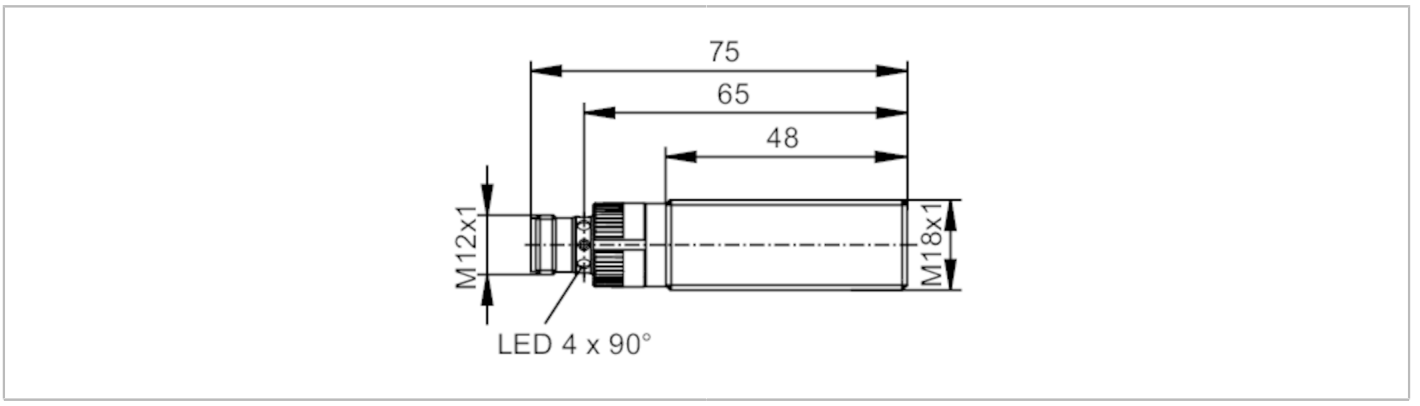
DI6005

Compact evaluation unit for speed monitoring

DGA4007-WRKG/IO/US



Product characteristics		
Electrical design		PNP/NPN; (parameterisable)
Output function		normally open / normally closed; (parameterisable)
Sensing range	[mm]	7
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)

DI6005

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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]	7	
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: 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)	**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	
Protection	IP 65; IP 66; IP 67; IP 68; IP 69K	

DI6005

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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	42 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	
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]	52.78	
Housing		threaded type	
Mounting		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.	

DI6005

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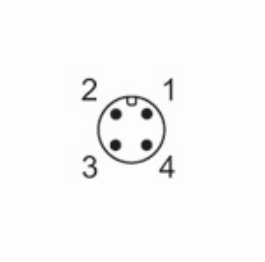
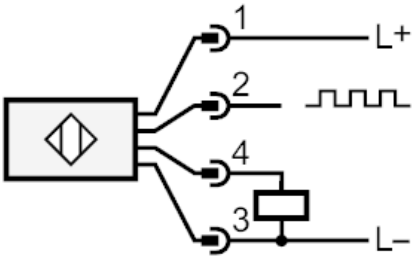
Electrical connection

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