



**Part no.: 50143590**  
**CMS708i-ENC1-1040-1040**  
**Contour measurement system**

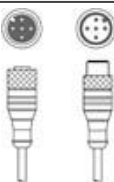
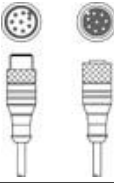


Figure can vary

## Contents

- Set consists of
- Technical data
- Dimensioned drawings
- Electrical connection
- Diagrams
- Notes
- Accessories

## Set consists of

|                                                                                     | Quantity | Part no. | Designation                 | Article                   | Description                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|----------|----------|-----------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | 2        | 424417   | BT-2P40                     | Mounting bracket set      | Contains: BT-P40 clamp bracket, 2x<br>Bore hole 1: M6<br>Bore hole 2: M6<br>Design of mounting device: Mounting clamp<br>Fastening, at system: Groove mounting<br>Mounting bracket, at device: Groove mounting<br>Type of mounting device: Clampable<br>Material: Metal |
|    | 2        | 50118749 | CML730i-R05-1040.A/L-M12    | Light curtain receiver    | Operating range: 0.1 ... 4.5 m<br>Interface: IO-Link<br>Connection: Connector, M12, Axial, 8 -pin                                                                                                                                                                       |
|    | 2        | 50118588 | CML730i-T05-1040.A-M12      | Light curtain transmitter | Operating range: 0.1 ... 4 m<br>Connection: Connector, M12, Axial, 5 -pin                                                                                                                                                                                               |
|   | 2        | 50129781 | KDS DN-M12-5A-M12-5A-P3-050 | Interconnection cable     | Suitable for interface: IO-Link, DeviceNet, CANopen<br>Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin<br>Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR                 |
|  | 3        | 50135146 | KDS S-M12-8A-M12-8A-P1-050  | Interconnection cable     | Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin<br>Connection 2: Connector, M12, Axial, Male, A-coded, 8 -pin<br>Shielded: Yes<br>Cable length: 5,000 mm<br>Sheathing material: PUR                                                                        |
|  | 1        | 50142930 | LSC708-ENC-100              | Switch cabinet            | Supply voltage: 100 ... 263 V, AC<br>Switching inputs: 4 Piece(s)<br>Switching outputs: 4 Piece(s)<br>Connections: 6 Piece(s)                                                                                                                                           |

## Technical data

### Basic data

|             |                                         |
|-------------|-----------------------------------------|
| Series      | CMS 7xxi                                |
| Contains    | 1x dongle CMS700<br>1x rotation encoder |
| Order guide | Additional models on request            |

### Functions

### Optical data

## Part no.: 50143590 – CMS708i-ENC1-1040-1040 – Contour measurement

|                                    |                            |
|------------------------------------|----------------------------|
| Operating range                    | Guaranteed operating range |
| Operating range                    | 0.1 ... 4.5 m              |
| Operating range, transparent media | 0.1 ... 1.75 m             |
| Operating range limit              | Typical operating range    |
| Operating range limit              | 0.1 ... 6 m                |
| Measurement field length 1         | 1,040 mm                   |
| Measurement field length 2         | 1,040 mm                   |
| Beam spacing                       | 5 mm                       |

### Electrical data

|                                                      |                                                                                 |
|------------------------------------------------------|---------------------------------------------------------------------------------|
| Protective circuit                                   | Polarity reversal protection<br>Short circuit protected<br>Transient protection |
| Output current, continuous current per channel, max. | 100 mA                                                                          |

### Performance data

|                      |                    |
|----------------------|--------------------|
| Supply voltage $U_B$ | 100 ... 263 V , AC |
| Open-circuit current | 250 mA             |

### Inputs

|                                    |            |
|------------------------------------|------------|
| Number of digital switching inputs | 4 Piece(s) |
|------------------------------------|------------|

### Switching inputs

|                   |                         |
|-------------------|-------------------------|
| Type              | Digital switching input |
| Voltage type      | DC                      |
| Switching voltage | 24 V, VIN               |

### Outputs

|                                     |            |
|-------------------------------------|------------|
| Number of digital switching outputs | 4 Piece(s) |
|-------------------------------------|------------|

### Switching outputs

|                   |                          |
|-------------------|--------------------------|
| Type              | Digital switching output |
| Voltage type      | AC                       |
| Switching voltage | 24 V, VIN                |

### Interface

|                 |                              |
|-----------------|------------------------------|
| Type            | EtherNet TCP/IP              |
| <b>Ethernet</b> |                              |
| Function        | Configuration / process data |

### Connection

|                       |                   |
|-----------------------|-------------------|
| Number of connections | 7 Piece(s)        |
| <b>Connection 1</b>   |                   |
| Function              | Earthing          |
| Type of connection    | Earthing strap    |
| Material              | Metal             |
| <b>Connection 2</b>   |                   |
| Function              | Voltage supply    |
| Type of connection    | Harting connector |
| Material              | Metal             |

**Connection 3**

|                    |                                          |
|--------------------|------------------------------------------|
| Function           | Width measuring light curtain connection |
| Type of connection | Connector                                |
| Thread size        | M12                                      |
| Type               | Male                                     |
| Material           | Metal                                    |
| No. of pins        | 8 -pin                                   |
| Encoding           | A-coded                                  |

**Connection 4**

|                    |                                           |
|--------------------|-------------------------------------------|
| Function           | Height measuring light curtain connection |
| Type of connection | Connector                                 |
| Thread size        | M12                                       |
| Type               | Male                                      |
| Material           | Metal                                     |
| No. of pins        | 8 -pin                                    |
| Encoding           | A-coded                                   |

**Connection 5**

|                    |                                                                                      |
|--------------------|--------------------------------------------------------------------------------------|
| Function           | Rotation encoder connection (not in combination with length measuring light curtain) |
| Type of connection | Connector                                                                            |
| Thread size        | M12                                                                                  |
| Type               | Male                                                                                 |
| Material           | Metal                                                                                |
| No. of pins        | 8 -pin                                                                               |
| Encoding           | A-coded                                                                              |

**Connection 6**

|                    |                                     |
|--------------------|-------------------------------------|
| Function           | External Ethernet TCP/IP connection |
| Type of connection | Connector                           |
| Thread size        | M12                                 |
| Type               | Male                                |
| Material           | Metal                               |
| No. of pins        | 4 -pin                              |
| Encoding           | A-coded                             |

**Mechanical data**

|                     |                                                              |
|---------------------|--------------------------------------------------------------|
| Design              | Cubic                                                        |
| Housing material    | Metal , Aluminum                                             |
| Lens cover material | Plastic                                                      |
| Housing color       | Gray<br>Red                                                  |
| Note                | Dimensions of individual set items, see dimensioned drawings |

**Operation and display**

|                       |                                               |
|-----------------------|-----------------------------------------------|
| Note                  | This information refers to the switch cabinet |
| Type of display       | LED                                           |
| Number of LEDs        | 3 Piece(s)                                    |
| Type of configuration | performed via webConfig                       |
| Operational controls  | Rotary switch                                 |

**Environmental data**

|                                |               |
|--------------------------------|---------------|
| Ambient temperature, operation | 0 ... 45 °C   |
| Ambient temperature, storage   | -20 ... 70 °C |

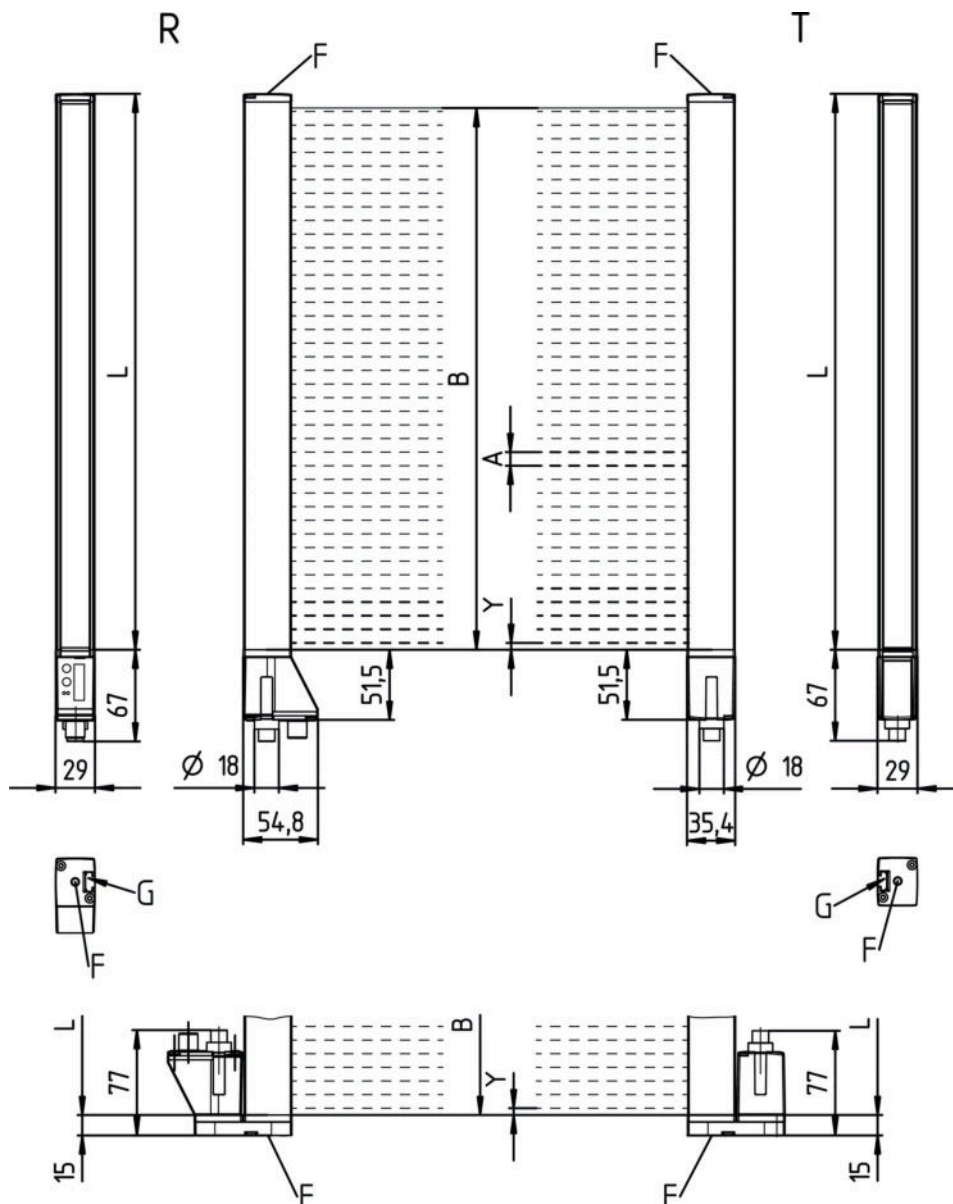
#### Classification

|                       |          |
|-----------------------|----------|
| Customs tariff number | 90314990 |
|-----------------------|----------|

## Dimensioned drawings

All dimensions in millimeters

Light curtain transmitter and receiver



A Beam spacing 5 mm

B Measurement field length 1 = 1040 mm  
Measurement field length 2 = 1040 mm

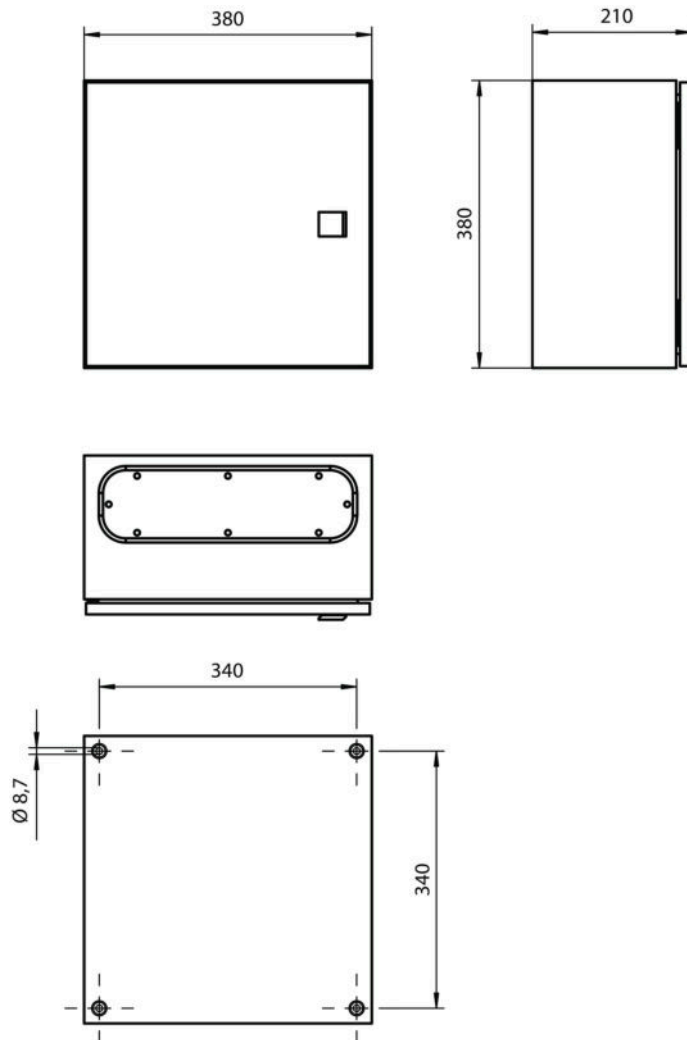
F M6 thread

G Fastening groove

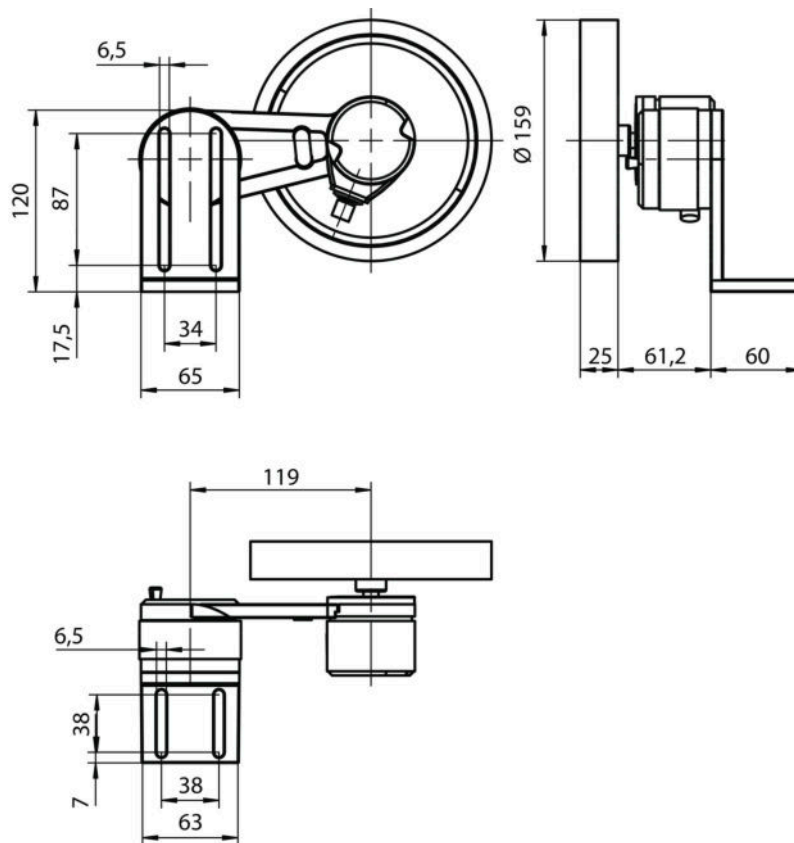
L Profile length 1 = 1048 mm  
L Profile length 2 = 1048 mm

T Transmitter  
R Receiver  
Y 2.5 mm

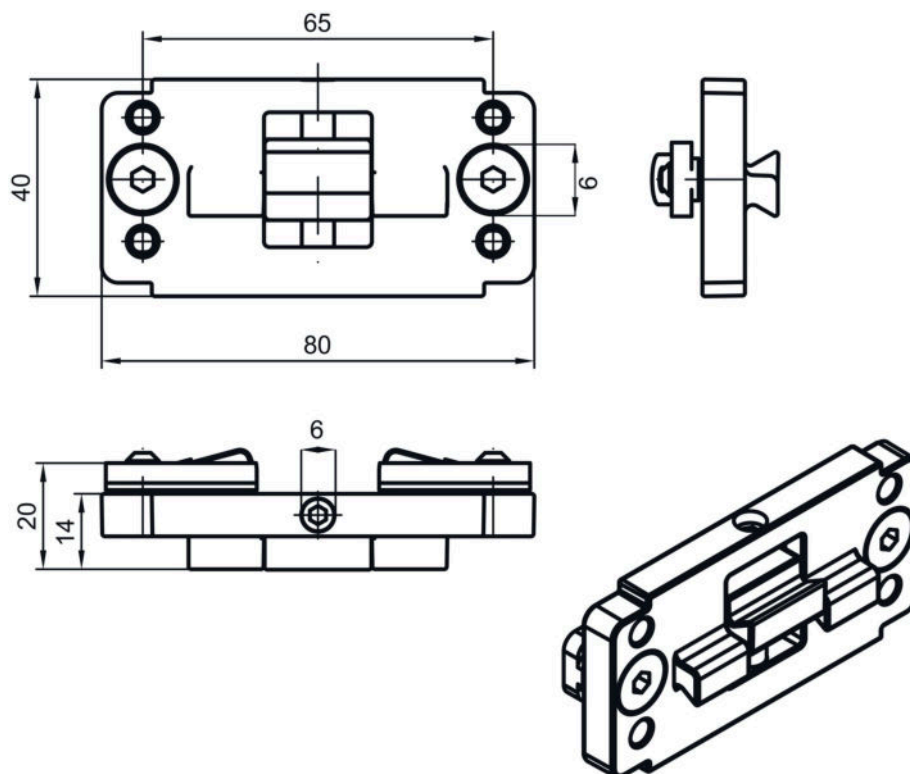
## Switch cabinet



## Rotation encoder



## Mounting bracket



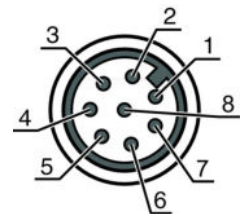
## Electrical connection

| Connection 1       |                |
|--------------------|----------------|
| Function           | Earthing       |
| Type of connection | Earthing strap |
| Material           | Metal          |

| Connection 2       | XS1000            |
|--------------------|-------------------|
| Function           | Voltage supply    |
| Type of connection | Harting connector |
| Material           | Metal             |

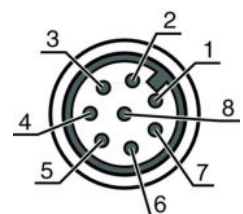
| Connection 3       | XS1301                                   |
|--------------------|------------------------------------------|
| Function           | Width measuring light curtain connection |
| Type of connection | Connector                                |
| Thread size        | M12                                      |
| Type               | Male                                     |
| Material           | Metal                                    |
| No. of pins        | 8 -pin                                   |
| Encoding           | A-coded                                  |

| Pin | Pin assignment |
|-----|----------------|
| 1   | V+             |
| 2   | IO1            |
| 3   | GND            |
| 4   | IO-Link        |
| 5   | IO2            |
| 6   | IO3            |
| 7   | IO4            |
| 8   | GND            |



| Connection 4       | XS1302                                    |
|--------------------|-------------------------------------------|
| Function           | Height measuring light curtain connection |
| Type of connection | Connector                                 |
| Thread size        | M12                                       |
| Type               | Male                                      |
| Material           | Metal                                     |
| No. of pins        | 8 -pin                                    |
| Encoding           | A-coded                                   |

| Pin | Pin assignment |
|-----|----------------|
| 1   | V+             |
| 2   | IO1            |
| 3   | GND            |
| 4   | IO-Link        |
| 5   | IO2            |
| 6   | IO3            |



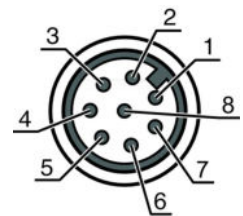


# Part no.: 50143590 – CMS708i-ENC1-1040-1040 – Contour measurement

| Pin | Pin assignment |
|-----|----------------|
| 7   | IO4            |
| 8   | GND            |

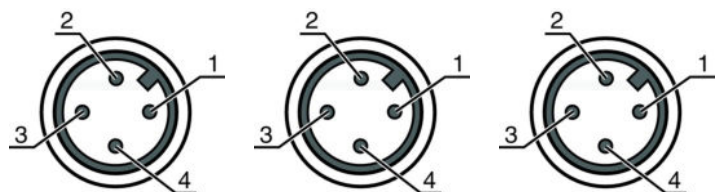
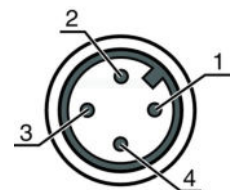
| Connection 5       | XS1400                                                                               |
|--------------------|--------------------------------------------------------------------------------------|
| Function           | Rotation encoder connection (not in combination with length measuring light curtain) |
| Type of connection | Connector                                                                            |
| Thread size        | M12                                                                                  |
| Type               | Male                                                                                 |
| Material           | Metal                                                                                |
| No. of pins        | 8 -pin                                                                               |
| Encoding           | A-coded                                                                              |

| Pin | Pin assignment |
|-----|----------------|
| 1   | U-             |
| 2   | U+             |
| 3   | A              |
| 4   | B              |
| 5   | N              |
| 6   | A inv.         |
| 7   | B inv.         |
| 8   | N inv.         |
| 9   | Shield         |

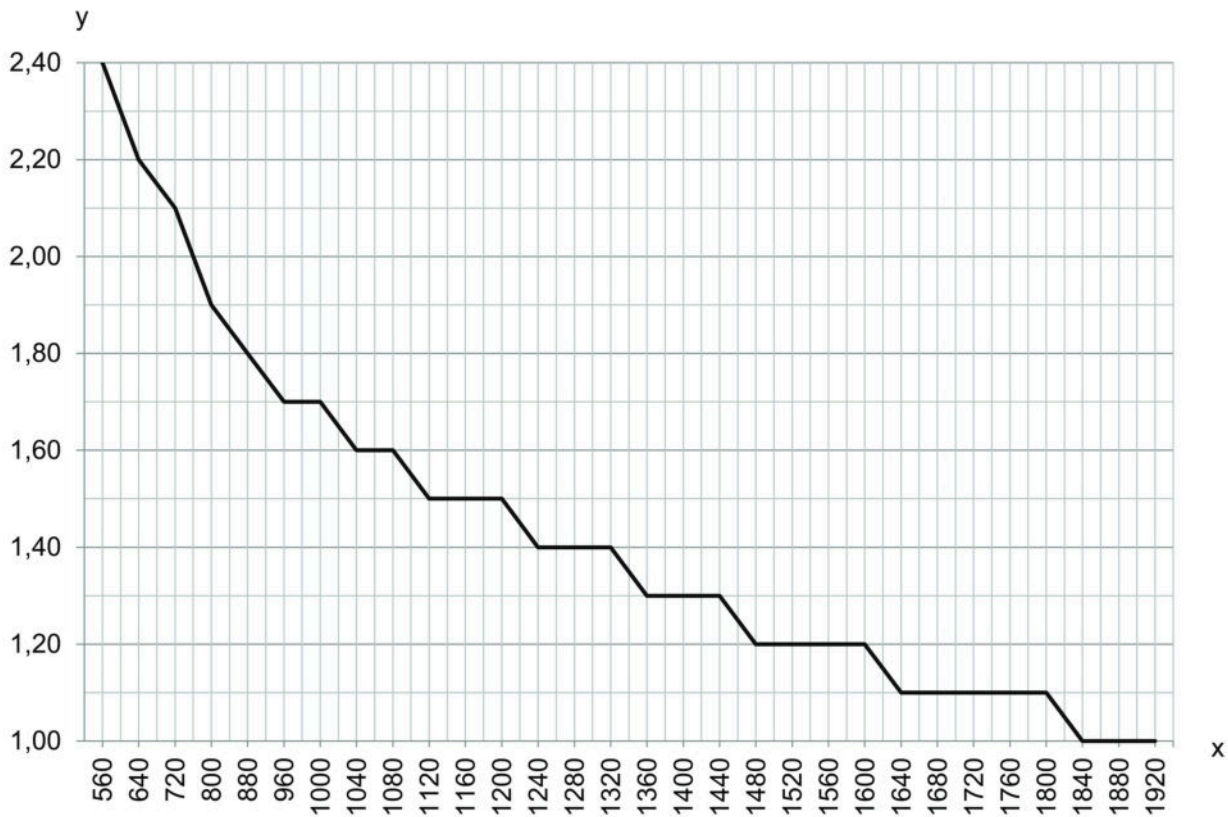


| Connection 6       | XETH1                               |
|--------------------|-------------------------------------|
| Function           | External Ethernet TCP/IP connection |
| Type of connection | Connector                           |
| Thread size        | M12                                 |
| Type               | Male                                |
| Material           | Metal                               |
| No. of pins        | 4 -pin                              |
| Encoding           | A-coded                             |

| Pin | Pin assignment |
|-----|----------------|
| 1   | TD+            |
| 2   | RD+            |
| 3   | TD-            |
| 4   | RD-            |



## Diagrams



x Total measuring length from width and height measuring light curtain [mm]  
y Max. conveyor speed [m/s]

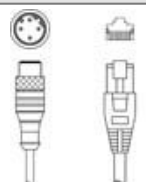
## Notes

### Observe intended use!

- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- Only use the product in accordance with its intended use.

## Accessories

### Connection technology - Interconnection cables

|                                                                                     | Part no. | Designation                 | Article               | Description                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|----------|-----------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50135082 | KSS ET-M12-4A-RJ45-A-P7-100 | Interconnection cable | Suitable for interface: Ethernet<br>Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin<br>Connection 2: RJ45<br>Shielded: Yes<br>Cable length: 10,000 mm<br>Sheathing material: PUR |

## Part no.: 50143590 – CMS708i-ENC1-1040-1040 – Contour measurement

|                                                                                                                                                                     | Part no. | Designation                 | Article               | Description                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | 50135083 | KSS ET-M12-4A-RJ45-A-P7-150 | Interconnection cable | Suitable for interface: Ethernet<br>Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin<br>Connection 2: RJ45<br>Shielded: Yes<br>Cable length: 15,000 mm<br>Sheathing material: PUR |
|   | 50135084 | KSS ET-M12-4A-RJ45-A-P7-300 | Interconnection cable | Suitable for interface: Ethernet<br>Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin<br>Connection 2: RJ45<br>Shielded: Yes<br>Cable length: 30,000 mm<br>Sheathing material: PUR |

## Mounting technology - Other

|  | Part no. | Designation   | Article             | Description                                                                                                                                                                                                                                     |
|--|----------|---------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 50143670 | BT 708M-MRSET | Mounting device set | Contains: Mounting material, Mounting profiles<br>Design of mounting device: Profile kit<br>Fastening, at system: Screw type / vertical<br>Mounting bracket, at device: Groove mounting<br>Type of mounting device: Rigid<br>Material: Aluminum |
|  | 50143671 | BT 70EM-MRSET | Mounting device set | Contains: Mounting material, Mounting profiles<br>Design of mounting device: Profile kit<br>Fastening, at system: Screw type / vertical<br>Mounting bracket, at device: Groove mounting<br>Type of mounting device: Rigid<br>Material: Aluminum |
|  | 50143669 | BT 710M-MRSET | Mounting device set | Contains: Mounting profiles, Mounting material<br>Design of mounting device: Profile kit<br>Fastening, at system: Screw type / vertical<br>Mounting bracket, at device: Groove mounting<br>Type of mounting device: Rigid<br>Material: Aluminum |
|  | 50142039 | BT 712M-MRSET | Mounting device set | Contains: Mounting profiles, Mounting material<br>Design of mounting device: Profile kit<br>Fastening, at system: Screw type / vertical<br>Mounting bracket, at device: Groove mounting<br>Type of mounting device: Rigid<br>Material: Aluminum |

### Note

A list with all available accessories can be found on the Leuze electronic website in the Download tab of the article detailed page.