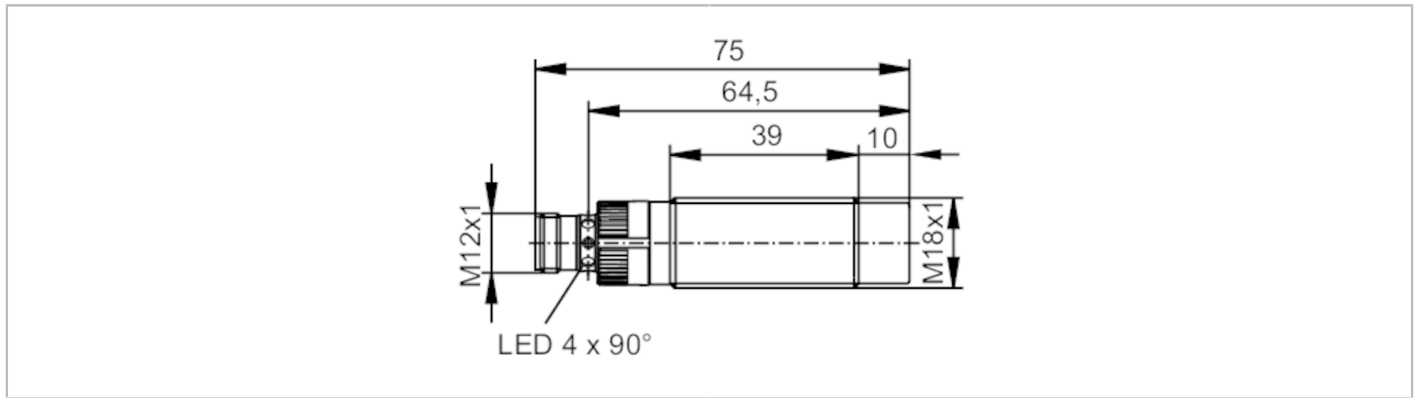


DI6004



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

Detection zone

Sensing range [mm]	12
--------------------	----

Measuring/setting range

Measuring range [Imp/min]	1...32000
Setting range [Imp/min]	3...24000
Measuring principle	inductive

Accuracy / deviations

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)

Response times

Start-up delay [s]	0...15; (In steps of: 1 s; Default: 10 s)
Max. damping frequency [Imp/min]	60000

IO-Link

Start-up delay [s]	0...30; (In steps of: 100 ms; Default: 10 s)
--------------------	--

Interfaces

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)	function	bit length
	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	Type of operation	DeviceID
	default	1444
Note	For further information please see the IODD PDF file under "Downloads"	

Operating conditions

Ambient temperature [°C]	-25...85
--------------------------	----------

DI6004



Compact evaluation unit for speed monitoring

DGA4012-WRKG/IO/US

Protection	IP 65; IP 66; IP 67; IP 68; IP 69K	
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]		119.35
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



Compact evaluation unit for speed monitoring

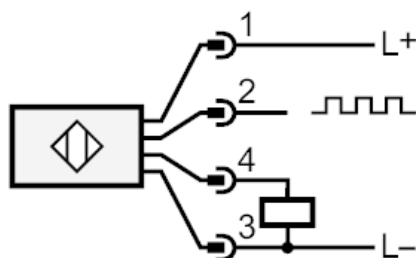
DGA4012-WRKG/IO/US

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 |