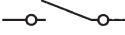
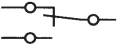
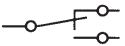


Inductive sensors

M 12 x 1

|                                                                                    |                                                                                                                                                                                      |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated operating distance                                                           |                                                                                                                                                                                      |
| Mounting                                                                           | flush  /non-flush  |
| Switching functions                                                                |                                                                                                                                                                                      |
|    | Model description                                                                                                                                                                    |
| Part number                                                                        |                                                                                                                                                                                      |
| Normally-open (NO)                                                                 | Wiring diagram (page/pos.)                                                                                                                                                           |
| Stock status: Ex stock/Built to order                                              |                                                                                                                                                                                      |
|    | Model description                                                                                                                                                                    |
| Part number                                                                        |                                                                                                                                                                                      |
| Normally-closed (NC)                                                               | Wiring diagram (page/pos.)                                                                                                                                                           |
| Stock status: Ex stock/Built to order                                              |                                                                                                                                                                                      |
|  | Model description                                                                                                                                                                    |
| Part number                                                                        |                                                                                                                                                                                      |
| Normally-closed/open (NC/NO) selectable                                            | Wiring diagram (page/pos.)                                                                                                                                                           |
| Stock status: Ex stock/Built to order                                              |                                                                                                                                                                                      |
|  | Model description                                                                                                                                                                    |
| Part number                                                                        |                                                                                                                                                                                      |
| Complementary                                                                      | Wiring diagram (page/pos.)                                                                                                                                                           |
| Stock status: Ex stock/Built to order                                              |                                                                                                                                                                                      |
| Electrical data                                                                    |                                                                                                                                                                                      |
| Voltage range                                                                      |                                                                                                                                                                                      |
| Output current                                                                     | min./max.                                                                                                                                                                            |
| Switching frequency                                                                | max.                                                                                                                                                                                 |
| Short-circuit protection                                                           |                                                                                                                                                                                      |
| LED: yellow = switched / green = power                                             |                                                                                                                                                                                      |
| Sensitivity adjustment                                                             |                                                                                                                                                                                      |
| Mechanical data                                                                    |                                                                                                                                                                                      |
| Temperature range                                                                  |                                                                                                                                                                                      |
| Protection type                                                                    |                                                                                                                                                                                      |
| Housing material                                                                   |                                                                                                                                                                                      |
| Termination                                                                        | cable 2 m/6.5 ft mm²                                                                                                                                                                 |
|                                                                                    | plug (page)                                                                                                                                                                          |
| Accessories                                                                        | (page/Pos.)                                                                                                                                                                          |

Dimension diagrams

All dimensions in mm (inch)

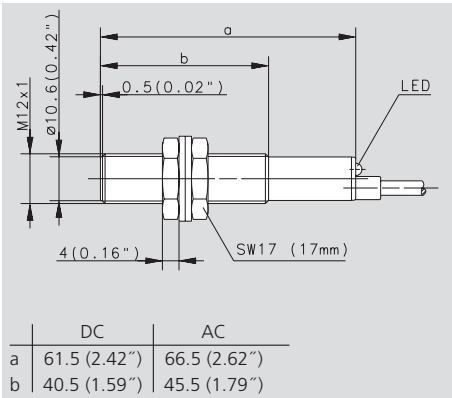


M 12 x 1

|                   |                   |                  |
|-------------------|-------------------|------------------|
| 2 mm (0.08")      |                   |                  |
| ●/-               | ●/-               | ●/-              |
| NPN               | PNP               | AC               |
| KIB-M12NS/002-KL2 | KIB-M12PS/002-KL2 | KIB-M12AS/002-L2 |
| 650.2303.001      | 650.2903.003      | 650.3503.001     |
| 263/4             | 263/1             | 265/4            |
| -/●               | ●/-               | ●/-              |
| -                 | KIB-M12PÖ/002-KL2 | KIB-M12AÖ/002-L2 |
|                   | 650.2703.001      | 650.3403.001     |
|                   | 263/2             | 265/5            |
|                   | -/●               | -/●              |
| -                 | -                 | -                |

|          |          |          |
|----------|----------|----------|
| 10–36 V  | 10–36 V  | 90–250 V |
| -/200 mA | -/200 mA | 4/180 mA |
| 800 Hz   | 800 Hz   | 10 Hz    |
| ●        | ●        | -        |
| ●/-      | ●/-      | ●/-      |
| -        | -        | -        |

|                |                |                |
|----------------|----------------|----------------|
| -25 °C/+70 °C  | -25 °C/+70 °C  | -25 °C/+70 °C  |
| -13 °F/+158 °F | -13 °F/+158 °F | -13 °F/+158 °F |
| IP 67/NEMA 4   | IP 67/NEMA 4   | IP 67/NEMA 4   |
| CuZn39Pb3      | CuZn39Pb3      | CuZn39Pb3      |
| PVC 3x0.14     | PVC 3x0.14     | PVC 2x0.14     |
| -              | -              | -              |
| -              | -              | -              |

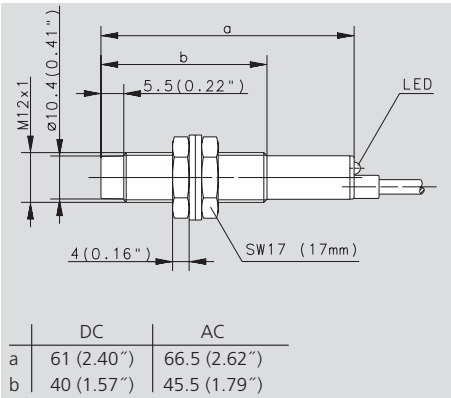


M 12 x 1

|                   |                   |                  |
|-------------------|-------------------|------------------|
| 4 mm (0.16")      |                   |                  |
| -/●               | -/●               | -/●              |
| NPN               | PNP               | AC               |
| KIN-M12NS/004-KL2 | KIN-M12PS/004-KL2 | KIN-M12AS/004-L2 |
| 650.2304.001      | 650.2904.002      | 650.3504.001     |
| 263/4             | 263/1             | 265/4            |
| ●/-               | ●/-               | ●/-              |
| -                 | KIN-M12NÖ/004-KL2 | KIN-M12AÖ/004-L2 |
|                   | 650.2104.001      | 650.2704.001     |
|                   | 263/5             | 265/5            |
|                   | -/●               | -/●              |
| -                 | -                 | -                |

|          |          |          |
|----------|----------|----------|
| 10–36 V  | 10–36 V  | 90–250 V |
| -/200 mA | -/200 mA | 4/180 mA |
| 400 Hz   | 400 Hz   | 10 Hz    |
| ●        | ●        | -        |
| ●/-      | ●/-      | ●/-      |
| -        | -        | -        |

|                |                |                |
|----------------|----------------|----------------|
| -25 °C/+70 °C  | -25 °C/+70 °C  | -25 °C/+70 °C  |
| -13 °F/+158 °F | -13 °F/+158 °F | -13 °F/+158 °F |
| IP 67/NEMA 4   | IP 67/NEMA 4   | IP 67/NEMA 4   |
| CuZn39Pb3      | CuZn39Pb3      | CuZn39Pb3      |
| PVC 3x0.14     | PVC 3x0.14     | PVC 2x0.14     |
| -              | -              | -              |
| -              | -              | -              |



**M 12 x 1****2 mm (0.08")**

| ●/-                                                     | ●/-                                                     | -  |
|---------------------------------------------------------|---------------------------------------------------------|----|
| NPN                                                     | PNP                                                     | AC |
| KIB-M12NS/<br>002-KLS12<br><b>650.2343.003</b><br>263/4 | KIB-M12PS/<br>002-KLS12<br><b>650.2943.012</b><br>263/1 | -  |
| -/●                                                     | ●/-                                                     | -  |
| -                                                       | KIB-M12PÖ/<br>002-KLS12<br><b>650.2743.003</b><br>263/2 | -  |
| -                                                       | -/●                                                     | -  |

**M 12 x 1****4 mm (0.16")**

| -   | -/●                                                     | -  |
|-----|---------------------------------------------------------|----|
| NPN | PNP                                                     | AC |
| -   | KIN-M12PS/<br>004-KLS12<br><b>650.2944.012</b><br>263/1 | -  |
| -   | ●/-                                                     | -  |
| -   | KIN-M12PÖ/<br>004-KLS12<br><b>650.2744.003</b><br>263/2 | -  |
| -   | -/●                                                     | -  |

**M 12 x 1****2 mm (0.08")**

| ●/-                                                    | ●/-                                                    | -  |
|--------------------------------------------------------|--------------------------------------------------------|----|
| NPN                                                    | PNP                                                    | AC |
| -                                                      | KIB-M12PS/<br>002-KL2V<br><b>650.2903.016</b><br>263/1 | -  |
| -/●                                                    | -/●                                                    | -  |
| KIB-M12NÖ/<br>002-KL2V<br><b>650.2103.003</b><br>263/5 | KIB-M12PÖ/<br>002-KL2V<br><b>650.2703.005</b><br>263/2 | -  |
| -/●                                                    | -/●                                                    | -  |

|          |          |   |
|----------|----------|---|
| 10-36 V  | 10-36 V  | - |
| -/200 mA | -/200 mA | - |
| 800 Hz   | 800 Hz   | - |
| ●        | ●        | - |
| ●/-      | ●/-      | - |
| -        | -        | - |

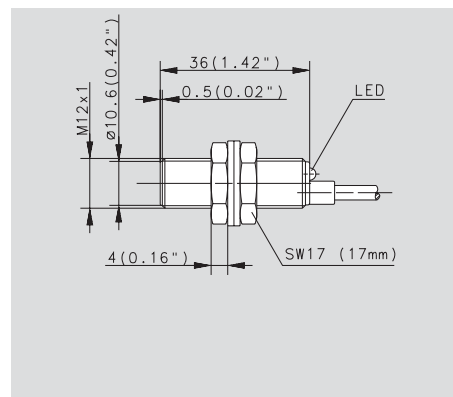
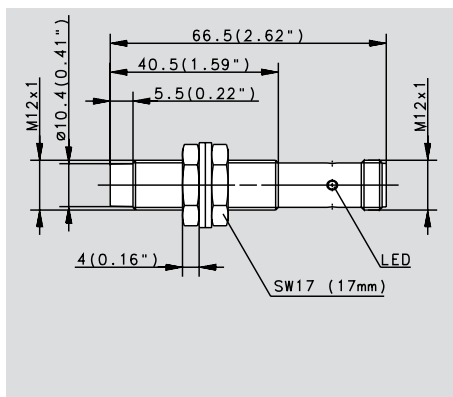
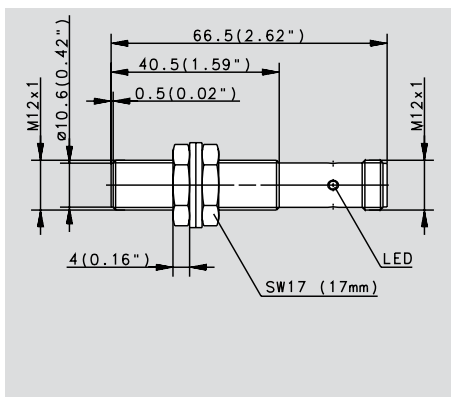
|          |   |
|----------|---|
| 10-36 V  | - |
| -/200 mA | - |
| 800 Hz   | - |
| ●        | - |
| ●/-      | - |
| -        | - |

|          |          |   |
|----------|----------|---|
| 10-36 V  | 10-36 V  | - |
| -/200 mA | -/200 mA | - |
| 800 Hz   | 800 Hz   | - |
| ●        | ●        | - |
| ●/-      | ●/-      | - |
| -        | -        | - |

|                |                |   |
|----------------|----------------|---|
| -25 °C/+70 °C  | -25 °C/+70 °C  | - |
| -13 °F/+158 °F | -13 °F/+158 °F | - |
| IP 67/NEMA 4   | IP 67/NEMA 4   | - |
| CuZn39Pb3      | CuZn39Pb3      | - |
| -              | -              | - |
| 284/285/286    | 284/285/286    | - |
| -              | -              | - |

|                |   |
|----------------|---|
| -25 °C/+70 °C  | - |
| -13 °F/+158 °F | - |
| IP 67/NEMA 4   | - |
| CuZn39Pb3      | - |
| -              | - |
| 284/285/286    | - |
| -              | - |

|                |                |   |
|----------------|----------------|---|
| -25 °C/+70 °C  | -25 °C/+70 °C  | - |
| -13 °F/+158 °F | -13 °F/+158 °F | - |
| IP 67/NEMA 4   | IP 67/NEMA 4   | - |
| CuZn39Pb3      | CuZn39Pb3      | - |
| PVC 3x0.14     | PVC 3x0.14     | - |
| -              | -              | - |



**M 12 x 1**

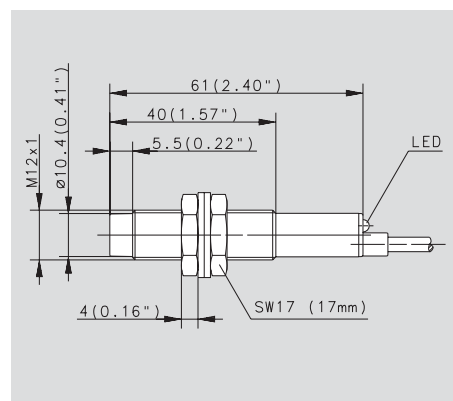
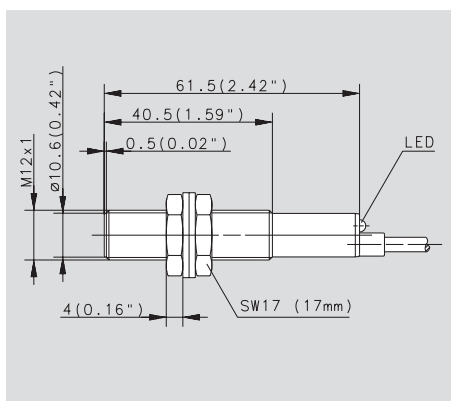
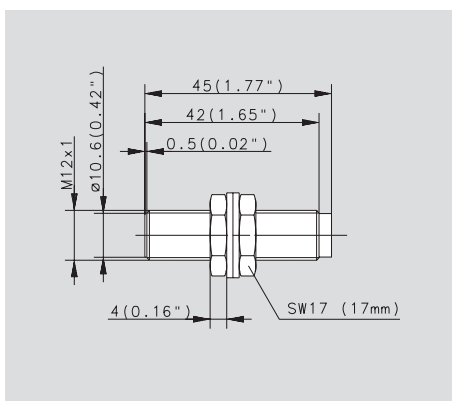


All dimensions in mm (inch)

Technical drawing of a shaft assembly. The shaft is labeled M12x1 and has a diameter of  $\varnothing 10.4 (10.41 \text{ mm})$ . The total length of the shaft is 45 (1.77"). The distance from the left end to the center of the SW17 (17mm) component is 42 (1.65"). The distance from the center of the SW17 component to the right end is 5.5 (0.22"). The distance from the left end to the center of the SW17 component is 4 (0.16").



| M 12 x 1<br>2 mm (0.08") |                                                         |    | M 12 x 1<br>4 mm (0.16") |                                                        |    | M 12 x 1<br>6 mm (0.24")                               |                                                        |    |
|--------------------------|---------------------------------------------------------|----|--------------------------|--------------------------------------------------------|----|--------------------------------------------------------|--------------------------------------------------------|----|
| –                        | ●/–                                                     | –  | –                        | ●/–                                                    | –  | –/●                                                    | –/●                                                    | –  |
| NPN                      | PNP                                                     | AC | NPN                      | PNP                                                    | AC | NPN                                                    | PNP                                                    | AC |
| –                        | KIB-M12PS/<br>002-KS12V<br><b>650.2943.006</b><br>263/1 | –  | –                        | KIB-M12PS/<br>004-KL2E<br><b>650.2903.014</b><br>263/1 | –  | KIN-M12NS/<br>006-KL2E<br><b>650.2304.012</b><br>263/4 | KIN-M12PS/<br>006-KL2E<br><b>650.2904.009</b><br>263/1 | –  |
| –                        | ●/–                                                     | –  | –                        | ●/–                                                    | –  | –/●                                                    | ●/–                                                    | –  |
| –                        | KIB-M12PÖ/<br>002-KS12V<br><b>650.2743.005</b><br>263/2 | –  | –                        | –                                                      | –  | –                                                      | KIN-M12PÖ/<br>006-KL2E<br><b>650.2704.005</b><br>263/2 | –  |
| –                        | –/●                                                     | –  | –                        | –                                                      | –  | –                                                      | –/●                                                    | –  |
| –                        | –                                                       | –  | –                        | –                                                      | –  | –                                                      | –                                                      | –  |
| –                        | –                                                       | –  | –                        | –                                                      | –  | –                                                      | –                                                      | –  |
| –                        | –                                                       | –  | –                        | –                                                      | –  | –                                                      | –                                                      | –  |
| –                        | 10–36 V                                                 | –  | –                        | 10–60 V                                                | –  | 10–60 V                                                | 10–60 V                                                | –  |
| –                        | –/200 mA                                                | –  | –                        | –/200 mA                                               | –  | –/200 mA                                               | –/200 mA                                               | –  |
| –                        | 800 Hz                                                  | –  | –                        | 800 Hz                                                 | –  | 400 Hz                                                 | 400 Hz                                                 | –  |
| –                        | ●                                                       | –  | –                        | ●                                                      | –  | ●                                                      | ●                                                      | –  |
| –                        | –                                                       | –  | –                        | ●/–                                                    | –  | ●/–                                                    | ●/–                                                    | –  |
| –                        | –                                                       | –  | –                        | –                                                      | –  | –                                                      | –                                                      | –  |
| –                        | –25 °C/+70 °C                                           | –  | –                        | –25 °C/+70 °C                                          | –  | –25 °C/+70 °C                                          | –25 °C/+70 °C                                          | –  |
| –                        | –13 °F/+158 °F                                          | –  | –                        | –13 °F/+158 °F                                         | –  | –13 °F/+158 °F                                         | –13 °F/+158 °F                                         | –  |
| –                        | IP 67/NEMA 4                                            | –  | –                        | IP 67/NEMA 4                                           | –  | IP 67/NEMA 4                                           | IP 67/NEMA 4                                           | –  |
| –                        | CuZn39Pb3                                               | –  | –                        | CuZn39Pb3                                              | –  | CuZn39Pb3                                              | CuZn39Pb3                                              | –  |
| –                        | –                                                       | –  | –                        | PVC 3x0.14                                             | –  | PVC 3x0.14                                             | PVC 3x0.14                                             | –  |
| –                        | 284/285/286                                             | –  | –                        | –                                                      | –  | –                                                      | –                                                      | –  |
| –                        | –                                                       | –  | –                        | –                                                      | –  | –                                                      | –                                                      | –  |



**M 12 x 1**



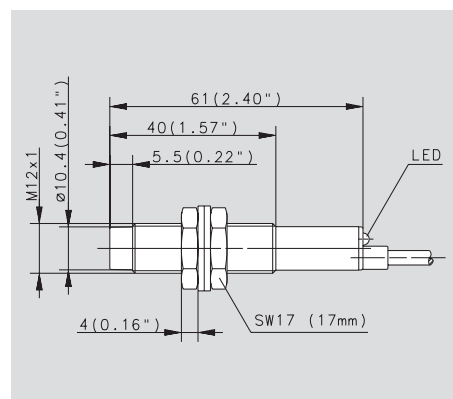
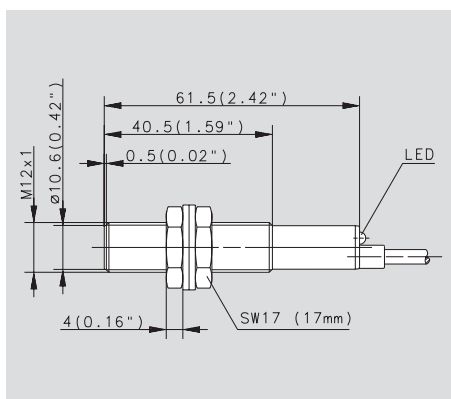
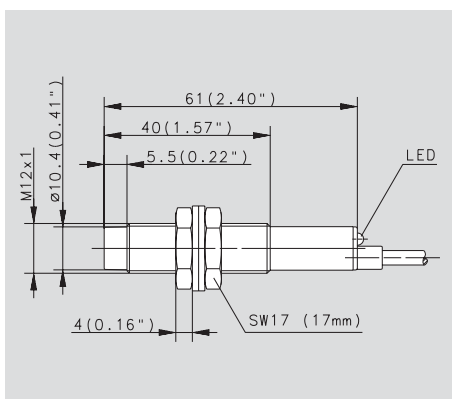
All dimensions in mm (inch)

Technical drawing of the LED module assembly showing dimensions and components:

- Thread: M12x1
- Outer diameter:  $\varnothing 10.6 (0.42")$
- LED length: 61.5 (2.42")
- LED to SW17 distance: 40.5 (1.59")
- SW17 to LED distance: 0.5 (0.02")
- SW17 length: 4 (0.16")
- SW17 specification: SW17 (17mm)
- LED label: LED



| M 12 x 1 higher temperature range |                                                               |    | M 12 x 1 higher switching frequency                           |                                                               |    | M 12 x 1 higher switching frequency                           |                                                               |    |
|-----------------------------------|---------------------------------------------------------------|----|---------------------------------------------------------------|---------------------------------------------------------------|----|---------------------------------------------------------------|---------------------------------------------------------------|----|
| 4 mm (0.16")                      |                                                               |    | 2 mm (0.08")                                                  |                                                               |    | 4 mm (0.16")                                                  |                                                               |    |
| –                                 | –/●                                                           | –  | ●/–                                                           | ●/–                                                           | –  | –/●                                                           | –/●                                                           | –  |
| NPN                               | PNP                                                           | AC | NPN                                                           | PNP                                                           | AC | NPN                                                           | PNP                                                           | AC |
| –                                 | KIN-M12PS/<br>004-KL2T<br><b>650.2904.011</b><br>263/1<br>–/● | –  | KIB-M12NS/<br>002-KL2F<br><b>650.2303.005</b><br>263/4<br>–/● | KIB-M12PS/<br>002-KL2F<br><b>650.2903.012</b><br>263/1<br>–/● | –  | KIN-M12NS/<br>004-KL2F<br><b>650.2304.006</b><br>263/4<br>–/● | KIN-M12PS/<br>004-KL2F<br><b>650.2904.010</b><br>263/1<br>●/– | –  |
| –                                 | KIN-M12PÖ/<br>004-KL5T<br><b>650.2704.004</b><br>263/2<br>–/● | –  | –                                                             | –                                                             | –  | –                                                             | –                                                             | –  |
| –                                 | –                                                             | –  | –                                                             | –                                                             | –  | –                                                             | –                                                             | –  |
| –                                 | –                                                             | –  | –                                                             | –                                                             | –  | –                                                             | –                                                             | –  |
| –                                 | –                                                             | –  | –                                                             | –                                                             | –  | –                                                             | –                                                             | –  |
| –                                 | 10–36 V                                                       | –  | 10–60 V                                                       | 10–60 V                                                       | –  | 10–60 V                                                       | 10–60 V                                                       | –  |
| –                                 | –/200 mA                                                      | –  | –/200 mA                                                      | –/200 mA                                                      | –  | –/200 mA                                                      | –/200 mA                                                      | –  |
| –                                 | 400 Hz                                                        | –  | 4000 Hz                                                       | 4000 Hz                                                       | –  | 3000 Hz                                                       | 3000 Hz                                                       | –  |
| –                                 | ●                                                             | –  | ●                                                             | ●                                                             | –  | ●                                                             | ●                                                             | –  |
| –                                 | ●/–                                                           | –  | ●/–                                                           | ●/–                                                           | –  | ●/–                                                           | ●/–                                                           | –  |
| –                                 | –                                                             | –  | –                                                             | –                                                             | –  | –                                                             | –                                                             | –  |
| –                                 | 0 °C/+100 °C                                                  | –  | –25 °C/+70 °C                                                 | –25 °C/+70 °C                                                 | –  | –25 °C/+70 °C                                                 | –25 °C/+70 °C                                                 | –  |
| –                                 | –32 °F/+212 °F                                                | –  | –13 °F/+158 °F                                                | –13 °F/+158 °F                                                | –  | –13 °F/+158 °F                                                | –13 °F/+158 °F                                                | –  |
| –                                 | IP 67/NEMA 4                                                  | –  | IP 67/NEMA 4                                                  | IP 67/NEMA 4                                                  | –  | IP 67/NEMA 4                                                  | IP 67/NEMA 4                                                  | –  |
| –                                 | CuZn39Pb3                                                     | –  | CuZn39Pb3                                                     | CuZn39Pb3                                                     | –  | CuZn39Pb3                                                     | CuZn39Pb3                                                     | –  |
| –                                 | PVC 3x0.14                                                    | –  | PVC 3x0.14                                                    | PVC 3x0.14                                                    | –  | PVC 3x0.14                                                    | PVC 3x0.14                                                    | –  |
| –                                 | –                                                             | –  | –                                                             | –                                                             | –  | –                                                             | –                                                             | –  |
| –                                 | –                                                             | –  | –                                                             | –                                                             | –  | –                                                             | –                                                             | –  |



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