

Compagnia Generale Elettronica - Misure - Regolazioni - Sicurezza
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DATA SHEET - Housing **GLOBTOP®** series PF

- **Dimensional:** mod. PF = H 106mm, Ø 121mm
- **Conduit entries:** nr 3 from 1/2" NPT-F. Option: nr 3 from M20x1,5F;
- **Material:** aluminum alloy copper free (copper ≤ 0,1%) or SS 316L
- **Casting method:** die-cast for aluminium housing and investment casting for SST housing.

The term "**Copper Free**" is used to describe aluminum alloys that contain **less than 0,4% copper**. **The copper content in our housing is ≤ 0.1%** and this very low content of copper increases the strength properties of the natural corrosion of aluminum in the presence of saline atmosphere, sulfur gases and ammonium nitrate. Aluminum alloys with a level not higher than 0.1% copper, is also **required and/or recommended for installation in tropical environment** warm (40°C) – humid (90%). **Attention:** in the presence of copper increased to 0.4% (NO copper free), galvanic corrosion due to the action within the structure of the metal increases rapidly.



- **Superficial treatment:**
 - ✓ **Aluminium alloy housings :** Chromate, specific for anticorrosion. Treatment in accordance with military norms MIL-DTL-5541F or a and MIL-C5541E for class 1A

This treatment generates a light yellow amorphous film, creating an excellent protection on unpainted aluminum alloy objects with a "self-healing" effect in case the film is superficially damaged or scratched, in addition to guaranteeing an optimal base for paint. The corrosion resistance in the salt spray test, is much higher than the normal passivation treatments

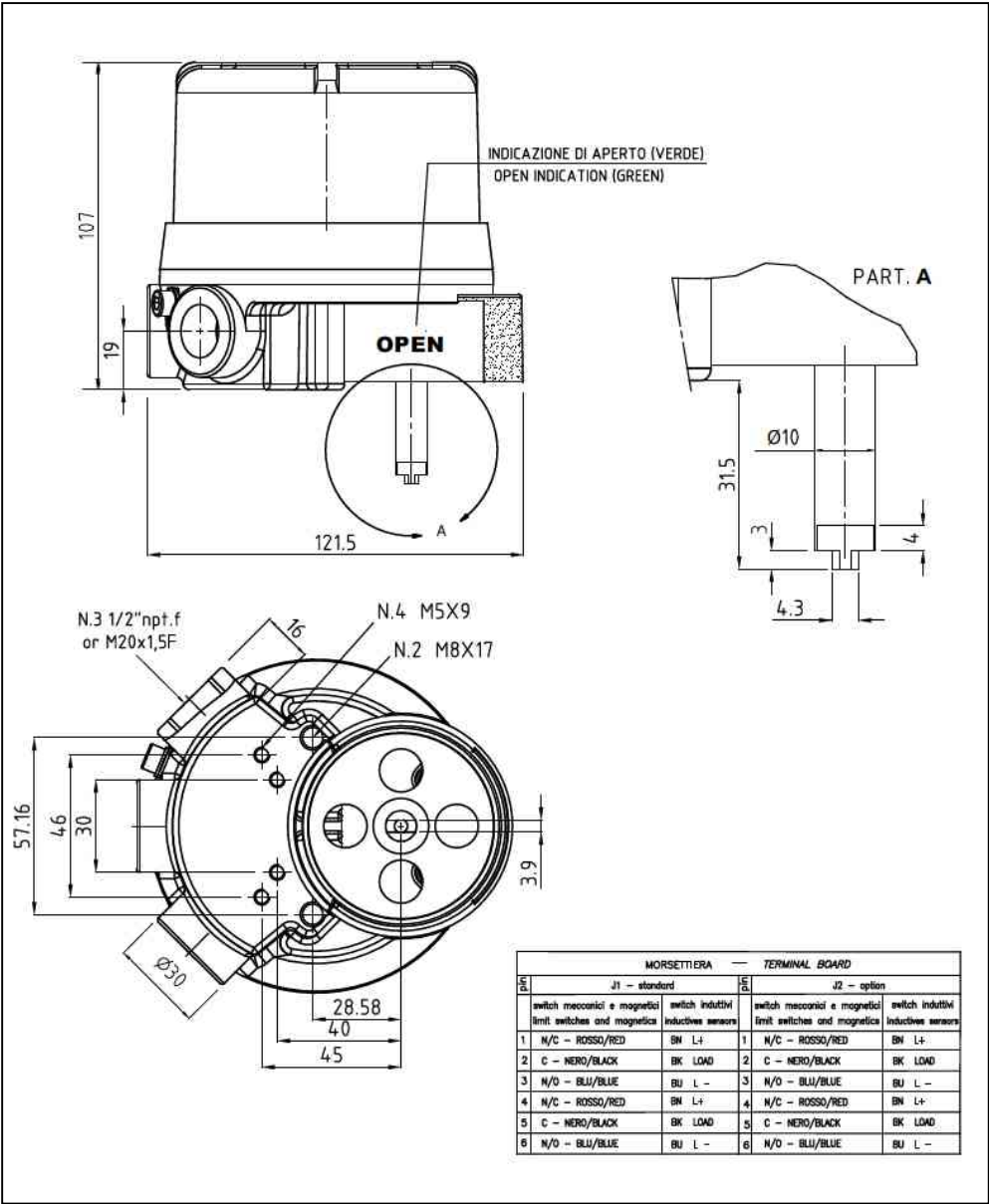
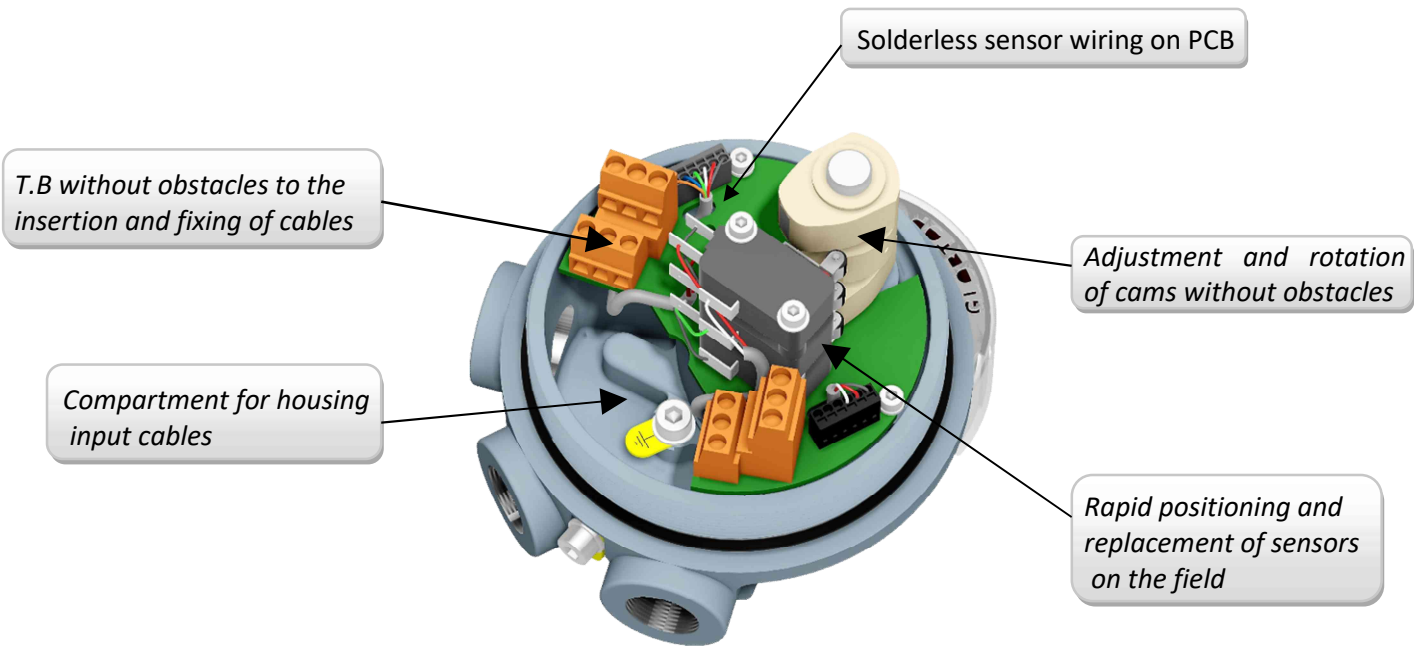
- ✓ **Painting (for aluminum only):** hot electrostatic with polyester powder (high adhesion) - std color. RAL 7000
- ✓ **316L SS housings:** solution heat-treatment, sand blasting, electro-polishing and passivation

These treatments, which serve to remove the superficial oxides present on the pieces in the presswork and machining phase, regenerate and improve the original rust-resistant characteristics of the object, thus adding years to its life in corrosive environments without the need for protective coatings. Excellent results in salt spray tests.



- **Protection degree:** IP66/67
- **SIL certification:** SIL1,2,3 available according to the required configurations.
- **Certifications ATEX, IECEx, INMETRO, ECAS ed EAC for Exd IIC area:**
Ex II 2GD - Ex db IIC T6,T5,T4 Gb – Ex tb IIIC T85/T100/T130°C Db (Tamb. da -60°C a +75/+90/+100°C)
- **Mechanical coupling:** shaft and brackets for fixing according to NAMUR standard and VDI / VDE3845 (material stainless steel 316L). Wheelbases of custody fixing: 30x80mm; 57,2x57,2mm; 46x90mm
- **Visual position indicator (standard version):** material, MAKROLON® polycarbonate shock and UV resistant. Three-dimensional shape. Base mounting allows better protection against accidental impacts.
- **Terminal strips mounting options:** up to 12 terminals of 2.5mm²

- Number of sensors that can be mounted inside:** from 1 up to 3 limit switches mechanical, magnetic and inductive of various sizes and brands.



PRODUCT CODE COMPOSITION

HOUSING MODEL

PF	Standard housing with nr.3 conduit entries ½ "npt – T.amb. -40÷100°C (For other configurations see DIGIT 7)
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Y	Nr. SENSORS
1÷3	See TAB.1
X	SENSOR TYPE
F	Mechanical (Omron, Crouzet, Honeywell)
N	Inductive (P&F, IFM) of proximity
R	Magnetic (JETREED) of proximity

HOUSING CERTIFICATION

0	IP66/67
A	Declaration of "Simple component" for Exia area
ET	Certification ATEX (BVI17ATEX0005X): Ex II 2GD – Ex db IIC T6/T5/T4 Gb Ex tb IIIC T85/T100/T135°C Db (T.amb. from -60°C to +65/+80/+115°C) - IP66/67
E	Certification IECEX (IECEX EPS 16.0056X): Ex db IIC T6/T5/T4 Gb, Ex tb IIIC T85/T100/T135°C Db (T.amb. from -60°C to +65/+80/+115°C) - IP66/67
G	GOST EAC Exd (TP TC 012/2011): 1Ex db IIC T6/T5/T4 Gb, Ex tb IIIC Db T85/T100/T135°C (T.amb. from -60°C to +65/+80/+115°C) - IP66/67
M	Certification INMETRO (BVC22.4141X): Ex db IIC T6/T5/T4 Gb ; Ex tb IIIC T85/T100/T135°C Db (T.amb. from -60°C to +65/+80/+115°C) - IP66/67
E_	Combined Exd Certifications : E1 (digit E+ET) - E2 (digit G+ET) - E3 (digit G+E) – E4 (digit E+EACAS)

SENSOR MODEL

See TAB.1&2

HOUSING MATERIAL

0	Aluminum alloy - Painted (Ral 7000)
S	AlSi316L

PF	-	2F	-	V3	-	E	-	0	-	1	-	1HM
DIGIT 1		DIGIT 2		DIGIT 3		DIGIT 4		DIGIT 5		DIGIT 6		DIGIT 7
X		YX		X		X		X		X		YX

Example

3D POSITION VISUAL INDICATOR

(Makrolon® polycarbonate, impact and UV ray resistant)

0	Without visual indicator
1	3D position visual indicator - red (closed), green (open), 0°– 90°
2	3D position visual indicator - yellow (closed), black (open), 0°– 90°
3	3D position visual indicator - yellow with graduated notches and written CL (closed). Written OP (open) applicable starting with aluminum alloy from 25° up to 135° - RECOMMENDED FOR RELEVANT MOVING VALVES

ELECTRICAL ENTRIES

Y	ELECTRICAL ENTRIES
0	½"NPT.F
1	M20x1,5F
X	SPECIAL VERSIONS
H	Housing configuration with range T.amb. -60°C ÷ 115°C (see TAB.2)
M	nr 3 terminals spare support customer side (see notes TAB1&2)
---	Contact CE srl for feasibility, timing, and digit definition

TAB. 1) SENSORS FOR STANDARD HOUSING CONFIGURATION ¹ . Depending on the sensor, the maximum interval of the T.amb. of use housing can be: - 40°C ÷ 100°C.		Quantity installable ¹
MECHANICAL		
V15	- Mechanical contact: SPDT - Switching capacity: 10Amp @ 30Vcc – 15Amp @ 250Vac (resistive load). - Ambient operating temperature: from -25°C to +80°C (Omron)	1÷3 ²
V3	- Mechanical contact: SPDT gold plated - Switching capacity DC/AC: from 1mA @ 4Vdc/ac to 5A @ 24Vdc/240Vac (resistive load) - Ambient operating temperature: from -60°C to +125°C (Crouzet)	1÷3 ²
VP	- Mechanical contact (positive break): SPDT (<i>Specific to plants in SIS. Level SIL2 HFT = 0</i>) - Switching capacity DC/AC: : from 30mA @ 10Vdc to 6A @ 24Vdc/240Vac (resistive load) - Ambient operating temperature: from -40°C to +85°C (Crouzet)	1÷3 ²
D	- Mechanical contact: 2 SPDT actuated by one cam function DPDT - Switching capacity : 5Amp @ 30Vcc – 5Amp @ 250Vac (resistive load) - Ambient operating temperature: from -40°C to +125°C (Honeywell)	2+2
XX	OTHER MODELS UPON REQUEST	
JETREED - MAGNETIC of proximity (Reed contact - Hermetic)		
P1	- Reed contact: SPDT of 3Amp, 120Vac/dc – Switching power: from 0.03 to 100 Watts /VA (resistive load). - Ambient operating temperature : from -40°C to +125°C	1÷2
P2	- Reed contact: SPDT of 3Amp, 240Vac/500Vdc – Switching power: from 3 to 100 Watts /VA (resistive load). - Ambient operating temperature: from -25°C to +125°C	1÷2
P3	- Reed contact: SPDT of 1Amp, 240Vac/dc– Switching power: from 25 Watts/VA (resistive load). - Ambient operating temperature: from -25°C to +125°C	1÷2
P4	- Reed contact: SPDT of 3Amp, 240Vac/500Vdc – Switching power: from 3 to 100 Watts dc/VA (resistive load) - Ambient operating temperature: from -60°C to +125°C	1÷2
P5	- Reed contact (gold plated): SPDT of 3Amp, 240Vac/500Vdc – Switching power: 100 Watts dc/VA (resistive load) - Ambient operating temperature: from -60°C to +125°C	1÷2
XX	OTHER MODELS UPON REQUEST	
INDUCTIVE of proximity		
03	Cylindrical - Namur NC – incorporable - SIL2 - ATEX Exia - T _{amb} - 25° ÷ +100°C; (P&F: NJ2 -12GK-N)	1÷2
05	Rectangular - Namur NC – incorporable - SIL2 - ATEX Exia - T _{amb} -25° ÷ +100°C; (P&F: NJ2-V3-N)	1÷3 ²
21	NO NPN -Tamb -25° ÷ +70°C -Rectangular form. Supply 10÷30Vcc 100mA- yellow led; (P&F: NBB2-V3-E0)	1÷3 ²
35	NO PNP -Tamb -25° ÷ +70°C - Rectangular form. Supply 10÷30Vcc 100mA- yellow led; (P&F: NBB2-V3-E2)	1÷3 ²
F4	NO NPN -Tamb -25° ÷ +80°C - Rectangular form. Supply 10÷30Vcc 200mA- yellow led; (IFM : IS5003)	1÷3 ²
F5	NO PNP -Tamb -25° ÷ +80°C - Rectangular form. Supply 10÷30Vcc 200mA- yellow led; (IFM : IS5001)	1÷3 ²
F6	NO PNP -Tamb -40° ÷ +85°C - Cylindrical form. Supply 10÷30Vcc 100mA- yellow led; (IFM : IFS256)	1÷2
XX	OTHER MODELS UPON REQUEST	

TAB.2) SENSORS FOR HOUSING CONFIGURATION with EXTENDED TEMPERATURE (DIGIT 7 = H) Depending on the sensor, the maximum interval of the T.amb. of use housing can be: - 60°C ÷ 115°C.		Quantity installable ¹
MECHANICAL		
V3	- Mechanical contact: SPDT gold plated - Switching capacity DC/AC: from 1mA @ 4Vdc/ac to 5A @ 24Vdc/240Vac (resistive load) - Ambient operating temperature: from -60°C to +125°C (Crouzet)	1÷2
JETREED - MAGNETIC of proximity (Reed contact - Hermetic)		
P1	- Reed contact: SPDT of 3Amp, 120Vac/dc – Switching power: from 0.03 to 100 Watts /VA (resistive load). - Ambient operating temperature : from -40°C to +125°C	1÷2
P2	- Reed contact: SPDT of 3Amp, 240Vac/500Vdc – Switching power: from 3 to 100 Watts /VA (resistive load). - Ambient operating temperature: from -25°C to +125°C	1÷2
P3	- Reed contact: SPDT of 1Amp, 240Vac/dc– Switching power: from 25 Watts/VA (resistive load). - Ambient operating temperature: from -25°C to +125°C	1÷2
P4	- Reed contact: SPDT of 3Amp, 240Vac/500Vdc – Switching power: from 3 to 100 Watts dc/VA (resistive load) - Ambient operating temperature: from -60°C to +125°C	1÷2
P5	- Reed contact (gold plated): SPDT of 3Amp, 240Vac/500Vdc – Switching power: 100 Watts dc/VA (resistive load) - Ambient operating temperature: from -60°C to +125°C	1÷2
XX	OTHER MODELS UPON REQUEST	

- NOTES : 1) - Every sensor is wired to the terminal block inside the housing.
2) - With up to two sensors possibility of 3-pole auxiliary terminal block (digit 7 = M)



s.r.l.

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