |
|        | Input / Output ports meet classification for Class 2 Power Supply circuit | (T)                   |
|        | IO Link PROFINET Masters IP 67  |                       |
|        | AL1100 4-port, A code M12, 4 pin power supply. 4 @ Class A Ports          | •) (•                 |
|        | AL1102 8-port, A code M12, 4 pin power supply. 8 @ Class A Ports          | <b>(a)</b>            |
| AL110x |   | 0)(0                  |
|        | Standard Ethernet port for communication.                                 | 0)(0                  |
|        | Standard M12 "A" Code Port for power.                                     | 0, 0                  |
|        | Input / Output ports meet classification for Class 2 Power Supply circuit |                       |
|        | IO Link PROFINET Masters IP 67 & 69K                                      |                       |
|        | AL1101 4-port, IP67. A code M12 4 pin power supply. 4 @ Class A Ports     | •) (•                 |
|        | AL1103 8-port, IP67. A code M12 4 pin power supply. 8 @ Class A Ports     | <b>B</b> )            |
| AL110x |   | 0)(0                  |
|        | Standard Ethernet port for communication.                                 | 0) (0                 |
|        | Standard M12 "A" Code Port for power.                                     | 0) (0                 |
|        | Input / Output ports meet classification for Class 2 Power Supply circuit | 0)(1                  |

## **Electrical Controls, Safety, Switch**

| ifm#          | Description   | Picture  |
|---------------|---|----------|
| <u>GF711S</u> | Non-contact fail-safe inductive sensor, M 12 x 1, metal thread, 4-wire, DC, operating voltage: 24 V DC (19.230 V DC), quick disconnect, M12 connector, complies with the requirements: SIL 2 (IEC 61508), SILcl 2 (IEC 62061) & PL d (ISO 13849-1).  0.5 – 4 mm enable zone, non-flush mount.                           |          |
| <u>GG712S</u> | Non-contact fail-safe inductive sensor, M 18 x 1, metal thread, 4-wire, DC, operating voltage: 24 V DC (19.230 V DC), quick disconnect, M12 connector, complies with the requirements: SIL 2 (IEC 61508), SILcl 2 (IEC 62061) & PL d (ISO 13849-1).  1 – 5 mm enable zone, flush mount.                                 |          |
| <u>GG851S</u> | Non-contact fail-safe inductive sensor, M 18 x 1, metal thread, 4-wire, DC, operating voltage: 24 V DC (19.230 V DC), quick disconnect, M12 connector, complies with the requirements: SIL 2 (IEC 61508), SILcl 2 (IEC 62061) & PL d (ISO 13849-1). >10mm enable zone, flush mount.                                     |          |
| <u>GG711S</u> | Non-contact fail-safe inductive sensor, M 18 x 1, metal thread, 4-wire, DC, operating voltage: 24 V DC (19.230 V DC), quick disconnect, M12 connector, complies with the requirements: SIL 2 (IEC 61508), SILcl 2 (IEC 62061) & PL d (ISO 13849-1).  1 – 8 mm enable zone, non-flush mount.                             |          |
| <u>GI712S</u> | Non-contact fail-safe inductive sensor, M30 x 1.5, metal thread, 4-wire, DC, operating voltage: 24 V DC (19.230 V DC), Quick disconnect, M12 connector, Complies with the requirements: SIL 2 (IEC 61508), SILcl 2 (IEC 62061) & PL d (ISO 13849-1).  1 – 10 mm enable zone, flush mount.                               | <b>4</b> |
| <u>GI711S</u> | Non-contact fail-safe inductive sensor, M 18 x 1, metal thread, 4-wire, DC, operating voltage: 24 V DC (19.230 V DC), quick disconnect, M12 connector, complies with the requirements: SIL 2 (IEC 61508), SILcl 2 (IEC 62061) & PL d (ISO 13849-1). 1 – 15 mm enable zone, non-flush mount.                             | -        |
| <u>GI701S</u> | Non-contact fail-safe inductive sensor, M30 x 1.5, threaded type, 4-wire, DC, Operating voltage: 24 V DC (19.230 V DC), quick disconnect, M12 connector, complies with the requirements: SIL 3 (IEC 61508), SILcl 3 (IEC 62061), Category 4 (ISO 13849-1) & PL e (ISO 13849-1). 6 – 12 mm enable zone, non-flush mount. |          |
| <u>GM701S</u> | Non-contact fail-safe inductive sensor, rectangular, plastics, 4-wire, DC, operating voltage: 24 V DC (19.230), quick disconnect, M12 connector, complies with the requirements: SIL 3 (IEC 61508), SILcl 3 (IEC 62061), Category 4 (ISO 13849-1) 4 & PL e (ISO 13849-1).  10 – 15 mm enable zone, non-flush mount.     |          |
| <u>GM705S</u> | Non-contact fail-safe inductive sensor, rectangular, plastics, 4-wire, DC, operating voltage: 24 V DC (19.230), quick disconnect, M12 connector, complies with the requirements: SIL 3 (IEC 61508), SILcl 3 (IEC 62061), Category 4 (ISO 13849-1) & PL e (ISO 13849-1). 4 – 20 mm enable zone, non-flush mount.         |          |
| MN700S        | RFID-coded safety sensor, Sensing range: 12 mm, non-flush mountable, 5-wire, DC PNP, Operating voltage: 20,426,4 V DC, Current consumption: 50 mA, 2 x OSSD, 1 x PNP, Quick disconnect, M12 connector, Coded target, Housing material: PA connector: stainless steel (1.4301)   | 0 0      |
| MN701S        | RFID-coded safety sensor, Sensing range: 12 mm, non-flush mountable, 8-wire, DC PNP, Operating voltage: 20,426,4 V DC, Current consumption: 50 mA, 2 x OSSD, 1 x PNP, Quick disconnect, M12 connector, Uniquely coded actuator, Housing material: PA connector: stainless steel (1.4301)                                | 0        |
| MN702S        | RFID-coded safety sensor, Sensing range: 12 mm, non-flush mountable, 8-wire, DC PNP, Operating voltage: 20,426,4 V DC, Current consumption: 50 mA, 2 x OSSD, 1 x PNP, Quick disconnect, M12 connector, Codable actuator, Housing material: PA connector: stainless steel (1.4301)                                       | 0        |
| <u>MN202S</u> | Magnetically coded sensor; 5 mm; non-flush mountable; 8mm, 4 pin connector.   | 0 0      |

MN502S

Magnetically coded sensor; 8 mm; non-flush mountable; 8mm, 4 pin connector.



### **Contacts**

### **FCA NAFTA Contact**

### **Steve Burris Senior Manager Powertrain Controls**

Mobile: +1-765-438-6922

E-mail address: mike.sutherland@ifm.com

### ifm USA

Mike Sutherland, FCA NAFTA Account Manager

Mobile: +1-248-766-1466

E-mail address: mike.sutherland@ifm.com

Japan

Tadataka Une, Sales Manager Telephone: +81 (0) 3-5255-5508 Mobile: +81 (0) 902314-3983

E-mail address: Tadataka.Une@ifm.com

### **Germany & European Countries not listed**

Klaus-Peter Prause, Global Key Automotive

Telephone: +49 201 24 22 - 12 13

Mobile: +49 151 14817604

E-mail address: klaus-peter.prause@ifm.com

#### Mexico

Martín Mánuel, NBSE – Automotive Industry Telephone. +52 8 (81) 8040.3535 ext. 1135

Mobile: +52 (81) 1759 3890

E-mail address: Martin.Manuel@ifm.com

#### Korea

Andreas Yongmuk Kim, Managing Director

Mobile: +82 10 8544 0299

E-mail address: andreas.kim@ifm.com

### India

Arvind Talange, General Manager, India Telephone: +91 (231) 2 67 27 70

Mobile: +919822035429

E-mail address: arvind.talange@ifm.com

#### Italy

Alberto Cicognini, Sales Manager (NVL) Telephone: +39 (039) 6 89 99 82 Mobile: +39 (348) 829 20 04

E-mail address: andrea.bedetti@ifm.com

### **France**

Michel Astier, Key Account Manager

Mobile: +33 6 07 06 99 18

E-mail address: michel.astier@ifm.com