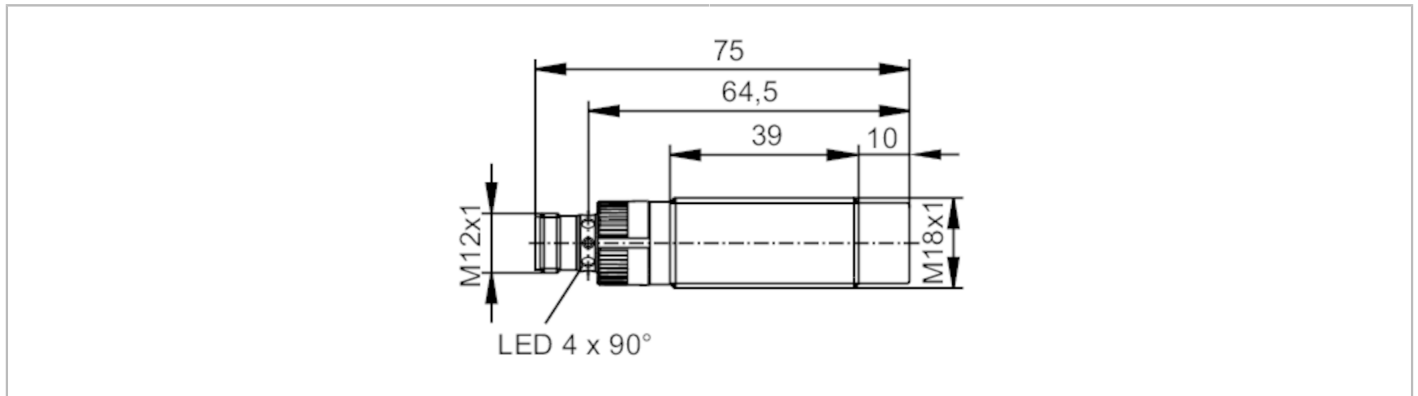


# DI6004



## Compact evaluation unit for speed monitoring

DGA4012-WRKG/IO/US



Product characteristics	
Electrical design	PNP/NPN; (parameterisable)
Output function	normally open / normally closed; (parameterisable)
Sensing range [mm]	12
Communication interface	IO-Link
Housing	threaded type
Dimensions [mm]	M18 x 1 / L = 75
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 Output function: normally open switch point: 100 Imp/min 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)

# DI6004



## Compact evaluation unit for speed monitoring

DGA4012-WRKG/IO/US

Permanent current rating of switching output DC	[mA]	100
Switching frequency DC	[Hz]	< 500
Pulse output		external evaluation of the damping pulses
<b>Detection zone</b>		
Sensing range	[mm]	12
<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: 0.5 / aluminium: 0.5 / copper: 0.4
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: Measuring and Switching Sensor, high resolution, 1 channel, Identification and Diagnosis, Locator, 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]	-25...85
Protection		IP 65; IP 66; IP 67; IP 68; IP 69K

# DI6004



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DGA4012-WRKG/IO/US

Tests / approvals		
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	40 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]		467
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	power supply	Limited Voltage/Current
	UL Approval no.	A041
File number UL		E174191
Mechanical data		
Weight [g]		52.7
Housing		threaded type
Mounting		non-flush mountable
Dimensions [mm]		M18 x 1 / L = 75
Thread designation		M18 x 1
Materials		housing: stainless steel (316L/1.4404); sensing face: PBT; 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.

# DI6004



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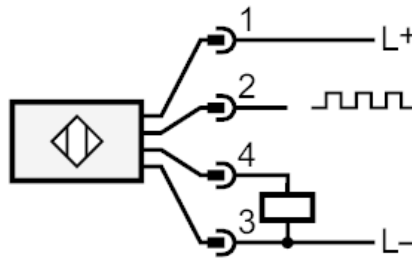
DGA4012-WRKG/IO/US

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



### Connection



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