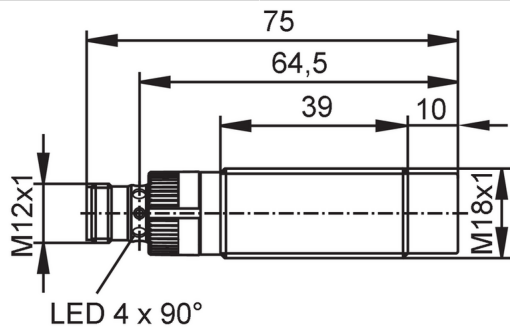




Compact evaluation unit for speed monitoring

DGA4012-WRKG/IO/US



Product characteristics		
Electrical design		PNP/NPN; (configurable)
Output function		normally open / closed; (configurable)
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; (configurable)
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2.5
Factory setting		Electrical design: PNP
		Output function: normally open
		Set 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; (configurable)
Permanent current rating of switching output DC	[mA]	100



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Switching frequency DC	[Hz]	< 500
Pulse output		external evaluation of the damping pulses
Monitoring range		
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 / aluminum: 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)
Reaction 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 class		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 at "Downloads"
Operating conditions		
Ambient temperature	[°C]	-25...85
Protection		IP 65; IP 66; IP 67; IP 68; IP 69K

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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)
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 changes	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
	voltage supply	Limited Voltage/Current
	UL approval number	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
Material		housing: stainless steel (1.4404 / 316L); sensing face: PBT; LED window: PEI; lock nuts: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	35
Displays / operating elements		
Display	Power	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		
		

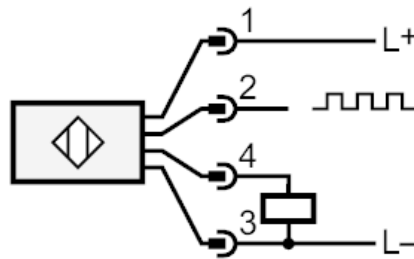
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Connection



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