DB S	Mobility Networks Logistics

DB Systel GmbH
H.TIN15
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Clearance for series production for telecommunications engineering material
Clearance no.: SE H.TIN15 09/01
Cleared for utilization with DB AG.

Designation	Manufacturer's item no.	DB material no.
Vario Top Size 2 pillar-mounted GRP cable routing system	C000201	00961173

TC facilities with safety functions acc. to EBA regulations: yes ☐ no ☒

Remarks (purpose of utilization, destination, replacement for, etc.):

In case of difficult or rough terrain, where typical cable routing systems, such as ground-mounted cable troughs, ground borne, airborne and cable tray routes may not be utilized, pillar-mounted cable ducts serve for the accommodation and routing of signal, telecommunications and outdoor power cables of DB AG.

The clearance for series production of cable routing systems is granted on the basis of the tender specifications "cable ducts made of plastic material" dated 08/01/2002, the experience of the prototype route built and the product documentation of June 2009 incl. mounting instructions.

Please comply with the remarks and the list of cleared drawings on page 2.

Manufacturer/ Sales: Invatec GmbH
Rötstraße 4
D-74589 Satteldorf

Copies to: I.NVT 22, H.TT-x-P, Invatec

Eschborn, 07/24/2009
(illegible signature) (illegible signature)
W. Ziebs St. Hofmann
(responsible for clearances)

Clearance no. SF H.TIN1 09/01

Remarks:
Planning is required according to good professional practice on the basis of the regulations of DB AG currently in force, the acknowledged rules of technology, and the product documentation of Invatec GmbH in the sense of the BAU-STE administrative procedure. Should the planner require additional product documentation of the manufacturer in addition to the above, these may be procured through the cleared OE.

Please take into account the fact that lateral or top snow loads are to be expected if the cable duct system is installed in excavations or on slopes with snow flow, snowdrift and the deployment of a snow plough. Areas subject to falling rock are to be considered as well. In these cases the planner will have to verify and ultimately decide together with the client if utilization of the pillar-mounted GRP cable duct system will be possible. In case of outdoor transitions between pillar-mounted and ground-mounted cable routes, UV and fire protection requirements similar to those that apply to the cable duct as such must be complied with. Please also note that the cable duct system must not be subject to any loads that result from railroad traffic. Utilization of the cable duct system in tunnels is not permissible.

The manufacturer is required to instruct the company performing the engineering work prior to the start of construction work. Compliance with all specifications (e.g. mounting instructions, planning documents, regulations, etc.) is to be ensured during all phases of construction from planning to acceptance inspection.

The pillar-mounted cable routing system is to be inspected in accordance with Directive 861.0222 “Proof of Maintenance and Schedule Adherence for Cables and Cable Routing Systems”.

List of cleared drawings:

No.	Drawing designation	Drawing no.	Date
1	Exploded view Size 2	08 07 14-3	07/14/2008
2	Overall component - cable duct Size 2	08 07 14-6	06/02/2009
3	Cable duct Size 2 - lower part - duct section	08 07 14-11	06/02/2009
4	Cable duct Size 2 - upper part – lid section	08 07 14-12	06/02/2009
5	Supporting structure – upper plate Size 2	08 07 14-24	06/02/2009
6	Supporting structure – prop IPE 100	08 07 14-16	06/02/2009
7	Supporting structure – connecting angle	08 07 14-15	06/02/2009
9	Supporting structure – angled hinge	08 07 14-20	06/02/2009
10	Connecting plate	08 07 14-25	06/02/2009
11	Closure Size 2 – zinc-plated	08 07 14-19	06/02/2009
12	Cable outlet gland Size 2	08 07 14-23	06/02/2009

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