

Series

EM58 • HS58 • HM58 MT



- EM58 series: general purpose, multi turn
- HS58 series: high accuracy, single turn
- HM58 series: high resolution, multi turn
- Fast and precise optical sensing
- Position and velocity output
- Integrated web server for parameter setup
- Status information & LED diagnostics



EM58 • HS58 • HM58 MT

### ENVIRONMENTAL SPECIFICATIONS

|                              |                                                               |
|------------------------------|---------------------------------------------------------------|
| Shock:                       | 100 g, 6 ms                                                   |
| Vibrations:                  | 10 g, 5-2000 Hz                                               |
| Protection:                  | IP65                                                          |
| Operating temperature range: | -25°C +85°C (-13°F +185°F)                                    |
| Storage temperature range:   | -40°C +100°C (-40°F +212°F)<br>(98% R.H.without condensation) |

### MECHANICAL SPECIFICATIONS

|                                          |                                                                                                |
|------------------------------------------|------------------------------------------------------------------------------------------------|
| Dimensions:                              | see drawing                                                                                    |
| Shaft diameter:                          | Ø 6, 8, 9.52, 10, 12 mm                                                                        |
| Hollow shaft diameter:                   | Ø 14, 15 mm                                                                                    |
| Reducing sleeves BR1-xx from Ø 15 mm to: | Ø 6, 8, 9.52, 10, 11, 12 mm                                                                    |
| Shaft loading (axial, radial):           | 40 N max.                                                                                      |
| Shaft rotational speed:                  | 6000 rpm max.                                                                                  |
| Bearings life:                           | 400 x 10 <sup>6</sup> rev. min.<br>(10 <sup>9</sup> rev. min. with shaft loading of 20 N max.) |
| Weight:                                  | ~ 350 g (12,3 oz)                                                                              |

### ELECTRICAL SPECIFICATIONS

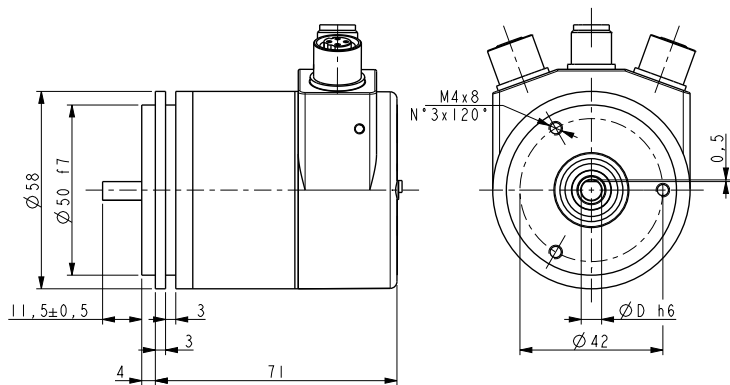
|                          |                                                                             |
|--------------------------|-----------------------------------------------------------------------------|
| Resolution:              | HS: 262144 cpr<br>EM: 8192 cpr x 16384 turns<br>HM: 65536 cpr x 16384 turns |
| Accuracy:                | HS, HM: ± 0,007° - EM: ± 0,5°                                               |
| Counting frequency:      | 150 kHz max.                                                                |
| Power supply:            | +10V +30V                                                                   |
| Power consumption:       | 1,7 W max.                                                                  |
| Interface:               | Ethernet Modbus TCP/IP                                                      |
| Programmable parameters: | see user manual                                                             |
| Communication modes:     | Polled mode (master-slave)                                                  |
| Cycle time:              | ≥ 2 ms                                                                      |
| Protection:              | against inversion of polarity and short-circuit                             |
| EMC:                     | electro-magnetic immunity, according to: EN 61000-4-2<br>EN 61000-4-4       |
| Optoelectronic life:     | 100.000 h min.                                                              |

### MATERIALS

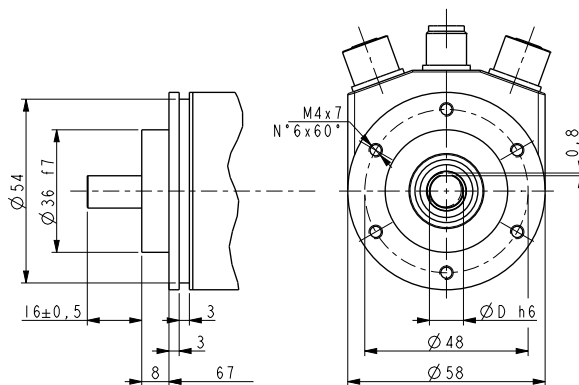
|               |                                            |
|---------------|--------------------------------------------|
| Flange:       | anticorodal, UNI EN AW-6082                |
| Housing:      | anticorodal, UNI EN AW-6082                |
| Bearings:     | ABEC 5                                     |
| Shaft:        | stainless steel, non magnetic, UNI EN 4305 |
| Light source: | GaAl diodes                                |

### ACCESSORIES

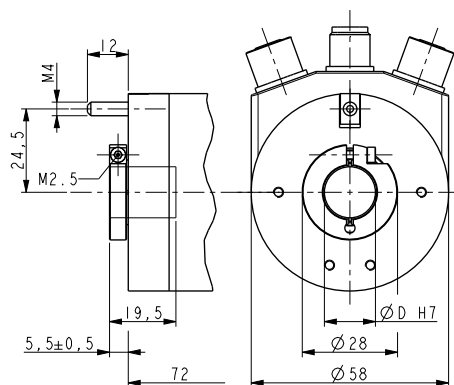
|                        |                                          |
|------------------------|------------------------------------------|
| PAN/PGF:               | flexible couplings                       |
| BR1:                   | reducing sleeves                         |
| LKM-386:               | fixing clamps                            |
| EC-M12ME-EC-GN-5:      | M12 cordset with 5 m cable               |
| EC-M12ME-EC-GN-10:     | M12 cordset with 10 m cable              |
| EXC-M12ME-EC-GN-5-RJ:  | M12 + RJ bus in/out cordset 5 m          |
| EXC-M12ME-EC-GN-10-RJ: | M12 + RJ bus in/out cordset 10 m         |
| EC-M12PP-LK-PBS-5:     | M12 power supply cordset with 5 m cable  |
| EC-M12PP-LK-PBS-10:    | M12 power supply cordset with 10 m cable |



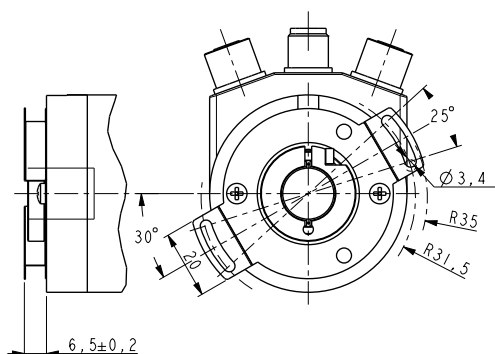
EM58 • HS58 • HM58 MT



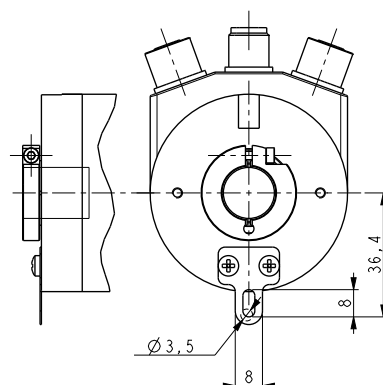
EM58S • HS58S • HM58S MT



EMC58 • HSC58 • HMC58 MT



EMC59 • HSC59 • HMC59 MT



EMC60 • HSC60 • HMC60 MT

Order code radial version - Single turn

|       |    |   |    |   |    |       |
|-------|----|---|----|---|----|-------|
| HS58  | XX | / | MT | - | XX | /Sxxx |
| HS58S | Ⓐ  |   |    |   | Ⓑ  | Ⓒ     |
| HSC58 |    |   |    |   |    |       |
| HSC59 |    |   |    |   |    |       |
| HSC60 |    |   |    |   |    |       |

Order code radial version - Multi turn

|       |       |          |    |   |    |       |
|-------|-------|----------|----|---|----|-------|
| HM58  | EM58  | XX/XXXXX | MT | - | XX | /Sxxx |
| HM58S | EM58S | Ⓐ        |    |   | Ⓑ  | Ⓒ     |
| HMC58 | EMC58 |          |    |   |    |       |
| HMC59 | EMC59 |          |    |   |    |       |
| HMC60 | EMC60 |          |    |   |    |       |

|                                 |                                                                                                                                        |                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Ⓐ RESOLUTION<br>18 = 262144 cpr | Ⓑ SHAFT DIAMETER<br>6 = 6 mm<br>8 = 8 mm<br>P9 = 9.52 mm, 3/8"<br>10 = 10 mm<br>12 = 12 mm<br>14 = 14 mm (HSCxx)<br>15 = 15 mm (HSCxx) | Ⓒ CUSTOM VERSION |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------|

|                                                                                                       |                                                                |                                                                                    |                  |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------|------------------|
| Ⓐ RESOLUTION<br>13/16384 = 8192 cpr x 16384 turns (EMxx)<br>16/16384 = 65536 cpr x 16384 turns (HMxx) | Ⓑ SHAFT DIAMETER<br>6 = 6 mm<br>8 = 8 mm<br>P9 = 9.52 mm, 3/8" | 10 = 10 mm<br>12 = 12 mm<br>14 = 14 mm (EMCxx, HMCxx)<br>15 = 15 mm (EMCxx, HMCxx) | Ⓒ CUSTOM VERSION |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------|------------------|