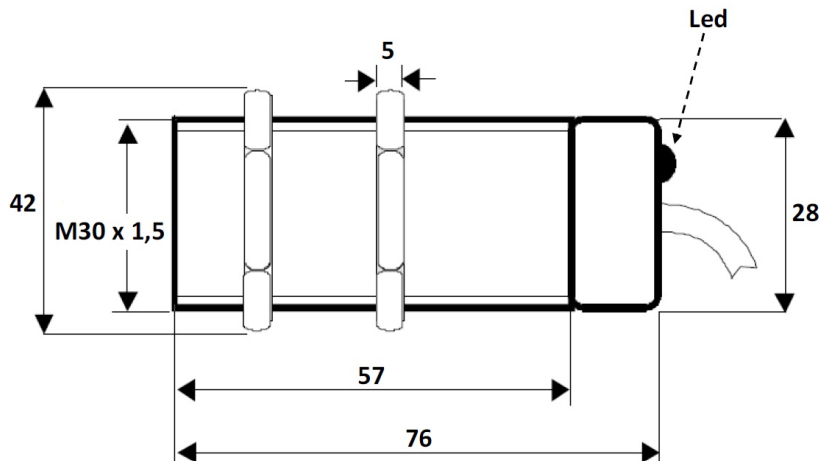## GENERAL FEATURES

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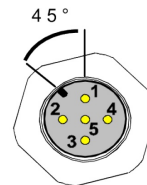
Pin Nr	Description	Wire colour
1	+24 Vdc	brown
2	output	white
3	input	blue
4	0 V	black
5	NC	green/yellow

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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	13	13	13	13	13	14	14	14	9	9	9	9
S_r recommended range	8	8	8	8	8	9	9	9	6	6	6	6
D_{tm} TAG distance to metal @ Sr	0	0	0	0	4	4	4	4	0	0	0	0
	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	21	22	22	24	32	37	37	39	4-31	41	41	43
S_r recommended range	13	14	14	15	19	22	22	24	4-19	25	25	26
D_{tm} TAG distance to metal @ Sr	4	4	4	4	10	10	10	10	10	10	10	10
	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	31	36	36	38	7	7	7	7				
S_r recommended range	19	22	22	23	4	4	4	4				
D_{tm} TAG distance to metal @ Sr	0	0	0	0	0	0	0	0				

All distances are in millimeters (mm)

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

	min	nominal	max	unit
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
General				
Casing		Aluminium housing - Rilsan operculum		-
Operating temperature	– 25		70	℃
Protection rating		IP67		-
Weight		230		g

RFID
INDUSTRY RAILWAYS SECURITY

BALOGH

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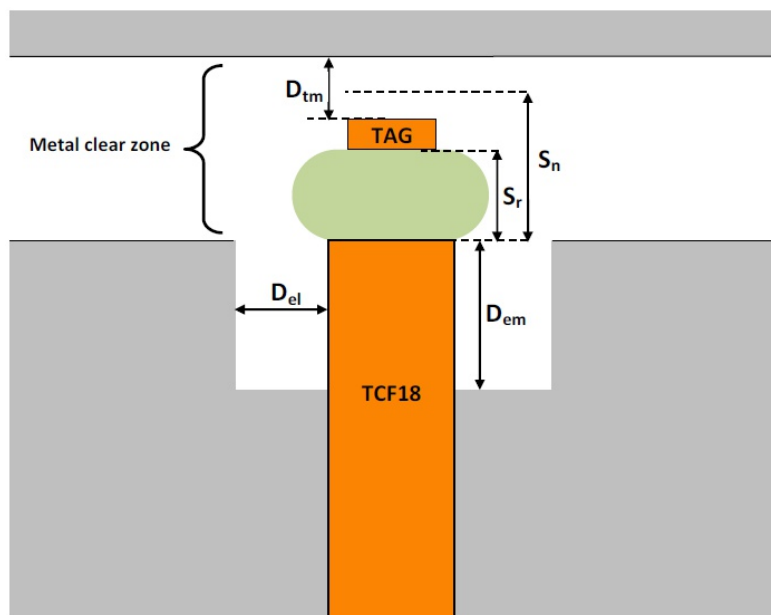
Transmission zone style
(the actual outline depends on the head)

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 30 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

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