

INDUSTRY Range

R/W head

TCF30 PLA

www.balogh-rfid.com

GENERAL FEATURES

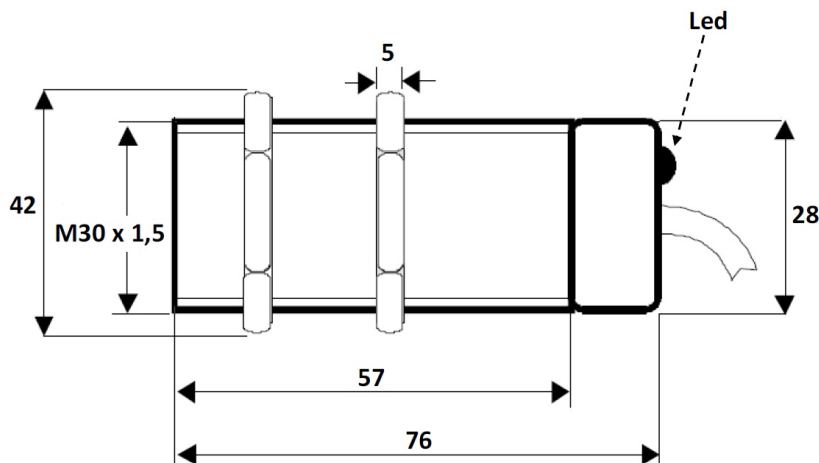
TCF18 is an R/W head allowing to exchange data with tags TAI or TAM without contact, using a protocol compliant with the standards ISO 18000-3 mode 1 and ISO 15693.

It has to be linked up to a Balogh interface, chosen among:

- BI**170 McMc (for the tag TAI) or BI**170 TT (for the tag TAM)
- CEPR96* (programmable)



ASSEMBLY DATA



All sizes are in millimeters (mm)

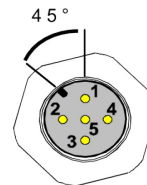
CONNECTION

The TCF18 is fitted with a 2m cable and a connector 5 pin M12 metallic male.

Use a corresponding female cable connector(A-coded, ref. 202 274) and a shielded cable with the following characteristics:

- max length : 50m,
- overall max. capacity between conductors and the shield :10nF.

The shield must be in contact to the cable connector housing 360° round crimping.



Pin Nr	Description	Wire colour
1	+24 Vdc	brown
2	output	white
3	input	blue
4	0 V	black
5	NC	green/yellow

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CHARACTERISTICS

TCF30	TAG (data carrier)											
	TAI7.5S IC SLI				TAI10 IC SLI				TAI10S IC SLI			
D_{em}^* (transceiver side to metal)	0	10	15	30	0	10	15	30	0	10	15	30
S_n nominal range	8	14	19	20	9	15	21	24	5	10	10	13
S_r recommended range	5	9	12	12	6	9	13	15	3	6	6	8
D_{tm} TAG distance to metal @ S_r	0	0	0	0	4	4	4	4	0	0	0	0
TCF30	TAG (data carrier)											
	TAI20 IC SLI				TAI30 IC SLI				TAI50 IC SLI			
D_{em}^* (transceiver side to metal)	0	10	15	30	0	10	15	30	0	10	15	30
S_n nominal range	16	28	33	40	24	43	54	68	8-20	49	65	80
S_r recommended range	10	17	20	24	15	26	33	41	8-12	30	39	48
D_{tm} TAG distance to metal @ S_r	6	6	6	6	10	10	10	10	10	10	10	10
TCF30	TAG (data carrier)				TAG (data carrier)							
	TAI711 IC SLI				TAM711 2K/8K (on metal)							
D_{em}^* (transceiver side to metal)	0	10	15	30	0	10	15	30				
S_n nominal range	23	42	53	67	5	10	14	19				
S_r recommended range	14	25	32	40	3	6	9	12				
D_{tm} TAG distance to metal @ S_r	0	0	0	0	0	0	0	0				

All distances are in millimeters (mm)

* See **Assembly recommendations** chapter (page 3) to have distance description

min	nominal	max	unit
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Power

Supply direct voltage (ripple included)	21	24	29	V
Protection against polarity reversal	yes			-
Supply current @ 24V	90			mA

Electronic

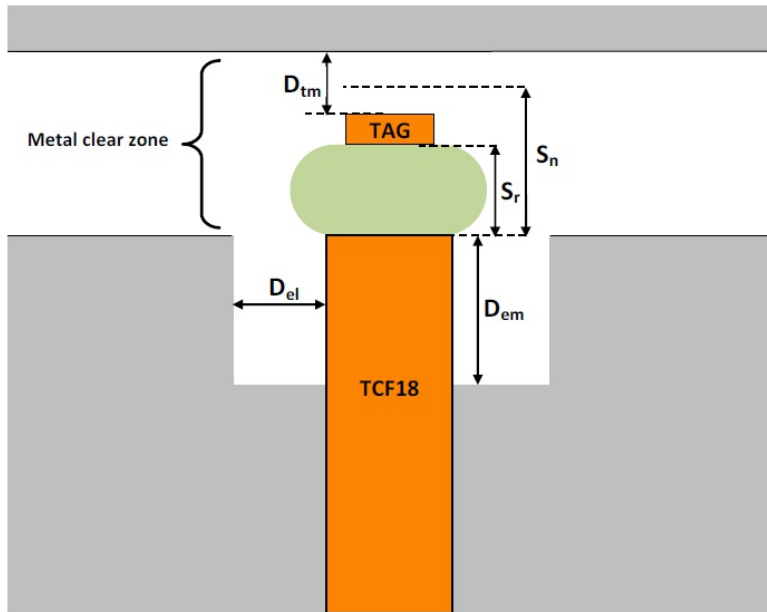
Carrier frequency	13,56		MHz
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General

Casing	PA12 (30% FV)		-
Operating temperature	- 25	70	°C
Protection rating	IP67		-
Weight	200		g

ASSEMBLY RECOMMENDATIONS

- **The head is not to be mounted directly in a recessed metal cavity.**
A minimum metal-free clearance is required round the head :



Transmission zone style
(the actual outline depends on the head)

S_n	Nominal range
S_r	Recommended range
D_{em}	Longitudinal distance transceiver side to metal
D_{el}	Lateral distance transceiver side to metal
D_{tm}	TAG (data carrier) distance to metal @ S_r

- **Important:**

- D_{el} must be at minimum to 45 mm to have the TAG ranges indicated in the characteristics chapter
- To avoid interference between two TCF30, there must be 50 mm end to end minimum distance

ACCESSORY

M12 Female connector A-coded, ref 202274.

For various possible interfaces, Balogh proposes cables with straight connector(s) :

- PUR cordset 5 m^(*) (réf. 495XXB4512) for BI interfaces (refer to accesories corresponding data sheet)
- PUR cable FFMD5/12 (lenght 2, 10 or 15 m) for the others interfaces

* On request: 10 m and 25 m