

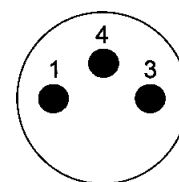
# M8 HARAX<sup>®</sup> cable connector



**Specifications** IEC 60 352-4

**Approval** 

Mating face



A-coding  
Mating face  
acc. to IEC 61 076-2-101



## Technical characteristics M8 HARAX<sup>®</sup>

| Type M8 | HARAX <sup>®</sup> M8-XS | HARAX <sup>®</sup> M8-S |
|---------|--------------------------|-------------------------|
|---------|--------------------------|-------------------------|

### General data

|                                                     |                                         |                                          |
|-----------------------------------------------------|-----------------------------------------|------------------------------------------|
| Conductor cross section                             | 0.1 - 0.14 mm <sup>2</sup><br>AWG 27-26 | 0.14 - 0.34 mm <sup>2</sup><br>AWG 26-22 |
| Diameter of individual strands                      | ≥ 0.05 mm                               | ≥ 0.1 mm                                 |
| Conductor insulation material                       | PVC / PP / TPE                          | PVC / PP / TPE                           |
| Conductor diameter                                  | 0.6 - 1.0 mm                            | 1.0 - 1.6 mm                             |
| Cable diameter                                      | 1.9 - 2.5 mm<br>2.5 - 3.5 mm            | 2.5 - 5.1 mm                             |
| Temperature range                                   | -40 °C ... +85 °C                       | -40 °C ... +85 °C                        |
| Temperature during connection                       | -5 °C ... +50 °C                        | -5 °C ... +50 °C                         |
| Degree of protection                                | IP67                                    | IP67                                     |
| Mating cycles                                       | 100                                     | 100                                      |
| Recommended tightening torque /<br>Hexagonal wrench | 0.4 Nm / SW 9                           | 0.4 Nm / SW 9                            |

### Electrical characteristics

|                       |                   |                   |
|-----------------------|-------------------|-------------------|
| Rated current         | 2 A               | 4 A               |
| Rated voltage         | 32 V              | 32 V              |
| Rated impulse voltage | 1.5 kV            | 1.5 kV            |
| Contact resistance    | 10 mΩ             | 10 mΩ             |
| Insulation resistance | 10 <sup>8</sup> Ω | 10 <sup>8</sup> Ω |
| Pollution degree      | 3                 | 3                 |
| Overvoltage category  | 3                 | 3                 |
| Isolation group       | 1                 | 1                 |

### Materials

|                          |                   |                   |
|--------------------------|-------------------|-------------------|
| Contact material         | Copper alloy      | Copper alloy      |
| Contact plating          | Gold              | Gold              |
| Contact carrier material | PA                | PA                |
| Housing material         | PA, zinc die-cast | PA, zinc die-cast |

## Technical characteristics – System cables

### M8 Circular connectors, without PE

|                                         |                                                         |
|-----------------------------------------|---------------------------------------------------------|
| Rated voltage                           | max. 60 V AC/DC                                         |
| Rated current / contact                 | max. 4 A                                                |
| Locking                                 | Screw locking M8x1, self securing                       |
| Recommended torque                      | 0.4 Nm                                                  |
| Temperature range                       | -25 °C ... +85 °C<br>(dependant on connected conductor) |
| Degree of protection                    | IP67                                                    |
| Number of wires / wire gauge            | 3 x 0.25 mm <sup>2</sup>                                |
| Conductor insulation                    | PP (bn, bu, bk)                                         |
| Arrangement of insulated strands        | 32 x 0.1 mm                                             |
| Sheath                                  | PUR (UL, CSA)                                           |
| Outer diameter                          | appr. 4.2 - 5.5 mm                                      |
| Bending radius                          | 10 x outer diameter                                     |
| Temperature range (working and storage) | -5 °C ... + 80 °C                                       |

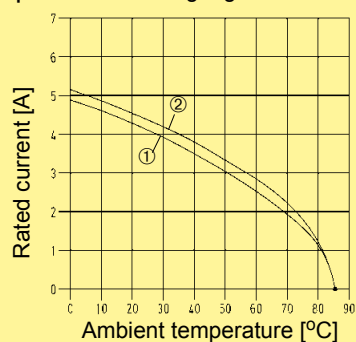
02

## Technical characteristics M8

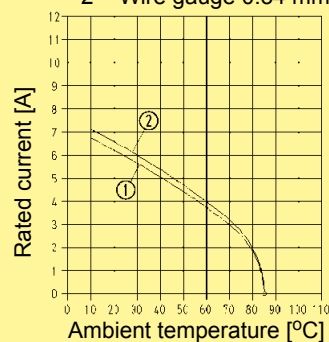
**Current carrying capacity** The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interruptet current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60 512-5.

M8-XS, 3 poles 1 = Wire gauge 0.1 mm<sup>2</sup>  
M8-S, 3 poles 2 = Wire gauge 0.14 mm<sup>2</sup>

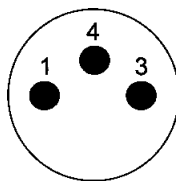


M8-S, 4 poles 1 = Wire gauge 0.25 mm<sup>2</sup>  
2 = Wire gauge 0.34 mm<sup>2</sup>





Mating face



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Mating face  
acc. to IEC 61076-2-101



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## Applications / Advantages

- Actor and sensor applications
- Unshielded versions
- HARAX® rapid termination
- Overmoulded system cables in various lengths
- Robust design, quick assembly

Identification

Part No.

Drawing

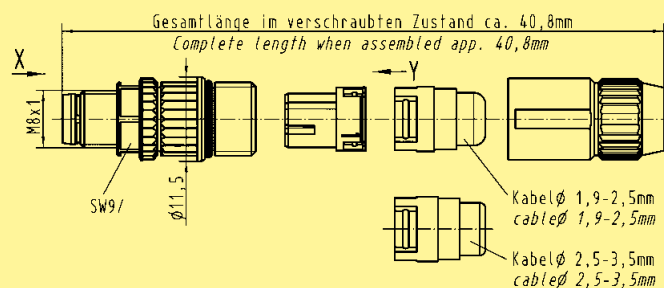
Dimensions in mm

HARAX® M8-XS



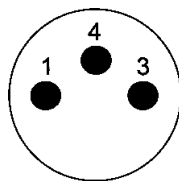
Male  
straight version, 3 poles  
for 0.1 - 0.14 mm<sup>2</sup>

21 02 159 1305





Mating face



A-coding  
Mating face  
acc. to IEC 61076-2-101



Identification

Part No.

Drawing

Dimensions in mm

**HARAX® M8-S**



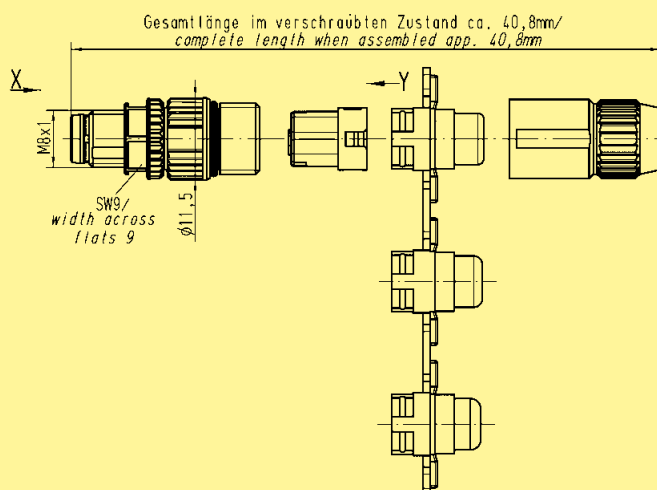
Male  
straight version, 3 poles  
for 0.14 - 0.34 mm<sup>2</sup>

21 02 151 1305



Male  
straight version, 4 poles  
for 0.14 - 0.34 mm<sup>2</sup>

21 02 151 1405



View mating side:  
3 poles, male

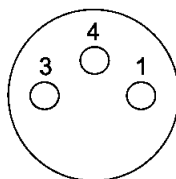


View mating side:  
4 poles, male





Mating face



A-coding  
Mating face  
acc. to IEC 61076-2-101



02

Identification

Part No.

Drawing

Dimensions in mm

**HARAX® M8-S**



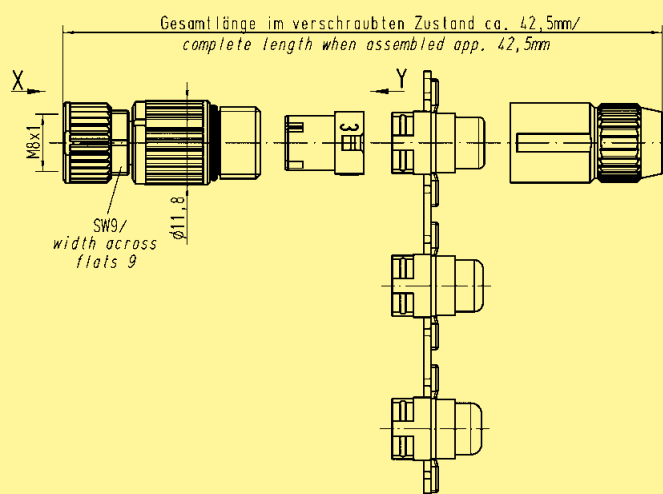
Female  
straight version, 3 poles  
for 0.14 - 0.34 mm<sup>2</sup>

21 02 151 2305

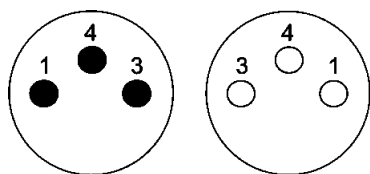


Female  
straight version, 4 poles  
for 0.14 - 0.34 mm<sup>2</sup>

21 02 151 2405



Mating face



A-coding  
Mating face  
acc. to IEC 61076-2-101



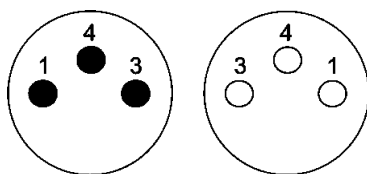
02

## Technical characteristics

### M8 Circular connector, without PE

|                                                         |                                   |
|---------------------------------------------------------|-----------------------------------|
| Rated voltage                                           | max. 60 V AC/DC                   |
| Rated current/contact                                   | max. 4 A                          |
| Locking                                                 | Screw locking M8x1, self securing |
| Recommended torque                                      | 0.4 Nm                            |
| Temperature range<br>(dependant on connected conductor) | -25 °C ... +85 °C                 |
| Degree of protection                                    | IP67                              |
| Number of wires / wire gauge                            | 3 x 0.25 mm <sup>2</sup>          |
| Conductor insulation                                    | PP (br, bl, sw)                   |
| Arrangement of insulated strands                        | 32 x 0.1 mm                       |
| Sheath                                                  | PUR (UL, CSA)                     |
| Outer diameter                                          | appr. 4.2 - 5.5 mm                |
| Bending radius                                          | 10 x outer diameter               |
| Temperature range (working and storage)                 | -5 °C ... + 80 °C                 |

Mating face



A-coding  
Mating face  
acc. to IEC 61076-2-101



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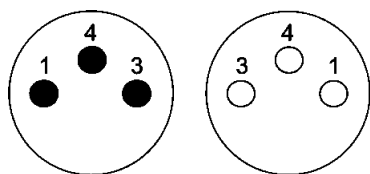
## Overview system cables M8

| Number of contacts |  | Male M8 straight          |                         | Female M8 angled          |                         |
|--------------------|--|---------------------------|-------------------------|---------------------------|-------------------------|
|                    |  | <br>Cable material<br>PUR |                         | <br>Cable material<br>PUR |                         |
| Female M8 angled   |  | 0.3 m                     | 21 02 454 5301          | xxx                       |                         |
|                    |  | 0.6 m                     | 21 02 454 5302          | xxx                       |                         |
|                    |  | 1.0 m                     | 21 02 454 5303          | xxx                       |                         |
|                    |  | 1.5 m                     | 21 02 454 5304          | xxx                       |                         |
|                    |  | 2.0 m                     | 21 02 454 5305          | xxx                       |                         |
|                    |  | 0.3 m                     | 21 02 454 7301 with LED | xxx                       |                         |
|                    |  | 0.6 m                     | 21 02 454 7302 with LED | xxx                       |                         |
|                    |  | 1.0 m                     | 21 02 454 7303 with LED | xxx                       |                         |
|                    |  | 1.5 m                     | 21 02 454 7304 with LED | xxx                       |                         |
|                    |  | 2.0 m                     | 21 02 454 7305 with LED | xxx                       |                         |
| Open end           |  | xxx                       |                         | 1.5 m                     | 21 02 554 4301          |
|                    |  | xxx                       |                         | 3.0 m                     | 21 02 554 4302          |
|                    |  | xxx                       |                         | 5.0 m                     | 21 02 554 4303          |
|                    |  | xxx                       |                         | 7.5 m                     | 21 02 554 4304          |
|                    |  | xxx                       |                         | 10.0 m                    | 21 02 554 4305          |
|                    |  | xxx                       |                         | 1.5 m                     | 21 02 554 7301 with LED |
|                    |  | xxx                       |                         | 3.0 m                     | 21 02 554 7302 with LED |
|                    |  | xxx                       |                         | 5.0 m                     | 21 02 554 7303 with LED |
|                    |  | xxx                       |                         | 7.5 m                     | 21 02 554 7304 with LED |
|                    |  | xxx                       |                         | 10.0 m                    | 21 02 554 7305 with LED |

# M8 System cables



Mating face



A-coding  
Mating face  
acc. to IEC 61076-2-101



## Identification

## Part No.

## Drawing

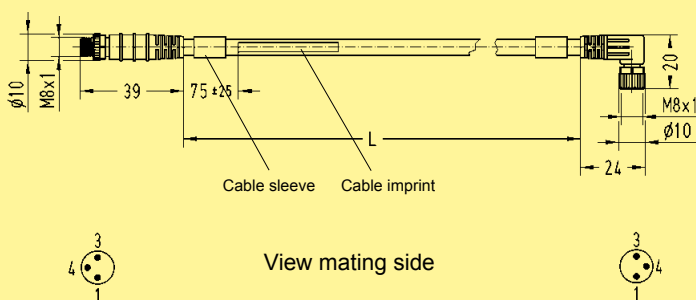
## Dimensions in mm

### M8 Circular connectors

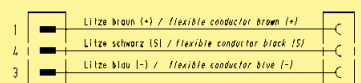
Female angled, male straight

Length: 0.3 m  
0.6 m  
1.0 m  
1.5 m  
2.0 m

21 02 454 5301  
21 02 454 5302  
21 02 454 5303  
21 02 454 5304  
21 02 454 5305



### Schematic diagram

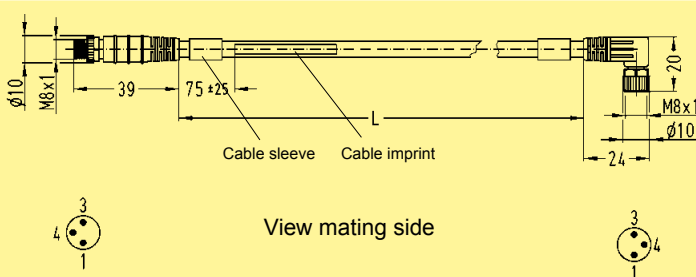


### M8 Circular connectors

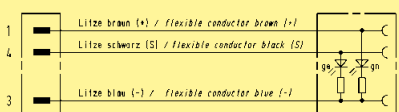
Female angled, with LED  
Male straight

Length: 0.3 m  
0.6 m  
1.0 m  
1.5 m  
2.0 m

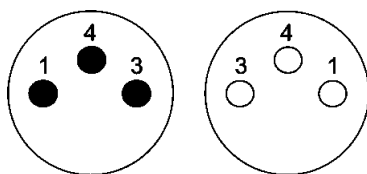
21 02 454 7301  
21 02 454 7302  
21 02 454 7303  
21 02 454 7304  
21 02 454 7305



### Schematic diagram



Mating face



A-coding  
Mating face  
acc. to IEC 61076-2-101



02

## Identification

## Part No.

## Drawing

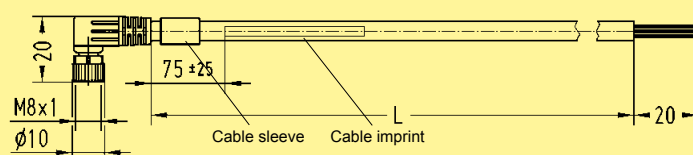
## Dimensions in mm

### M8 Circular connectors

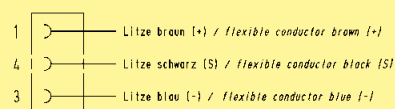
Female angled  
pre-assembled on one end

Length: 1.5 m  
3.0 m  
5.0 m  
7.5 m  
10.0 m

21 02 554 4301  
21 02 554 4302  
21 02 554 4303  
21 02 554 4304  
21 02 554 4305



### Schematic diagram



### View mating side

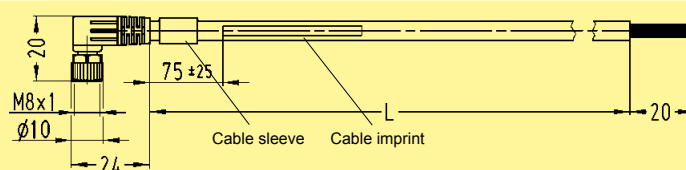


### M8 Circular connectors

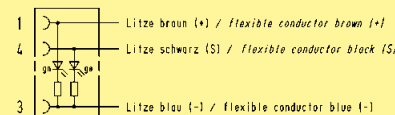
Female angled, with LED  
pre-assembled on one end

Length: 1.5 m  
3.0 m  
5.0 m  
7.5 m  
10.0 m

21 02 554 7301  
21 02 554 7302  
21 02 554 7303  
21 02 554 7304  
21 02 554 7305



### Schematic diagram



### View mating side



## Identification

## Part No.

## Drawing

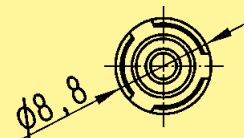
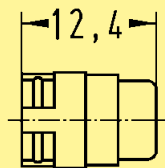
## Dimensions in mm

### Seal M8

for 1.9 - 2.5 mm cable Ø  
for 2.5 - 3.5 mm cable Ø  
for 4.2 - 5.4 mm cable Ø



21 01 010 2016  
21 01 010 2008  
21 01 010 2005

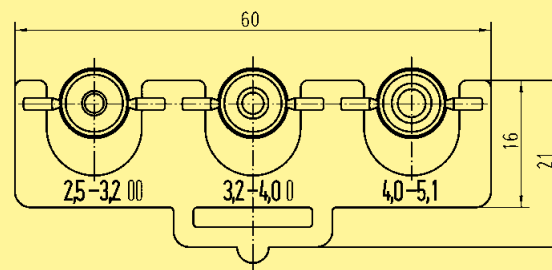


### Set of seals for *HARAX*® M8-S

for 2.5 - 3.2 mm cable Ø  
for 3.2 - 4.0 mm cable Ø  
for 4.0 - 5.1 mm cable Ø



21 01 010 2013



### M8 dynamometric screwdriver

Tightening torque 0.4 Nm

SW 9

09 99 000 0380

