

The Correct Cable for Every Application

Choosing the right cable is crucial in terms of the service life you can expect from a sensor-actuator cable. This is why it pays to familiarize yourself with our extensive range of cables. It will save you time as well as money!



PVC – for straightforward applications

Application areas:

For use in areas subject to moderate mechanical strain, e.g., packaging machines, assembly and production lines.

- ➔ Affordable cable quality
- ➔ Effective resistance to chemicals
- ➔ Suitable for the food industry




Features:

- Easily strippable
- Excellent flame retardance
- Suitable for flexible installation to some extent
- Limited resistance to oil and lubricant

Temperature range

| | |
|-----------------------|---|
| Permanently installed | -25 °C ... 70 °C |
| | -25 °C ... 105 °C for indicated cable types |
| Non-fixed | -5 °C ... 70 °C |
| Minimum bend radius | 10 x D |

Cable types

| Cable type | Structure | Diameter | Use |
|-----------------------|--|--------------------------|------------------|
| PVC, gray | 3/4/5 x 0.34 mm ² (19 x 0.15 mm) | D = 4.8 mm | M12 |
| | 3/4 x 0.25 mm ² (14 x 0.15 mm) | D = 4.3 mm | M8 |
| PVC, blue (NAMUR) | 2/4 x 0.34 mm ² (19 x 0.15 mm) | D = 4.8 mm | M8 / M12 |
| PVC, black | 2+1/3+1/4+1 x 0.5 mm ² (16 x 0.2 mm) | D = 5.1 mm/5.7 mm/6.6 mm | Valve connectors |
| PVC-U, black |  3/4 x 0.34 mm ² (19 x 0.15 mm) | D = 4.3 mm | M8 / M12 |
| PVC-U, yellow |  3/4 x 0.34 mm ² (19 x 0.15 mm) | D = 4.3 mm | M8 / M12 |
| PVC-U, yellow, 105 °C |  3/4/5 x 0.34 mm ² (42 x 0.1 mm) | D = 5.2 mm/5.5 mm/5.9 mm | 1/2" |



PUR – for complex applications

Application areas:

Suitable for long-term flexible use in the most challenging of environments such as with machine tools, rotary tables and swivel tables. Shielded versions available to meet additional EMC requirements.

- **Halogen-free**
- **Capable of withstanding a high level of mechanical stress**
- **Effective resistance to chemicals**
- **Effective resistance to oil**
- **UL cable types are extremely flame-retardant**

Features:

- Free from silicone and substances that inhibit lacquer adhesion
- Resistant to microbes and hydrolysis
- UV-resistant





Temperature range

Permanently installed –40 °C ... 80 °C
 Non-fixed –20 °C ... 80 °C
 Minimum bend radius 10 x D

Additional data for UL-approved cable types (unshielded):

Min. no. of bend cycles 5 million
 Distance 5 m
 Acceleration 5 m/s²
 Speed 3.33 m/s
 Torsion ±180°/m tested at 20 °C ... 25 °C

Cable types

| Cable type | Structure | Diameter | Use |
|--|--|-------------------|------------------|
| PUR, gray | 3/4/5 x 0.34 mm ² (19 x 0.15 mm) | D = 4.8 mm | M12 |
| | 3/4 x 0.25 mm ² (14 x 0.15 mm) | D = 4.3 mm | M8 |
| PUR, blue (NAMUR) | 2/4 x 0.34 mm ² (19 x 0.15 mm) | D = 4.8 mm | M8 / M12 |
| PUR-U, black  | 8 x 0.25 mm ² (14 x 0.15 mm) | D = 6.0 mm | M12 |
| | 2+1/4+1 x 0.5 mm ² (28 x 0.15 mm) | D = 4.8 mm/5.5 mm | Valve connectors |
| | 3/4 x 0.34 mm ² (42 x 0.1 mm) | D = 4.3 mm | M8 / M12 |
| PUR-U/ABG, black, shielded  | 8 x 0.25 mm ² (14 x 0.15 mm) | D = 6.0 mm | M12 |
| PUR-ABG, gray, shielded | 4/5 x 0.34 mm ² (19 x 0.15 mm) | D = 4.8 mm | M8 / M12 |
| PUR-U, yellow  | 4 x 0.34 mm ² (42 x 0.1 mm) | D = 4.3 mm | M8 / M12 |
| PUR-U/0.75, black  | 5 x 0.75 mm ² (42 x 0.15 mm) | D = 6.0mm | M12 |



Irradiated PUR – for extreme applications

Application areas:

This cable boasts properties that are better than those of conventional PUR cables, making this highly-flexible control cable also suitable for use in robot applications and particularly with welding robots.

- **Welding bead resistant**
- **Resistant to high temperatures**
- **Capable of withstanding mechanical stress**
- **Robot-compatible**
- **Halogen-free**
- **Excellent flame retardance**

Features:

- Effective resistance to oil
- Effective resistance to chemicals
- UV-resistant
- Free from silicone and substances that inhibit lacquer adhesion
- Resistant to microbes and hydrolysis

Temperature range

| | | |
|-----------------------|-------------------|--------------------|
| Permanently installed | -50 °C ... 105 °C | |
| | -50 °C ... 80 °C | for UL cable types |
| Non-fixed | -40 °C ... 105 °C | |
| | -40 °C ... 80 °C | for UL cable types |

Minimum bend radius 10 x D

Min. no. of bend cycles 5 million


Distance 10 m

Acceleration 10 m/s²

Speed 3 m/s

Torsion Torsion ±360°/m tested at 20 °C ... 25 °C

Cable types

| Cable type | Structure | Diameter | Use |
|---|---|------------|----------|
| PUR H/S, orange | 4 x 0.34 mm ² (19 x 0.15 mm) | D = 4.8 mm | M8 / M12 |
| PUR H/S, yellow  | 3/4/5 x 0.75 mm ² (42 x 0.15 mm) | D = 5.8 mm | 1/2" |



POC welding bead resistant – for the most challenging scenarios

Application areas:

This special cable comes into its own for applications in the welding sector that cannot be solved with irradiated PUR cables.

- **Welding bead resistant**
- **Resistant to high temperatures**
- **Capable of withstanding mechanical stress**
- **Robot-compatible**
- **Excellent flame retardance**

Features:

- Effective resistance to oil
- Effective resistance to chemicals
- UV-resistant
- Free from silicone and substances that inhibit lacquer adhesion
- Resistant to microbes and hydrolysis

Temperature range

| | |
|-----------------------|-----------------------------------|
| Permanently installed | -40 °C ... 150 °C |
| Non-fixed | -15 °C ... 150 °C |
| Minimum bend radius | 10 x D |
| Torsion | ±360°/m tested at 20 °C ... 25 °C |

Cable types

| Cable type | Structure | Diameter | Use |
|-------------|---|------------|----------|
| POC, orange | 4 x 0.34 mm ² (19 x 0.15 mm) | D = 4.8 mm | M8 / M12 |