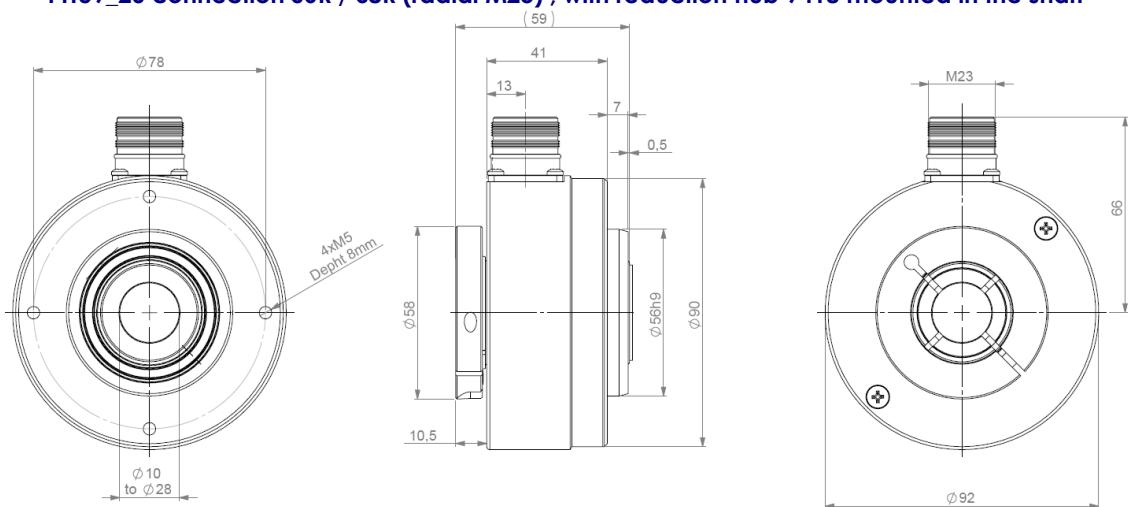


SSI ABSOLUTE MULTITURN ENCODER, PHU9 RANGE

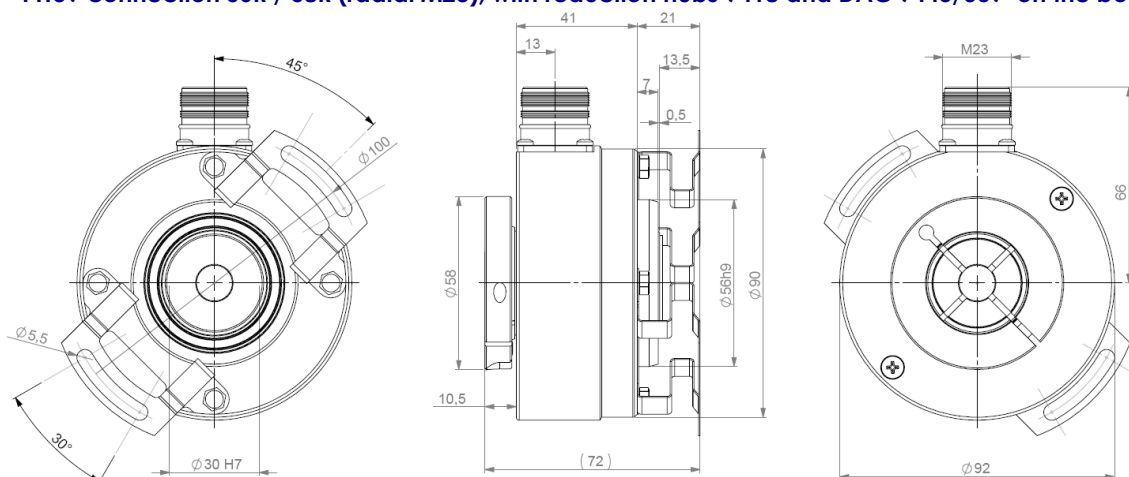
- Version Heavy-Duty, \varnothing 30mm through shaft, reduction hubs available
- Robustness and excellent resistance to shocks / vibrations
- High performances in temperature -20°C to $+80^{\circ}\text{C}$
- Isolated SSI interface, clock from 100 to 500 kHz
- Universal electronic circuits from 5 to 30Vdc
- Protection against short-circuits and inversion of polarity
- High resolutions available: 8192 (13 bits) per turn
- Turn counting up to 65 536 (16 bits)
- 2 inputs : DIRECTION and RAZ
- Available with incremental channels – 2048 points – 5 to 30 Vdc



PHU9_20 connection S6R / S8R (radial M23) , with reduction hub 9418 mounted in the shaft



PHU9 connection S6R / S8R (radial M23), with reduction hubs 9418 and DAC 9445/009* on the body



* Accessory to be ordered separately

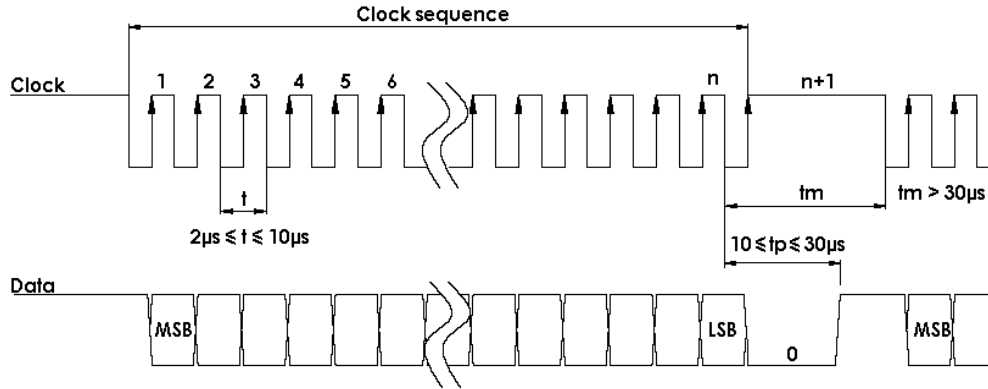
Material	Cover : steel	Shocks (EN60068-2-27)	$\leq 500 \text{ m.s}^{-2}$ (during 6 ms)
	Body : aluminium	Vibrations (EN60068-2-6)	$\leq 100 \text{ m.s}^{-2}$ (10 ... 2 000 Hz)
	Shaft : stainless steel	EMC	EN 61000-6-4, EN 61000-6-2
Bearings	6 807 serial	Isolation	100V (1 min)
Maximum loads	Axial : 50 N	Encoder weight (approx)	0,700 kg
	Radial : 80 N	Operating temperature	$-20... +80^{\circ}\text{C}$ (encoder T ⁹)
Shaft inertia	$\leq 55.10^{-6} \text{ kg.m}^2$	Storage temperature	$-20... +80^{\circ}\text{C}$
Torque	$\leq 25.10^{-3} \text{ N.m}$	Protection(EN 60529)	IP 65
Permissible max. speed	$6\ 000 \text{ min}^{-1}$	Torque (ring pressure screw)	nominal: 3N.m, break: 4N.m
Continuous max. speed	$3\ 600 \text{ min}^{-1}$	Theoretical mechanical lifetime 10^9 turns (F_{axial} / F_{radial})	
Shaft seal	Viton	25 N / 40 N : 140	50 N / 80 N : 17

SSI ABSOLUTE MULTITURN ENCODER, PHU9 RANGE

ELECTRICAL CHARACTERISTIC

Input signal clock CLK	per opto-coupler	Power supply	5 – 30Vdc
Output signal DATA	line - driver RS422	Introduction	< 1 s
Clock frequency CLK	100kHz – 500kHz	Cons. without load	< 100mA (typically 50-60mA at 24Vdc)
Precision	± ½ LSB (13 bits)	Position refresh	< 200µs

SSI TRANSMISSION



Transmission	Transmission up to 400m* at 100kHz in function of the cable characteristics
Cable	High security of transmission by using shielded cable and twisted pairs

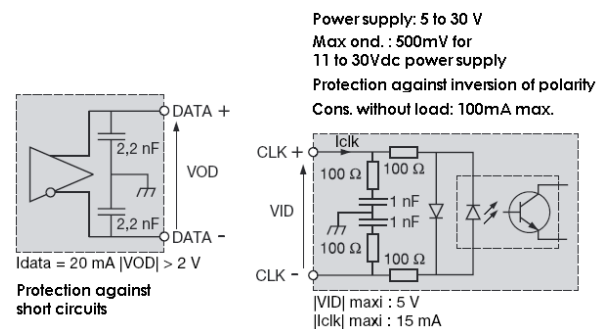
*Consult us for length > 100m

SSI CONNECTION (TYPE S6 : BEI SENSORS STANDARD)

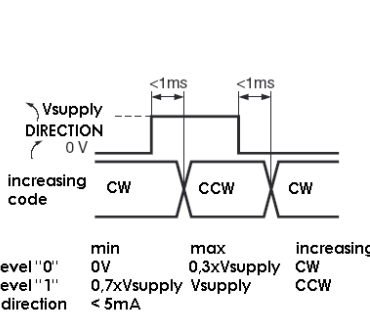
Type	Vcc	Gnd	Clk+	Data+	RAZ	Data-	Clk-	DIRECTION
S6	1	2	3	4	5	6	7	9
S8	8	1	3	2	6	10	11	5
S5	BN/GN Brown/Green	WH/GN White/Green	GN Green	GY Grey	BU Blue	PK Pink	BN Brown	WH White

Note : Do not connect other pinouts, connect DIRECTION and RAZ to a potential (RAZ at 0V if not used)

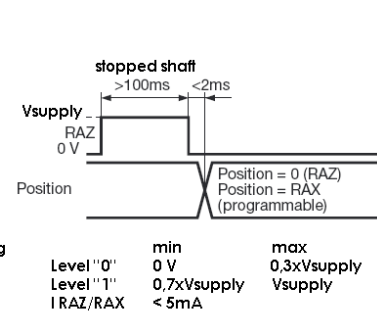
Data output RS422



Isolated Clk input



DIRECTION input



ORDERING REFERENCE (Contact the factory for special versions, ex: special flanges, connections, electronics...)

	Shaft Ø	Supply	Output stage	Code	Resolution			Connection	Orientation
PHU9	30 : 30mm Reduction hub available	P : 5 to 30Vdc	SS : SSI sans parité	B: binary G: Gray	13 B12 D5			S6 : M23 12 pins CW S8 : M23 12 pins CCW	R : radial
					Resolution	Nb of turn	Nb data		
					13: 13 bits	B12: 12 bits	D5: 25 bits	S5R : PUR cable	Example: R020: radial cable 2m
PHU9_	30 //	P	SS	G //	13	B12	D5 //	S6	R

Made in France