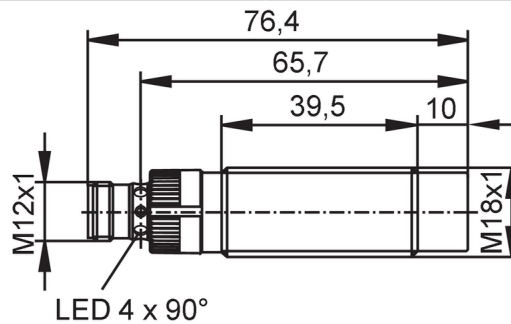


## Compact evaluation unit for speed monitoring

DGA4008-WRKG/IO/US/3D



## Product characteristics

|                         |                                                    |
|-------------------------|----------------------------------------------------|
| Electrical design       | PNP/NPN; (parameterisable)                         |
| Output function         | normally open / normally closed; (parameterisable) |
| Sensing range [mm]      | 8                                                  |
| Communication interface | IO-Link                                            |
| Housing                 | threaded type                                      |
| Dimensions [mm]         | M18 x 1 / L = 76.4                                 |

## Application

|                 |                                                                                 |
|-----------------|---------------------------------------------------------------------------------|
| Special feature | Gold-plated contacts                                                            |
| Application     | evaluation of rotating and linear movements with regard to underspeed; blocking |

## Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...30 DC |
| Current consumption [mA]    | < 15       |
| Protection class            | II         |
| Reverse polarity protection | yes        |

## Outputs

|                                           |                                                                                                                    |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Electrical design                         | PNP/NPN; (parameterisable)                                                                                         |
| Output function                           | normally open / normally closed; (parameterisable)                                                                 |
| Max. voltage drop switching output DC [V] | 2.5                                                                                                                |
| Factory setting                           | Electrical design: PNP<br>Output function: normally open<br>switch point: 100 Imp/min<br>Output OUT2: Pulse output |
| Short-circuit protection                  | yes                                                                                                                |
| Overload protection                       | yes                                                                                                                |

## Switching output (OUT1)

|                                                      |                  |
|------------------------------------------------------|------------------|
| Output signal                                        | switching signal |
| Permanent current rating of switching output DC [mA] | 250              |

## Pulse output / switching output (OUT2)

|                                                      |                                                   |
|------------------------------------------------------|---------------------------------------------------|
| Output signal                                        | pulse signal; switching signal; (parameterisable) |
| Permanent current rating of switching output DC [mA] | 100                                               |



## Compact evaluation unit for speed monitoring

DGA4008-WRKG/IO/US/3D

|                                 |                              |                                                                                                  |
|---------------------------------|------------------------------|--------------------------------------------------------------------------------------------------|
| Switching frequency DC          | [Hz]                         | < 500                                                                                            |
| Pulse output                    |                              | external evaluation of the damping pulses                                                        |
| <b>Detection zone</b>           |                              |                                                                                                  |
| Sensing range                   | [mm]                         | 8                                                                                                |
| <b>Measuring/setting range</b>  |                              |                                                                                                  |
| Measuring range                 | [Imp/min]                    | 1...32000                                                                                        |
| Setting range                   | [Imp/min]                    | 3...24000                                                                                        |
| Measuring principle             |                              | inductive                                                                                        |
| <b>Accuracy / deviations</b>    |                              |                                                                                                  |
| Correction factor               |                              | stainless steel: 0.7 / brass: 0.4 / aluminium: 0.4 / copper: 0.3                                 |
| Hysteresis                      | [% of Sr]                    | 10                                                                                               |
| Hysteresis                      | [% of Sp]                    | 10...30                                                                                          |
| Repeatability IO-Link           | [%]                          | 1; (of the final value of the measuring range)                                                   |
| Temperature drift               |                              | ± 10 %; (of the final value of the measuring range)                                              |
| <b>Response times</b>           |                              |                                                                                                  |
| Start-up delay                  | [s]                          | 0...15; (In steps of: 1 s; Default: 10 s)                                                        |
| Max. damping frequency          | [Imp/min]                    | 60000                                                                                            |
| <b>IO-Link</b>                  |                              |                                                                                                  |
| Start-up delay                  | [s]                          | 0...30; (In steps of: 100 ms; Default: 10 s)                                                     |
| <b>Interfaces</b>               |                              |                                                                                                  |
| Communication interface         |                              | IO-Link                                                                                          |
| Transmission type               |                              | COM2 (38,4 kBaud)                                                                                |
| IO-Link revision                |                              | 1.1                                                                                              |
| SDCI standard                   |                              | IEC 61131-9                                                                                      |
| Profiles                        | Smart Sensor - SSP 4.2.1     | Measuring and Switching Sensor, high resolution, 1 channel                                       |
|                                 | Common - I&D                 | Identification and Diagnosis                                                                     |
|                                 | Function                     | Locator                                                                                          |
|                                 | Function                     | ProductURI                                                                                       |
| SIO mode                        |                              | yes                                                                                              |
| Required master port type       |                              | A                                                                                                |
| Min. process cycle time         | [ms]                         | 3.7                                                                                              |
| IO-Link process data (cyclical) | <b>function</b>              | <b>bit length</b>                                                                                |
|                                 | process value                | 32                                                                                               |
|                                 | device status                | 4                                                                                                |
|                                 | binary switching information | 2                                                                                                |
| IO-Link functions (acyclical)   |                              | switch-on cycle counter; operating hours counter; internal temperature; application specific tag |
| Supported DeviceIDs             | <b>Type of operation</b>     | <b>DeviceID</b>                                                                                  |
|                                 | default                      | 1444                                                                                             |
| Note                            |                              | For further information please see the IODD PDF file under "Downloads"                           |
| <b>Operating conditions</b>     |                              |                                                                                                  |
| Ambient temperature             | [°C]                         | -20...60                                                                                         |
| Protection                      |                              | IP 67                                                                                            |

# DI604A



## Compact evaluation unit for speed monitoring

DGA4008-WRKG/IO/US/3D

| Tests / approvals                                                                   |                                                                                                                     |                                                                                  |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Approval                                                                            | BVS 17 ATEX E 112 X; IECEx BVS 17.0094X                                                                             |                                                                                  |
| ATEX marking                                                                        |  II 3D Ex tc IIIC T80°C Dc         |                                                                                  |
| EMC                                                                                 | EN 61000-4-2 ESD                                                                                                    | 4 kV CD / 8 kV AD                                                                |
|                                                                                     | EN 61000-4-3 HF radiated                                                                                            | 10 V/m                                                                           |
|                                                                                     | EN 61000-4-4 Burst                                                                                                  | 2 kV                                                                             |
|                                                                                     | EN 61000-4-6 HF conducted                                                                                           | 10 V                                                                             |
|                                                                                     | EN55011                                                                                                             | class B                                                                          |
| Vibration resistance                                                                | EN 60068-2-6 Fc                                                                                                     | 20 g (10...3000 Hz)                                                              |
|                                                                                     |                                                                                                                     | 50 sweep cycles, 1 octave per minute, in 3 axes                                  |
| Shock resistance                                                                    | EN 60068-2-27 Ea                                                                                                    | 100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes |
| Continuous shock resistance                                                         | EN 60068-2-27                                                                                                       | 41 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes          |
| Fast temperature change                                                             | EN 60068-2-14 Na                                                                                                    | TA = -25°C; TB = 80°C; t1 = 30 min; t2 = <10 s 50 cycles                         |
| Salt spray test                                                                     | EN 60068-2-52 Kb                                                                                                    | severity level 5 (4 test cycles)                                                 |
| MTTF                                                                                | [years]                                                                                                             | 471                                                                              |
| Mechanical data                                                                     |                                                                                                                     |                                                                                  |
| Weight                                                                              | [g]                                                                                                                 | 75                                                                               |
| Housing                                                                             | threaded type                                                                                                       |                                                                                  |
| Mounting                                                                            | non-flush mountable                                                                                                 |                                                                                  |
| Dimensions                                                                          | [mm]                                                                                                                | M18 x 1 / L = 76.4                                                               |
| Thread designation                                                                  | M18 x 1                                                                                                             |                                                                                  |
| Materials                                                                           | housing: stainless steel (316L/1.4404); sensing face: PA; LED window: PEI; lock nuts: stainless steel (316L/1.4404) |                                                                                  |
| Tightening torque                                                                   | [Nm]                                                                                                                | 35                                                                               |
| Displays / operating elements                                                       |                                                                                                                     |                                                                                  |
| Display                                                                             | operation                                                                                                           | 4 x LED, green                                                                   |
|                                                                                     | switching output                                                                                                    | 4x LED, yellow                                                                   |
|                                                                                     | error message                                                                                                       | 4x LED, red                                                                      |
| Accessories                                                                         |                                                                                                                     |                                                                                  |
| Items supplied                                                                      | lock nuts: 2                                                                                                        |                                                                                  |
| Remarks                                                                             |                                                                                                                     |                                                                                  |
| Pack quantity                                                                       | 1 pcs.                                                                                                              |                                                                                  |
| Electrical connection                                                               |                                                                                                                     |                                                                                  |
| Connector: 1 x M12; coding: A; Contacts: 4, gold-plated                             |                                                                                                                     |                                                                                  |
|  |                                                                                                                     |                                                                                  |

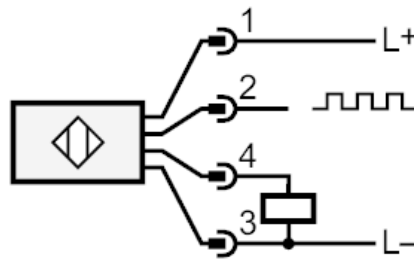
# DI604A



## Compact evaluation unit for speed monitoring

DGA4008-WRKG/IO/US/3D

### Connection



|    |                                      |
|----|--------------------------------------|
| 1: | L+                                   |
| 2: | OUT2 Pulse output / switching output |
| 3: | L-                                   |
| 4: | OUT1 IO-Link / switching output      |